

Mihaela Tofan • Irina Bilan • Elena Cigu
(editors)

European Union Financial Regulation
and
Administrative Area

EUFIRE 2019

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Section I

EU FINANCIAL REGULATION AND FINANCIAL STABILITY

ACCOUNTING QUALITY AND COST OF CAPITAL. THE CASE OF THE ROMANIAN LISTED COMPANIES

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Abstract

This paper focuses on the role of the financial information quality, under the issue of relevance and faithful representation, in the development of the cost of attracted capital. We use financial data issued by the Romanian companies listed on the regulated market of the Bucharest Stock Exchange, on a time lapse between 2012 and 2017. The used quantitative analysis assumed the testing of some econometric models which are well known in the literature, namely the Ohlson (1995) relevance model and the Jones (1991) one, for accurate representation. The results of the study identify a significant contribution of the financial information quality on the reduction of cost of capital, both regarding the relevance to investors and creditors and the conformation of accounting procedures with the regulations set by the standards. By introducing some control variables, such as size, respectively the growth of the company, the sense and the intensity of the relation was maintained.

Keywords: *quality of financial information; information relevance; earnings management; cost of capital.*

JEL Classification: M41, G32

1. INTRODUCTION

The allocation of available funds towards economic entities requesting financial resources is based on a decision-making process which is mostly founded on the evaluation of the financial information issued by the economic entities. The quality of the reported information might represent an important variable when negotiating the level of the cost associated to the attracted resources, with subsequent influences on the reimbursement capacity and on the level of financial performance gained by the entities. The appreciation of the influence of the quality of data provided by the accounting on the decisions taken by users represents a widely approached subject in the literature. Though

mostly focused on the investors' reaction, studies reveal the need of implying all stakeholders in the analysis.

This paper focuses exactly on this dimension, introducing, in the study, the role of the financial information quality, under the aspect of the relevance and faithful representation, in the development of the cost of attracted capital. Financial data is used, which has been issued by the Romanian companies listed on the regulated market of the Bucharest Stock Exchange (BSE), on a time lapse between 2012 and 2017. Also, the used quantitative analysis assumed the testing of some well-known econometric models within the literature, namely the Ohlson (1995) model, for relevance, and the Jones (1991) model, for accurate representation.

Reached results identify a significant influence of financial information quality, its growth determining a decrease of the cost of capital. By introducing some control variables, such as size, respectively the growth of the entity, the sense and the intensity of the relations were maintained.

2. THEORETICAL BASIS AND WORKING HYPOTHESES

Accountability standards only present the qualitative features that must be met by the information issued by companies, without providing means for their evaluation. The literature has developed a series of theoretical constructs, completed by specific quantification methods of the specific qualitative level, which can contribute to the easing of the carried-on analyses. Starting from the fundamental qualitative features, the relevance and the faithful representation of the transactions and events, concepts such as "value relevance" and "earnings management" have been developed in the literature, attached to the two fundamental features mentioned in the accounting standards. To this extent, the value relevance reflects the ability of accountability numbers of surprising data which comes to influence the investors' decisions (Barth, Landsman and Lang, 2008; El-Sayed Ebaid, 2012). Earnings management describes actions of the managers regarding the accountability procedures or even real transactions, through which they aim at modifying the financial results, in order to misguide the users about the real financial performance (Healy and Wahlen, 1999).

Any kind of activity is conditioned by the existence and the use of certain specific economic resources (tangible and monetary), determined by the particularities of the object of activity. The source of economic resources, which provide content to the balance sheet assets, is represented by capital. Capital represents an economic category which includes the totality of stable financing sources, which, through association with the other production factors (nature and labor), are part of the production of new economic goods, in order to gain profit. Within the globalization context and the one of the free circulation of capital, this production factor might represent an efficient mean of implementing certain global policies, aiming at the optimization of social and environmental

conditions (Carp, 2013). From the perspective of the financing source, capital owns two different forms, namely the owners' equity and the foreign capital. Owners' equity develops within a shared capital entity, completed, after the first activity cycle, by new elements such as profit and eventual obtained reserves (Dicu, 2015). Foreign capital (borrowed or attracted) reflects the result of foreign financing of the goods that represent the patrimony of the entity, for which it must meet a certain performance or provide a value equivalent.

For an entity, the cost of financing resources of the activity represents a significant information which lays at the basis of decisions that the management must make when choosing the optimal solution for capital attraction. Usually, through the cost of capital, one understands the cost needed in order to procure the goods and services useful to the reaching of the company's objectives, namely the dimension of the payments made to the providers of financial resources, given the growth of the market value of the entity. From the structural issue, cost of capital considers two components, corresponding to the source of financing, the cost of owners' equity and the cost of foreign capital (Toma, 2018).

The cost of equity is basically the cost which the entity supports in order to pay dividends to the shareholders. This is quite difficult to quantify, as the engagements made by the leading staff with investors have a formal feature, and the allocation of dividends is determined by the existence of profit and also influenced by the policy adopted by the most stakeholders regarding the allocation of profit. Though, essentially, both investors and managers have converging interests in an entity, the way through which they reach their objectives is different. While investors aim at reaching an investment return higher than the best discount rate on the market, managers focus on minimizing the cost of capitals used for the creation of the company. Cost of foreign capital is represented by payments of interests which have to be done by the financed entity towards its creditors. Unlike the owners' equity, foreign capital has a cost which is usually known even from the moment of foreign resources contracting, through return engagements for the credits assumed by the beneficiary entity. As an exception, the cost of borrowed capital can register some variations during the credit agreement, when the interest is fluctuating. The minimization of costs for all capital inflows, which should represent a continuous concern for managers, can be made by optimizing the financing structure, namely by modifying the percentage of borrowed/own capitals in the total capitals (Toma, 2018).

The quality of financial information and of the insurance process regarding its accordance to the specific standards represents the fundamental elements at the basis of the investors' and creditors' decisions. Qualitative characteristics are the attributes that determine the usefulness of the information provided by the financial statements (Istrate, 2016). A low quality of financial information

determines a weak reaction of financial markets (capital or credit markets), while a decrease in quality generates their negative reaction (Dechow, Ge and Schrand, 2010) to the extent of the growth of the cost of capital attracted by companies, respectively a negative association between the cost of capital and the results' quality (Chi *et al.*, 2017). A low quality of financial information, resulted from earnings management, can represent, for the investors on the capital market, a signal regarding the presence of a high risk associated to the future performance of companies, index which takes shape as an increase in the cost of capital (Kumar and Lim, 2015). The credit market uses specific evaluation models of the financial information relevance of the credit solicitants and a reduction of the relevance determines an increase of the contractual restrictions, both from the perspective of the cost and the one of the collateral ones (maturity, warranties etc.) (Bharath, Sunder and Sunder, 2008). Karjalainen (2011) notices the role of the accruals' quality in the development of the reported liabilities' cost, while Francis, Nanda and Olsson (2008) identify the influence of the dimension of discretionary accruals on the weighted average cost of capital (WACC) used by companies.

In order to analyze the identified dependence relations, we aim at testing the following working hypotheses:

H1: Reported financial information of companies significantly influence the cost of attracted capital.

H2: The level of discretionary accruals significantly influences the cost of capital.

3. RESEARCH METHODOLOGY

The research objective is to evaluate the influence of the financial information quality on the cost of capital. The analyzed sample is represented by the Romanian companies listed on the main section of the BSE, excepting the entities whose object of activity is represented by financial intermediation. Data has been manually collected from the financial statements published on the site of the BSE and the own companies' sites. Extracted data corresponds to an interval of 6 financial exercises (2012-2017), which has facilitated the reaching of 384 observations for the 58 companies included in the sample.

In order to process the data, we have used the correlation analysis and the multiple linear regression. Variables included in the study are displayed in Table 1.

The WACC was calculated using, for the cost of owners' equity, the return on equity ratio (net result/owner's equity), and for the cost of liabilities, the effective interest rate of the borrowed resources (financial expenditures/financial liabilities).

Table 1. Used variables

| Variable | Abbreviation | Description |
|---|--------------|--|
| Dependent variables | | |
| <i>Weighted Average Cost of Capital</i> | WACC | Displays the cost of resources attracted to finance activities, being calculated as weighted average of costs specific to each type of capital (owners'/foreign) |
| Independent variables | | |
| <i>Book value</i> | BV | The owners' equity of the entity |
| <i>Net income</i> | NI | The net result of the exercise |
| <i>Discretionary accruals</i> | DA | Reflect the dimension of the discretionary accruals, calculated as a difference between total accruals and non-discretionary accruals |
| <i>Dimension</i> | SIZE | Total assets log |
| <i>Company growth</i> | CG | $(\text{turnover}_{i,t} - \text{turnover}_{i,t-1}) / \text{turnover}_{i,t-1}$ |

Source: own processing

Resulted as differences between the consequences of the use of accrual accounting and the one of cash accounting, accruals represent elements which originate both in the use of some rigid accounting standards and in the choices of treatments (accounting choices). Total accruals can be calculated using the elements in the balance sheet and the profit and loss account, according to Jones (1991) model, presented relation 1.

$$TA_t = (\Delta CA_t - \Delta Cash_t) - (\Delta CL_t - \Delta STD_t) - DEP_t \quad (1)$$

where: TA are total accruals in year t ; ΔCA represent the change in current assets in year t compared to year $t-1$; $\Delta Cash$ is the change in cash in year t from year $t-1$; ΔCL is the change in current liabilities in year t from year $t-1$; ΔSTD represents the fluctuation of short term debts in year t from year $t-1$; DEP are depreciation and amortization in year t .

Discretionary accruals represent the residual component as a result of testing the Jones (1991) model, reflected by equation no. 2.

$$\frac{TA_t}{A_{t-1}} = \beta_0 * \frac{1}{A_{t-1}} + \beta_1 * \frac{\Delta REV_t}{A_{t-1}} + \beta_2 * \frac{PPE_t}{A_{t-1}} + \varepsilon \quad (2)$$

where TA are total accruals in year t ; ΔREV is the variation of the turnover in year t compared to year $t-1$; PPE are gross fixed tangible assets in year t ; ε represent the error term (DA). The decrease of DA reflects the growth of the financial information quality.

To analyze the financial information relevance for the entire range of financers (investors and creditors) we proposed the econometric model displayed in equation no. 3, derived from the Ohlson (1995) model.

$$WACC_t = \alpha_0 + \alpha_1 BV_{t-1} + \alpha_2 NI_{t-1} + \alpha_3 SIZE_t + \alpha_4 CG_t + \varepsilon_t \quad (3)$$

where: WACC represents the weighted average cost of capital in year t ; BV is book value (equity) per share at the end of year $t-1$; NI is the net income per share at the end of year $t-1$; $\alpha_{0,1,2,3,4}$ are regression coefficients ; ε_t is the random, error variable.

The influence of the financial information quality from the perspective of the faithful representation of transactions and events, measured through the size of the discretionary accruals (DA) is evaluated through the model presented in equation no. 4.

$$WACC_t = \alpha_0 + \alpha_1 DA_{t-1} + \alpha_2 SIZE_t + \alpha_3 CG_t + \varepsilon_t \quad (4)$$

In the proposed relations, the independent variables reflecting the quality of financial information (BV, NI and DA) are included in the analysis with the values from the previous year, so to allow the dependent variable to include the effects of the analyses of users, mostly based on information from the financial statements.

4. RESULTS AND INTERPRETATIONS

Table 2 presents the descriptive statistics which reveal, from the perspective of the variables in the analysis, the economic space included in debate.

Table 2. Descriptive statistics

| Elements | WACC | DA | CG | NI | BV |
|--------------------|---------|---------|---------|--------|--------|
| Mean | 0.01728 | 0.08181 | 0.05030 | 0.0063 | 0.5459 |
| Median | 0.02457 | 0.03938 | 0.00000 | 0.0156 | 0.6341 |
| Standard deviation | 0.17513 | 0.15596 | 0.46941 | 0.1778 | 0.4502 |
| No. obs. | 348 | 348 | 348 | 348 | 348 |

Note: CF represents the growth of the turnover; RN is calculated reporting the net result to the total assets, and ANC by dividing the owners' equity to the total assets.

Source: own processing

We identify an average WACC of the resources used by Romanian listed companies of 1.72%, low level mostly resulting from the significant dimension of the owners' equity in the total resources ($BV_{mean} = 0.5459$). Alongside, the low level of the NI (0.63%) reflects the fact that investors receive, from the perspective of the possible distributed results, a low allocation of the available capitals.

Table 3 emphasizes the results reached subsequently to the analysis regarding the relevance of financial information for all interested parts (investors and creditors). To this extent, the information published through financial

statements have a significant influence on the WACC ($SIG_{model}=0.000$). The variation of the cost of capital is 35.2% ($R^2=0.352$), respectively 36.5% ($R^2=0.365$) explained by the changes in the accounting structures (BV and NI). The sense and the dimension of the determinist relations is also maintained in the situation of controlling the relation for the size of the company, respectively the growth of sales.

Table 3. The influence of financial information on the weighted average cost of capital

| Dependent variable | Constant | BV | NI | SIZE | CG | R ² | SIG model |
|--------------------|------------------|-------------------|------------------|-------------------|------------------|----------------|-----------|
| WACC | 0.094 (0.000) | -0.015 (0.000) | 0.016 (0.000) | | | 0.352 | 0.000 |
| WACC | 0.110 (0.000) | -0.002 (0.084) | 0.016 (0.000) | -0.014 (0.004) | 0.008 (0.037) | 0.365 | 0.000 |
| No. obs. | 348 | | | | | | |

Source: own processing

The role of discretionary accruals in the formation of the cost of attracted resource is reflected in Table 4. Discretionary accruals, whose size can reflect the quality of the financial information, from the perspective of its influence through earnings management, influences the cost of capital, its growth determining the increase of the WACC ($\alpha_1= 0.133$).

Table 4. The impact of the discretionary agreements dimension on the weighted average cost of capital

| Dependent variable | Constant | DA | SIZE | CG | R ² | SIG model |
|--------------------|-------------------|------------------|------------------|------------------|----------------|-----------|
| WACC | 0.006 (0.074) | 0.133 (0.001) | | | 0.014 | 0.001 |
| WACC | -0.047 (0.054) | 0.128 (0.002) | 0.003 (0.012) | 0.041 (0.003) | 0.027 | 0.000 |
| No. obs. | 348 | | | | | |

Source: own processing

Financers thus interpret the presence and the use of accruals as a mean of manipulating the accounting information, therefore asking for a higher premium for the taken risk of placing their available capital in the analyzed companies.

5. CONCLUSIONS

Financial information published by companies can be an important tool in substantiating investment decisions. The usefulness of accounting information

depends to a large extent on its quality, the observance of quality conditions being not just a recommendation but a necessity.

This paper analyzes the influence of the financial information quality, from the perspective of the relevance and the faithful representation of transactions and events, on the cost of capitals used to finance the activity of the companies listed on the main section of the Bucharest Stock Exchange.

As a result of testing the proposed working hypotheses, we have identified significant influences of the accounting structures involved in the study on the weighted average cost of capital. To this extent, reported financial information is relevant to financiers, as the increase in its quality determines the decrease of the cost for the resources allocated to companies. Also, the increase in the dimension of discretionary accruals generates an increase in the cost of capital, as financiers see the presence of these accounting structures as a mean of earnings management.

Certainly, this paper is featured by a series of limits, such as the reduced size of the sample and the lack of structuring the analyzed population on the field of activity. The removal of these restrictions represents the future research directions.

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TESTING COMPLIANCE WITH IAS 24 FOR RELATED PARTIES LISTED ON BUCHAREST STOCK EXCHANGE

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Abstract

Data quality is a key aspect for the investors in decision process. A special attention must be paid to data disclosed by related parties through Annual and Periodical Tax Reports published for the end users. Sometimes end users do associate transactions among related parties with creative/aggressive accounting, the quality of information disclosed in their Financial Reports being affected by such techniques. Companies listed on the Bucharest Stock Exchange do apply regulations on affiliated entities and transactions between them as stipulated by the International Accounting Standard IAS 24 Related Party Disclosures. Following above-mentioned statements, we are willing to verify how Romanian listed businesses are complying to regulations related to relationships and transactions among related parties. The scope of the present study consists in calculating Data Disclosure Index for transactions between related parties in compliance to IAS 24 requirements using Cooke technique. This study output shows that 50% of data disclosed concerning relationships and transactions between related parties contains higher disclosure rates in case of compulsory data submitted compared to voluntary disclosed data.

Keywords: *transfer pricing; related party transactions; disclosure index; information quality; IAS24.*

JEL Classification: M41

1. INTRODUCTION

Data quality is a key aspect for the investors willing to make decisions on investments in business. Through the financial information it is possible to design both the current profile of the entity, confirmed by its subsequent evolution, as well as its perspective (Mironiuc and Carp, 2014). Tax and Accounting Reports showing effective business health and performance are compulsory for Romanian companies as stipulated by national and international regulations. Data quality specifications are mandatory. These reports are really useful for the end users outside the business, therefore their filing due to high data quality specifications and reporting practices involving what the report will consist of willing to show to end users what are they expecting to see (Biobele, Igbeng and John, 2013). Otherwise the trustworthy trend of the accounting and

tax data will go down due to their inconsistency, missing transparency and missing the possibility to be compared to similar data. High operation costs and high investment risks for the investors are the consequences to be expected (Aljifri *et al.*, 2014).

A special attention must be paid to data disclosed by related parties through Annual and Periodical Tax Reports published for the end users. Sometimes they do associate transactions among related parties with creative, named also aggressive accounting (Gordon and Henry, 2005). Data manipulation by applying transfer prices done by such businesses is well-known. Related studies have shown that transactions between affiliated entities are discordant to goods and services request and offer interaction (Cools, 2005, p. 67). In other words, transfer prices are applied on relationship between affiliated entities do not fit the prices on the market, according to the arm's Length principle. Business health and performance data of the affiliated entities due to application of transfer prices different from those on the market will cause a deformed situation concerning business health and performance on Annual Tax Reporting. End users will get not relevant, not precise and incomplete data willing to make correct decisions on making investments, but those will be wrong and faulty.

Both national regulations and international ones related to accounting and tax reporting are compulsory for listed companies on Bucharest Stock Exchange (*BSE*). This is to say that such entities are deeply monitored. The audit of the Annual Tax Reports of the listed businesses is compulsory. This way Annual Tax Reports become more credible and complying to quality specifications in force willing to assure end users on that.

International companies listed in Romania do apply regulations on affiliated entities and transactions among them as stipulated by the International Accounting Standard IAS 24 *Related Party Disclosures* (IAS 24). European regulations have not been immediately applied in Romania from 2007 when our country has entered EU. International Accounting Regulations materialized in International Financial Reporting Standards (*IFRS*) have become compulsory for listed companies only from 2012. Only some Romanian businesses have been applying these regulations voluntarily or following the policies of the parent business already applying *IFRS*, in the case of multinational companies.

Considering that a large number of countries in the world have adopted *IFRS*, the voluntary disclosure of accounting information is increasingly rare. In countries where the activity of economic entities is not strong regulated by accounting regulations, it is up to the entity's management whether or not to provide useful information to those concerned.

The purpose of this study is to determine the extent to which *BSE* listed companies comply with the requirements for the presentation of information on related parties according to *IAS 24*, as well as the degree of presentation of the voluntary information. In order to achieve the scope of the study it will be

calculated a Disclosure Index according to Cooke (1989a). The same study the metrics of data disclosure on business health and performance is very important as affecting decisions on funds investment by actual and potential investors.

The topic of the way how Romanian business discloses data on relationships and transactions between affiliated parties has not been widely approached by researchers. That is why this topic needs a deeper approach and study on willing to better know how this issue works in our country. This research will be an added value for modifying and updating related legislation to simplify the life of the tax payers on one side and protect investors interests on the other. The new regulations on Transfer Prices File coming from *Order No. 442/2016 on lower limit value of related party transactions, deadlines of submitting Transfer Pricing File, the Transfer Pricing File structure and request procedure, Transfer Pricing planning* had to affect data disclosure related to affiliated entities and transactions among them, being compulsory the submission of the Annual Transfer Prices File.

The study contains three chapters: approaching the problem of the transactions between related parties; the methodology of the present study; the main outputs and commenting how the data are disclosed by listed businesses. This study is ended by the conclusions jointly to future research trends, including limitations.

2. APPROACHING THE PROBLEM

The growing trend of the transactions between related parties affecting international trade has focused accounting and finance research on that topic being widely discussed in universities, research centers and on international conferences and summits. Mainly the research related to affiliated entities is focused on transfer prices as tool for manipulating the profits. Moreover, the research is focused on transactions between affiliated entities to be based on market price (Arm's Length Principle).

2.1. Data disclosure among related parties and data asymmetry issues

Data disclosure related to relationship and transactions among related parties and what does affect them has been seriously considered starting from the beginning of the XXI century, after the scandals well known in corporate businesses. It is considered that such transactions are normal business practices as many businesses operate through their subsidiaries, associated businesses and through other affiliation schemes willing to cut additional operational costs (Gordon *et al.*, 2007). Even was found that transactions between affiliated entities has become a powerful tool within tax fraud and fraud against investor's funds and properties (Pizzo, 2013), the fact that multinational companies do manage transactions with affiliated entities. Should not lead us to think that these operations do cover accounting or tax fraud (Gordon *et al.*, 2007). Moreover,

most frauds are not related to transactions between affiliated entities (Shapiro 1984; Bonner, Palmrose and Young, 1988), and it is reasonable to say that most of the transactions using transfer pricing do not result in fraud (Henry *et al.*, 2012).

Worldwide known financial scandals like Enron, Adelphia or Parmalat have arisen the risks related to affiliated entities business (Melis, 2005), earth quaked financial markets and have preceded new regulations approval on business governance (Bava and Gromis di Trana, 2015). Stricter accounting and tax reporting regulations have been approved on compulsory monitoring of transactions between affiliated entities to disclose more detailed operational and accounting data. Annual Tax Reports audit, Top Management independence in the board of directors, and high corporate governance practices are a few of examples in this case.

The relationship between related entities is stipulated by the law in many countries due to legislation harmonization. The number of negative aspects coming from transactions between affiliated entities was cut down due to aforesaid law-making strategy (Djankov *et al.*, 2008). Such regulations generate a conflict of interests despite law stipulations are explicit and clear. The conflict arises between managers and investors (Berle and Means, 1932; Jensen and Meckling, 1976; Pizzo, 2013). Managers, on one side, as business and accounting data users (insiders) get more detailed results from aforesaid data. Investors, on the other side, as users outside the business (outsiders) may access only general and limited accounting data which are not enough for all type of users. This issue generates a lack of data called moral hazard (Cooper and Keim, 1983) as some users hold higher quality data than others (Kothari, Shu and Wysocki, 2009).

Some studies show that company managers are willing to use business and accounting data they have for deforming business health and performance data submitted for end users outside the business (Cooper and Keim, 1983; Huian, Mironiuc and Chiriac, 2018); obtaining personal profit (Scott, 2006); making decisions going against investor's interests (Healy and Palepu, 2001). Such actions will always turn in a deformed business health and performance. The lack of data disclosed will make investment market less attractive (Glosten and Milgrom, 1985) and failed (Cooper and Keim, 1983).

Data disclosure through Annual Tax Reports cuts down the lack of data available for end users outside the business (Hermalin and Weisbach, 2012). This will enable company managers on making correct decisions to confirm investors interests and avoid financial losses (Bushman and Smith, 2001). In Beyer *et al.* (2010) opinion more detailed data disclosure will help investors' expectations to be fulfilled and investment risks to be avoided in advance.

Data submitted in Annual Tax Reports are disclosed under two schemes (Cooper and Keim, 1983; Healy and Palepu, 2001; Balakrishnan *et al.*, 2014):

compulsory as legally required and voluntary when a higher quantity of data than the one required by the law. Voluntary data disclosure is relevant when benefits from cutting down the lack of data available for end users are higher than the costs for obtaining this kind of data (Healy and Palepu, 2001). Businesses usually submit good news under voluntary scheme: business performance data to get higher score over businesses facing difficulties or those performing on lower indicators and showing only bad news (Verrecchia, 1983). Company managers go in detail on data disclosure when they are willing to increase the score of trust worth over their business from end users and investors (Schuster and Clarke, 2010). Sometimes under certain circumstances company managers do not submit accounting data either willing to cut the high costs on obtaining this kind of data (Verrecchia, 1983) or avoid business shares price to decrease due to bad news spreading around (Lundholm and Van Winkle, 2006). Rodrigues and Stegemoller (2010) have confirmed that businesses booking transactions with affiliated entities are willing to mask some data related to such transactions as missing submission of similar data is not easy to be detected. Top Management salaries are to be considered confidential as same managers think. That is why their decision was not to include these data in Annual Tax Reports (Nelson, Gallery and Percy, 2010).

The lawmaker has made compulsory accounting data disclosure all for cutting down the lack of data on business health and performance, setting up the minimum requirements for data disclosure to be available for end users outside the business, accounting data disclosure to be compulsory for company managers, investors to be in right to read and analyze such data (Bava and Gromis di Trana, 2015). Several studies show that compulsory data disclosure will enable company managers to submit data deforming business health and performance especially when related to confidential data (Nelson, Gallery and Percy, 2010). Gigler and Hemmer (1998) have shown that compulsory data disclosure makes more complete the data submitted by business managers under voluntary scheme, these ones being only confirmed and made more credible. Data disclosed by business managers cannot be verified. In this way, end users do not trust and ignore it (Stocken, 2000). In other words, despite the data are not complete they are credible due to their voluntary disclosure (Lundholm, 2003).

Transfer prices have been quite recently applied in Romania. This was possible after communism felt down and democracy coming up. National market was accessible also for foreign investors. Transfer prices and relationships between related parties have been rarely approached as research of that topic had a lot of restrictions and limitations. Company Groups based in Romania trend is growing once this country has entered EU. Labour cost, relaxed tax and accounting regulations and low rental rates have recently attracted foreign investments from multinational companies (Deloitte, 2017). Applying

transactions between affiliated parties and related problems were concerned by Romanian research (Corlaciuc and Tiron, 2013; Feleagă and Neacșu, 2016), by the Big Four auditors (PwC, Ernst & Young, Deloitte, and KPMG) and tax, accounting and finance consultants and professionals.

Romanian research has been focused on data disclosure concerning relationships and transactions among related parties too being published Corlaciuc and Tiron (2013) and Feleagă and Neacșu (2016) studies. These papers were based on the same research running Data Disclosure Index calculations based on Cooke technique (Cooke, 1989a). The study output of Corlaciuc and Tiron (2013) shows a medium level of data disclosure by Romanian listed companies from 2008 to 2012 as related to transactions between affiliated entities as growing trend from 2008 to 2011. This is a positive aspect due to voluntary data disclosure. *IFRS* were not compulsory at that time. Data Disclosure Index has shown a lower value in 2012 as a paradox because this year International Accounting Regulations were approved to be compulsory for application at Annual Tax Reporting. It was logic Data Disclosure Index trend to be increasing in 2012, but this did not happen as aforesaid study has shown. The study of Feleagă and Neacșu (2016) has covered the time frame from 2012 to 2014. Data disclosure level of detail trend on relationship and transactions between related parties goes from medium to high as positive aspect *IAS 24* specifications application by Romanian listed businesses.

2.2. Voluntary information disclosure

Globalization favored a good environment for the goods and services market to control the behavior of entity management. Due to the existing competition, natural selection is effective, eliminating weak entities from the market, with benefits being attributed to highly competitive entities. The presentation of voluntary information by economic entities in this context will provide competitive advantages, especially when the market is characterized by saturated market share or on the contrary there is no competition in the field in which they operate.

Raffournier (1995) in his study has been concerned by the Accounting and Tax Data Disclosure level of detail and what has affected that emphasizing voluntary scheme of data submission. Depoers (2000) considers that the presentation of voluntary information is closely related to the level of access in a highly competitive market. The narrower the market access, the more voluntary information the entities offer to attract investors.

The presentation of financial information on a voluntary basis aims to reduce information asymmetry in Grossman's (1981) opinion. Managers only present information according to the legal norms, in order to have an informational advantage over external users (Dye, 1985; Verrecchia, 1990) and significant decision-making power (Bozec, 2008). The informational balance as

a result of reducing informational asymmetry will lead to transparency in financial reporting.

According to some opinions, the tendency to present more voluntary information is determined by the quality level of information that is mandatory, increasing the quality of information with the purpose of presenting more voluntary information (Dye, 1985, Einhorn, 2005; Verrecchia, 1990), although contradictory evidence exists. Apostolou and Nanopoulos (2009), Chen and Jaggi (2000), Cheng and Courtenay (2006), Lim, Matolcsy and Chow (2007) and Patelli and Prencipe (2007) showed that the presence of independent directors in the board of directors facilitates the disclosure of voluntary information, due to their control and decision-making capabilities.

2.3. Regulations on data disclosure concerning related parties

International Accounting Standards Board (*IASB*) stipulates the transactions between related parties as funds, services or obligations transfers from one dependent entity to another and/or vice-versa. No price is applied, transaction being subject to billing. *IAS 24* stipulates an affiliated entity to be a person, business or organization affiliated to another entity submitting Annual Tax Reports. Aforesaid regulation defines affiliated entities those making a group (parent business with its subsidiaries, relationship between subsidiaries being considered an affiliated one).

Affiliation cases between entities are stipulated by the Romanian Tax Code, chapter 26, (a), (b), (c), (d) of the article 7 of the *Law 227/2015 regarding the Fiscal Code*. Two private persons get affiliated, one of them as husband/wife or others relative within 3rd generation; a private person gets affiliated to a business entity (legal entity), min 25% of shares to be held by the first one directly or due to affiliation or the first person really controls the second entity; two business entities (legal entities) get affiliated, min 25% of shares to be held by the first one directly or due to affiliation or the first entity really controls the second entity or vice-versa (min 25% of shares to be held by the second entity or the second entity really controls the first one).

IFRS requirements are applied by 98% of European countries as basic regulations for business operation (Pacter, 2017). Recent studies emphasize that *IFRS* regulations application has increased Annual Tax Reports quality due to decreasing manipulation of the accounting data. Annual Tax Reports show more accurate and valuable data (Barth, Landsman and Lang, 2008); *IFRS* requirements do stipulate more detailed data disclosure in Annual Text Reports submitted by the business compared to national accounting regulations. That is why *IFRS* regulations application has decreased the amount of the voluntary disclosed data by business managers (Li and Yang, 2015).

Romanian listed companies at *BSE* have to apply *IFRS* on accounting and annual tax reporting from 2012. Businesses affiliated with others and booking

transactions with them have to apply *IAS 24* regulations on affiliated entities data disclosure for Annual Tax Reporting. The last version of this standard adopted by *IASB* was issued from 4th November 2009, being effective after 1st January 2011. The specifications of the standard are willing to apply accounting data quality requirements on relationships and transactions between affiliated parties. The clearance of the aforesaid data and full compliance to business health of the entity the end users are interested to. Such data publishers have to assure that to any end user. Compulsory data a business has to disclose in Annual Tax Report: relationship of the parent business to its subsidiaries despite no transactions have been booked between them; Top Management remuneration in whole and separately; kind of relationship to affiliated entities and transactions among them as transaction value, outstanding balance, financial obligations, accounting provisions, terms and conditions, banking and other guarantee values, etc.). Aforesaid data have to be separately disclosed per each entity as parent business, subsidiaries, commonly controlled and/or influenced, affiliated, other relationships. Transactions' transparency between affiliated entities under *IAS 24* will increase and, at the same time, increase user confidence in their financial information.

3. METHODOLOGY

This study is based on Annual Tax Reports issued by Romanian companies under *IFRS* requirements considering that Romanian listed companies on *BSE* do apply aforesaid compulsory specifications. The range of businesses considered under present study will come from those Romanian listed under Listed Businesses Market, 53 of 85 listed on Regulated Market in 2016 Tax Year. This way the scope of this study will be fulfilled. 32 of Romanian listed companies were not considered under this study as they are related to banking, insurance or investment funds due to other tax and accounting reporting requirements applicable; these businesses are not affiliated to any Company Group, do not have affiliated entities both in Romania or abroad, their Annual Tax Reports do not contain data disclosed on relationships and transactions between affiliated entities; are companies in bankruptcy and the data disclosed by these entities are not relevant for the present study, their business activity is not continuous. 4 companies have affiliated entities, but did not book monitored transactions in the time frame considered. These 4 entities were not considered under present study in order to avoid altering the Global Data Disclosure Index. In case of no transactions booked between related entities aforesaid index will be 0. This will affect its global value.

Data sources as Tax and Accounting Reports are separate annual reports and tax returns, consolidated ones, Top Management reports, Annual Reports of the Board of Directors, other similar reports and papers. The data was collected manually from the Annual Tax Reports filed under *IFRS* requirements and data

disclosed under *IAS 24* specifications were considered for the whole range of businesses considered under present study.

Data Disclosure Index on relationships and transactions between affiliated entities must be calculated applying Cooke technique (Cooke, 1989a) who used for this purpose the voluntary disclosure index or by computing number of words applied on submitting data (Copeland and Fredericks, 1968; Borkowsky and Gaffney, 2012). Cooke (1989a) considers the last method to be subjective, an alternative one being the application of dichotomic variables equal to 1 if data were submitted and to 0 if data are not present in the report.

Data Disclosure Index calculation means identification of elements as proof of submitting data by the affiliated entities. Aforesaid elements selection criteria were those identified in previous similar studies, recommended under *IAS 24* requirements and national accounting regulations and those, as we think, disclosed by affiliated entities under voluntary scheme. Data Disclosure Index of relationships and transactions among related parties has been calculated due to completion of all the elements analysis by following data types: A – data concerning relationships between related parties (4 elements); B – data concerning business Top Management compensation (5 elements); C – data concerning transactions among related parties (8 elements); D – data concerning transfer prices application (2 elements); E – data concerning accounting policies applied for transactions between related parties (1 element). Table 1 evidently shows all the elements selected for calculating Data Disclosure Index by Romanian listed businesses on relationships and transactions among related parties and each element rate in the Data Disclosure Index.

Value 1 is assigned to an element found in the Annual Tax Report and 0 to the one not present/missing. This step comes from Cooke technique (Cooke, 1989a). Data Disclosure Index will be calculated following this relation:

$$D_i = \frac{\sum_{i=1}^m d_i}{\sum_{i=1}^n d_i} \quad (1)$$

Where:

D_i – Data Disclosure Index on relationships and transactions between related entities, values between 0 and 1. Data disclosure rate is higher as much as Data Disclosure Index value is close to 1 in compliance to *IFRS* for listed businesses applied to annual tax reporting as per *IAS 24* requirements;

d_i – element to disclose, equal to 1 if submitted and to 0 if not;

m – number of elements submitted;

n – number of elements expected to be submitted, max value is 20; $m \leq n$.

Data Disclosure Index will be calculated per each data type (D_A , D_B , D_C , D_D , D_E). A separate Data Disclosure Index will be calculated for mandatory ($D_{\text{mandatory}}$) and voluntary ($D_{\text{voluntary}}$) disclosed data. After that a Global Data Disclosure Index (D_{global}) considering both mandatory and voluntary data

disclosed will be calculated. Each selected element will be a 5% rate of availability assigned (100%/20, considering max of 20 elements identified and selected for Data Disclosure Index calculation on affiliated entities).

Table 1. Data disclosure in Annual Tax Reports specifications for related parties

| Disclosure scheme | Data type | Description | % | % |
|-------------------|-----------|---|-----|-----|
| Mandatory | A | Parent business name (1) | 24 | 20 |
| | | Influencing or controlling entity, highest level (2) | | |
| | | Next parent business name (by importance) in charge for annual tax reporting (3) | | |
| | | Relationship between parent business and subsidiaries (4) | | |
| | B | Short-term benefits for Employees (5) | 29 | 25 |
| | | After employment benefits (6) | | |
| | | Other long-term benefits (7) | | |
| | | Employment ending benefits (8) | | |
| | | Employment ending benefits (9) | | |
| | C | Description of relationship between affiliated entities (10) | 47 | 40 |
| | | Type of transactions among affiliated entities (11) | | |
| | | Description of transactions (12) | | |
| | | Value of transactions (13) | | |
| | | Outstanding balance of transactions, financial obligations included (14) | | |
| | | Accounting provisions on doubtful debts related to outstanding balances (15) | | |
| | | Recognized expenses on the time frame related to doubtful or unclaimable debts of affiliated entities (16) | | |
| | | Data separately disclosed as related to the parent business; businesses, persons or organizations significantly controlling or influencing the entity; subsidiaries; associated entities; business or businesses the entity is shareholder of; top managers of the parent business, of an entity or of other affiliated entities (17) | | |
| Total mandatory | | | 100 | 85 |
| Voluntary | D | Transfer prices-related data (18) | 67 | 10 |
| | | Transactions done under market (19) | | |
| | E | Accounting policies applied to transactions between related parties (20) | 33 | 5 |
| Total voluntary | | | 100 | 15 |
| TOTALS | | | - | 100 |

Source: own processing

This is to avoid subjectivity and discordant evaluations on an element significance when calculating the Global Data Disclosure Index (Cooke, 1989b;

Corlaciuc and Tiron, 2013; Spero, 1979). Type A data means submitting the parent business name, the name of the entity controlling parent business on the highest level, parent business name in charge for Consolidated Annual Tax Reporting. The other 2 elements were assigned value 1 as these data submission is necessary when one name is different from another one. In manner to avoid altering Data Disclosure Index value the element concerning relationship to subsidiaries is assigned value 1 too for businesses not having subsidiaries or not included in Company Groups.

The 2016 Annual Tax Reports were analysed due to approval in the same year of the new legal requirements on Transfer Prices File submitting. Data Disclosure Index on relationships and transactions between affiliated entities has been significantly increasing due to aforesaid legal specifications as compared to average value of Data Disclosure Index before 2016 (Corlaciuc and Tiron, 2013; Feleagă and Neacșu, 2016).

Data coming from Tax Reports have been processed in Microsoft Excel spreadsheets; the indexes calculated per entity, by data type, mandatory, voluntary and global indexes are enclosed in Table 2.

Table 2. Disclosure indexes for related parties

| No. | Entity | D _A | D _B | D _C | D _D | D _E | D _{mandatory} | D _{voluntary} | D _{global} |
|-----|--------|----------------|----------------|----------------|----------------|----------------|------------------------|------------------------|---------------------|
| 1 | ARS | 1.00 | 0.00 | 0.54 | 0.00 | 1.00 | 0.51 | 0.50 | 0.51 |
| 2 | ALR | 1.00 | 0.60 | 0.58 | 1.00 | 1.00 | 0.73 | 1.00 | 0.86 |
| 3 | ALT | 1.00 | 0.00 | 0.13 | 0.50 | 1.00 | 0.38 | 0.75 | 0.56 |
| 4 | ALU | 1.00 | 0.20 | 0.71 | 0.00 | 1.00 | 0.64 | 0.50 | 0.57 |
| 5 | ATB | 0.75 | 0.00 | 0.13 | 0.00 | 1.00 | 0.06 | 0.50 | 0.40 |
| 6 | ARM | 0.75 | 0.20 | 0.63 | 0.50 | 0.00 | 0.53 | 0.25 | 0.39 |
| 7 | SPCU | 1.00 | 0.40 | 0.42 | 1.00 | 1.00 | 0.61 | 1.00 | 0.80 |
| 8 | CBC | 1.00 | 0.00 | 0.42 | 0.00 | 1.00 | 0.47 | 0.50 | 0.49 |
| 9 | BCM | 1.00 | 0.60 | 0.63 | 0.00 | 1.00 | 0.74 | 0.50 | 0.62 |
| 10 | CEON | 1.00 | 0.80 | 0.54 | 0.50 | 1.00 | 0.78 | 0.75 | 0.77 |
| 11 | CMF | 1.00 | 0.00 | 0.63 | 0.50 | 1.00 | 0.54 | 0.75 | 0.65 |
| 12 | CMP | 1.00 | 0.60 | 0.63 | 1.00 | 1.00 | 0.74 | 1.00 | 0.87 |
| 13 | COTE | 1.00 | 0.60 | 0.67 | 0.00 | 1.00 | 0.76 | 0.50 | 0.63 |
| 14 | ELJ | 1.00 | 0.00 | 0.50 | 0.00 | 0.00 | 0.50 | 0.00 | 0.25 |
| 15 | ELGS | 1.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.38 | 0.00 | 0.19 |
| 16 | ECT | 0.75 | 0.20 | 0.46 | 0.00 | 1.00 | 0.47 | 0.50 | 0.48 |
| 17 | ELMA | 1.00 | 0.20 | 0.71 | 0.00 | 0.00 | 0.64 | 0.00 | 0.32 |
| 18 | EPT | 1.00 | 0.00 | 0.46 | 0.50 | 1.00 | 0.49 | 0.75 | 0.62 |
| 19 | RMAH | 1.00 | 0.20 | 0.58 | 0.00 | 1.00 | 0.59 | 0.50 | 0.55 |
| 20 | IMP | 1.00 | 0.40 | 0.54 | 0.00 | 1.00 | 0.65 | 0.50 | 0.57 |
| 21 | MECF | 1.00 | 0.40 | 0.58 | 1.00 | 0.00 | 0.66 | 0.50 | 0.58 |
| 22 | MECE | 1.00 | 0.40 | 0.17 | 0.50 | 1.00 | 0.52 | 0.75 | 0.64 |

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| No. | Entity | D _A | D _B | D _C | D _D | D _E | D _{mandatory} | D _{voluntary} | D _{global} |
|-----|--------|----------------|----------------|----------------|----------------|----------------|------------------------|------------------------|---------------------|
| 23 | NAPO | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.33 | 0.50 | 0.42 |
| 24 | SCPS | 1.00 | 1.00 | 0.58 | 1.00 | 0.00 | 0.86 | 0.50 | 0.68 |
| 25 | SNN | 1.00 | 1.00 | 0.63 | 0.00 | 1.00 | 0.88 | 0.50 | 0.69 |
| 26 | OIL | 1.00 | 0.00 | 0.42 | 0.00 | 0.00 | 0.47 | 0.00 | 0.24 |
| 27 | SNP | 1.00 | 0.60 | 0.88 | 0.50 | 0.00 | 0.83 | 0.25 | 0.54 |
| 28 | SNO | 1.00 | 0.20 | 0.38 | 0.50 | 1.00 | 0.53 | 0.75 | 0.64 |
| 29 | PEI | 1.00 | 0.00 | 0.71 | 0.00 | 1.00 | 0.57 | 0.50 | 0.53 |
| 30 | PREH | 1.00 | 0.40 | 0.54 | 1.00 | 1.00 | 0.65 | 1.00 | 0.82 |
| 31 | PPL | 1.00 | 0.20 | 0.25 | 0.00 | 0.00 | 0.48 | 0.00 | 0.24 |
| 32 | RTRA | 1.00 | 1.00 | 0.42 | 1.00 | 1.00 | 0.81 | 1.00 | 0.90 |
| 33 | MCAB | 1.00 | 0.20 | 0.38 | 0.00 | 1.00 | 0.53 | 0.50 | 0.51 |
| 34 | SNG | 1.00 | 0.40 | 0.42 | 0.00 | 0.00 | 0.61 | 0.00 | 0.30 |
| 35 | ROCE | 1.00 | 0.20 | 0.42 | 0.50 | 1.00 | 0.54 | 0.75 | 0.64 |
| 36 | RRC | 1.00 | 0.20 | 0.50 | 1.00 | 1.00 | 0.57 | 1.00 | 0.78 |
| 37 | PTR | 1.00 | 0.00 | 0.63 | 1.00 | 1.00 | 0.54 | 1.00 | 0.77 |
| 38 | RPH | 1.00 | 0.20 | 0.50 | 1.00 | 0.00 | 0.57 | 0.50 | 0.53 |
| 39 | STZ | 1.00 | 0.20 | 0.71 | 0.00 | 0.00 | 0.64 | 0.00 | 0.32 |
| 40 | SOCF | 1.00 | 0.00 | 0.58 | 0.00 | 0.00 | 0.53 | 0.00 | 0.26 |
| 41 | EL | 1.00 | 0.20 | 0.00 | 0.00 | 0.00 | 0.40 | 0.00 | 0.20 |
| 42 | STIB | 1.00 | 0.00 | 0.42 | 0.50 | 1.00 | 0.47 | 0.75 | 0.61 |
| 43 | TRP | 1.00 | 0.20 | 0.42 | 1.00 | 0.00 | 0.54 | 0.50 | 0.52 |
| 44 | ART | 1.00 | 0.20 | 0.50 | 0.00 | 1.00 | 0.57 | 0.50 | 0.53 |
| 45 | TGN | 1.00 | 0.40 | 0.67 | 0.00 | 1.00 | 0.69 | 0.50 | 0.59 |
| 46 | TEL | 1.00 | 0.20 | 0.00 | 0.00 | 0.00 | 0.40 | 0.00 | 0.20 |
| 47 | COTR | 1.00 | 0.20 | 0.71 | 0.00 | 1.00 | 0.64 | 0.50 | 0.57 |
| 48 | TUFE | 1.00 | 0.00 | 0.50 | 0.50 | 0.00 | 0.50 | 0.25 | 0.38 |
| 49 | EFO | 0.75 | 0.00 | 0.63 | 0.00 | 1.00 | 0.46 | 0.50 | 0.48 |
| 50 | UZT | 1.00 | 0.20 | 0.25 | 0.00 | 0.00 | 0.48 | 0.00 | 0.24 |
| 51 | VESY | 0.00 | 0.00 | 0.75 | 1.00 | 0.00 | 0.25 | 0.50 | 0.38 |
| 52 | VNC | 1.00 | 0.20 | 0.29 | 0.50 | 1.00 | 0.50 | 0.75 | 0.62 |
| 53 | SCD | 0.75 | 0.20 | 0.63 | 0.50 | 1.00 | 0.53 | 0.75 | 0.64 |

Source: own processing

To reflect the extent to which the affiliated entities presented the financial information, their maximum disclosure level, i.e. 100%, was split using a 4-point scale, resulting four levels of disclosure as shown in Table 3: low, low to medium, medium to high and high. Table 3 shows 2 entities disclosing low level of detail of both mandatory and voluntary data concerning transactions and relationships to affiliated entities. Low to Medium level of detail on global data disclosure has been identified in case of 22 businesses.

Table 3. Level analysis of disclosure indexes

| Index level (%) | Number of entities | | |
|------------------------|------------------------|------------------------|---------------------|
| | D _{mandatory} | D _{voluntary} | D _{global} |
| 0-25 (low) | 2 | 11 | 5 |
| 26-50 (low to medium) | 22 | 20 | 21 |
| 51-75 (medium to high) | 26 | 15 | 25 |
| 76-100 (high) | 3 | 7 | 2 |
| Total | 53 | 53 | 53 |

Source: own processing

According to agency theory (Jensen and Meckling, 1976) it is assumed that dispersed ownership entities tend to publish information with high levels of application to enhance the credibility of financial reports. This assertion is confirmed by the fact that a Medium to High level of detail of global data disclosure has been found for 26 businesses. High level of detail of global data disclosure has been found for only 3 businesses making the range of those considered. 22 businesses where disclosing compulsory data on growing trend. A lower number of businesses disclosing voluntary data equal to 20 was found in growing trend too.

Table 4 shows min, average and max values of the Data Disclosure Index concerning transactions among related parties (mandatory, voluntary and global disclosure).

Table 4. Minimum, average and maximum values Disclosure Index analysis

| Value | D _{mandatory} | D _{voluntary} | D _{global} |
|---------|------------------------|------------------------|---------------------|
| minimum | 0.06 | 0.00 | 0.19 |
| average | 0.57 | 0.50 | 0.53 |
| maximum | 0.88 | 1.00 | 0.90 |

Source: own processing

Lower Data Disclosure Index (compulsory data) value equal to 0.06 has been calculated in case of Antibiotice S.A. Electroargeş S.A. shows a minimum value of 0.19 in case of global data disclosure due to a 0 level of voluntary information disclosure. The same time 9 businesses did not disclose any transfer prices- and accounting-related data on relationships and transactions between affiliated in case of voluntary data disclosure, but 7 businesses show high Data Disclosure Index values on voluntary disclosure specification: Alro S.A., Boromir S.A., Compa S.A., Prefab S.A., Retrasib S.A., Rompetrol Rafinare S.A. and Rompetrol Well Services S.A. According to the legitimacy theory, which asserts the increase of the reputable capital and the strengthening of the legitimacy of the companies that issue financial reports filled in with voluntary

information, this was the reason why the given entities provided such information to the users.

Global Index covering the whole range of considered businesses (average values) are about 0.53, which means a Medium level of detail on data disclosure. Similar studies show Low to Medium a 42% level of detail (Corlaciuc and Tiron, 2013) and Global Index exceeding 50% (Feleagă and Neacșu, 2016). Overall Voluntary Data Disclosure Index shows 50% which means that business Top Management is willing to disclose higher data rates on relationship and transactions between affiliated entities due to increasing transparency rate of such transactions and customer trustworthiness over accounting and tax report data. Higher Data Disclosure Index both by compulsory and voluntary scheme has been found for Retrasib S.A., Global Index equals to 0.90. The parent company of this entity is located in Germany and we may suppose that the high level of disclosure of such type of information is due to accounting policies adopted. Nuclearelectrica S.A. has submitted much more compulsory data on relationships and transactions related to transfer prices, even it has no the obligation to disclose information about transactions between related parties, as it is a state-owned company. Its Data Disclosure Index equals to 0.88.

It is necessary to present the results obtained for the Indexes calculated for each Data type (Table 5), in order to understand which category influenced most observed results at the level of the whole sample. Type A of information was presented 96% by Ves SA., Antibiotice S.A. being the one which does not provide any information in this category, and 46% of the entities disclosed the whole information related to this category required by *IFRS*.

Table 5. Disclosure Indexes according to Data Type

| | Type A | Type B | Type C | Type D | Type E |
|--------------|--------|--------|--------|--------|--------|
| Index | 0.96 | 0.26 | 0.48 | 0.35 | 0.64 |

Source: own processing

Lower Data Disclosure rate concerns Top Management salaries, Data Disclosure Index equals to 0.26. This is due such data classification as confidential despite their disclosure being legally compulsory. 5 data components concerning Top Management salaries made compulsory under *IAS 24* requirements were submitted by Retrasib, Natura Quattor Energia Holdings and Nuclearelectrica businesses only. Meanwhile, 13 businesses did not comply to the requirements on disclosing such data due to Data Disclosure Index equal to 0.

Data Disclosure rate on relationships among related parties is higher by Data Type covering 96%. From 53 related parties analysed, only four have not provided such information: Armatura S.A., Antibiotice S.A., Electrocontact S.A., Turism, Hoteluri, Marea Neagră S.A., and Zentiva S.A. Higher Data

Disclosure rate on transactions between affiliated entities has been shown by OMV Petrom S.A. (88%). Data Disclosure rate covers only 13% as min value for Type C Data when submitted by Antibiotice S.A., Electroarges S.A. and Altur S.A.

Transfer prices-related data disclosure outputs do show 14 entities submitting all the selected data types despite these data are not compulsory. The same time 25 businesses did not report that in Annual Tax Report. Considered range of businesses has shown a Low to Medium level of detail on data disclosure (35%) despite disclosed data are classified as general. This is to emphasize that some entities have been submitting the same data willing to say they are coming from the same source. A big part of these data was reporting compliance to *Organization for Economic Cooperation and Development* specifications on transfer prices-related transactions. Accounting policies on relationships and transactions between related parties show a Medium to High disclosure rate (64%) despite the global disclosure rate of such data equals to 5%. This is to emphasize that 33 businesses (covering more than a half of range of businesses considered) have submitted in their Tax Reports also voluntary data which might be helpful for end users. Mainly these data cover the way they are disclosed when related to affiliated entities and fit some *IAS 24* specifications. Quite all these data as when related to transfer prices are similar from one Tax Report to another.

4. CONCLUSIONS

Data disclosure in compliance to end user specifications is the main target of any Business Top Management willing to attract investments. Data disclosure related to relationships and transactions among related parties will have to increase the trustworthiness of the end users over Annual Tax Reports issued by a Group of Companies. Annual Tax Reports will contain wrong data on business health and performance considering manipulations done within accounting data reported. Only compliance of data reported to accounting records and voluntary data disclosure will reveal business health of the affiliated entities as true or not. This will only increase the transparency of the transactions between affiliated entities and trustworthiness over their operational reports.

This study concerns the metrics of information disclosure on related parties by Romanian listed businesses. The scope has been reached through content analysis of the 2016 Annual Tax Reports issued by listed entities and calculating Data Disclosure Index by Cooke technique (Cooke, 1989). Both compulsory and voluntary disclosed data coming from Annual Tax Reports were considered/analysed.

This study output shows that Romanian listed companies disclose 53% of data on related party transactions. Data disclosed on related parties contain higher disclosure rates in case of mandatory data submitted compared to

voluntary disclosed data. This is what to be expected as businesses, first of all, are willing to submit compulsory data as legal requirement to follow. Output generated for the same range of businesses considered for a time frame before the one applied in this study shows a Low to Medium Data Disclosure Rate on relationships and transactions between affiliated entities (Corlaciuc and Tiron, 2013) and a Medium to High trend (Feleagă and Neacșu, 2016). By adopting OPANAF 422/2016, the level of disclosure was expected to be higher compared to other periods, which was not confirmed for the given exercise. However, this does not mean that the introduction of this regulation cannot have an influence over time, and a more detailed analysis of the pre- and post-adoption periods is needed.

Data Disclosure Variables analysis by Disclosure Scheme or Data Type shows variable rates of disclosure (higher or lower). This is due to data classification as confidential when their disclosure must damage the core business. The other reason must concern not relevant data due to transactions not exceeding the limit value of the Data Disclosure Significance Index (these data are disclosed in Aggregated Mode). Some entities show index values close to 1, which means higher probability of fitting financial reporting specifications, moreover those specified by IAS 24, fact confirmed according to agency theory. Voluntary information is disclosed in the financial reports of the analysed entities, thus characterizing from the perspective of the legitimacy theory, being oriented towards obtaining image benefits (Calu *et al.*, 2015).

Only once financial year has been considered on calculating Data Disclosure Index on affiliated entities. This is a limitation of the present study due to higher amount of time needed to get more accurate outputs and generate the concerned Data Disclosure Index trend. Materiality of Data Disclosure by each entity has not been considered too. Each entity which Data Disclosure Materiality of the transactions between affiliated parties has been under Index Limit Value has been classified as not relevant for Separated Data Disclosure per affiliated entity. In this case Data Disclosure has been managed in Aggregated Mode (simplified reporting related for more elements placed together). This study has considered this case in lower detail as calculated Data Disclosure Index may not be realistic.

More details on data disclosure done by Romanian listed entities upon IAS 24 specifications must come from additional studies including more worked finance-related examples. This way will allow to compare data disclosure detail in time. It must be observed how do national regulations amendments affect data disclosure concerning relationships and transactions between related parties. It will be set up a model design to identify the issues influencing data disclosure concerning relationships and transactions among related parties and disclosed data importance.

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IMPACT OF THE INTERNET OF THINGS ON THE DEVELOPMENT PROCESS IN THE INDUSTRY 4.0 ERA – A MULTIDIMENSIONAL APPROACH

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Abstract

The development of human knowledge is recognized as one of the most important elements of evolution, but at the same time its achievement process is difficult to attain. That is because throughout human history, the technological progress that emerged from discoveries, inventions, and scientific breakthroughs has decisively shaped development. In the new millennium, humankind is reshaped once more by the widespread digitalisation phenomenon engendered by recent developments in information technologies.

The mainstream scientific literature emphasizes the vital role played by the digitalisation process, also known as Industry 4.0, in animating and stimulating the transformation of today's reality. However, the current body of knowledge does not completely understand and explain the impact of technological progress entailed by digitalisation on human development.

The foremost aim of this paper is to provide an overview of studies dealing with the concept of Internet of Things and its impact on the development process in the Industry 4.0 context, thus contributing to a better understanding of the multidimensional impact of digitalisation on the human development process.

Methodologically, a qualitative research was undertaken, resorting to descriptive and exploratory literature review. A content analysis technique was performed regarding (1) the concepts of Internet of Things and Industry 4.0 and (2) their impact on different dimensions of our current reality.

In our opinion, the human development process in the context of the so-called Fourth Industrial Revolution cannot be reduced to a single dimension, whether economic, social or technological. Most of the studies analysing the technological breakthroughs of the digital era often practice this kind of reduction. This paper highlights the need for an interdisciplinary understanding of the concepts, motivated by the complexity of the impact of the digitalisation phenomenon on the development process.

Keywords: *internet of things; industry 4.0; digitalisation; development.*

JEL Classification: O33, J24, O14, L17, O15

1. INTRODUCTION

The development of human knowledge is one of the primary and most difficult evolution features to attain. This is because, since the dawn of ages, the development of humankind was shaped by its great discoveries. A subject for heated debate in the scientific world and beyond, the technological advancement of humankind over the centuries ultimately left its irreversible marks on the reality in the world, at a time then-known as the First Industrial Revolution Era (Mokyr, 2002). The great discoveries of the Industrial Revolution in Great Britain dating back two centuries are undeniable, along with the discovery of the fabulous benefits of using steam engine power. Humankind had to recognize the importance of a new technological leap when goods could be produced and mass consumed by implementing a new manner of thinking about and practicing the manufacture and packaging of various industrial components. A third wave of technological progress brings about information technologies and automation of the productive process (Li, Hou and Wu, 2017).

Humanity finds its reality at the threshold between millennia as being retouched by the ubiquity of the digitalisation phenomenon. Information technologies shape and irreversibly transform the current economy, from the mode of organizing the production function, the operation and expansion of markets, up to the production of and capitalizing on ideas and knowledge (Brynjolfsson and McAfee, 2011). Perhaps the particularity of the moment in regards to the existence of humanity resides in the very chance of witnessing the emergence of artificial intelligence, as well as its manifestation in highly diverse and complex areas, from the design and creation, up to the supply and sale of goods and services at a global scale.

The smart and precise manipulation of various objects in environments that are more or less hostile-to-life, or the autonomous driving and independent use of means of transportation, are fields that until quite recently pertained exclusively to the exercise of unique human capacities. Machines and humans are working together, communicate and interact with each other in a manner that was unimaginable or unconceivable until a few decades ago. The implications of this fabulous evolution on development could make the difference between prosperity and survival and between survival and disappearance (Brynjolfsson and Kahin, 2000).

The International Exhibition in Hannover in 2011 is the official birthplace of the Industry 4.0 concept, which two years later was going to form the scope of the German Government's Guidelines for Implementing the Strategic Initiative. This would have a significant impact throughout the world by lifting the curtain for the Fourth Industrial Revolution (Li, Hou and Wu, 2017). What we currently know is that such a concept is not limited only to industrial manufacture. Instead, it manifests in all aspects of human society: technology, production, consumption, business environment, through to the everyday life of billions of

people. The intensive and extensive use of cyber-physical systems (C.P.S.) and advanced automations are the defining features of the “*New Industrial Revolution*” (Liu and Xu, 2017), based on the deep integration of artificial intelligence and telecommunication systems in the economic and social reality (Zang, 2014).

The literature highlights the vital importance of the digitalisation process as a dynamising and determinant force of the transformations emerging in the Industry 4.0 era (Ardito, D’Addab and Messeni Petruzzellia, 2017; Khorov, *et al.*, 2015; Li, Hou and Wu, 2017; Zarei, 2016). The digitalisation phenomenon takes a few primary forms of manifestation: Internet of things (IoT), Artificial Intelligence (A.I.) and Machine Learning, Big Data and Cloud Computing, and Digital Platforms, respectively (Schwab, 2016). What the literature still fails to achieve is a complete understanding of the impact that the technological progress of the digitalisation phenomenon has on human evolution, which emphasizes the importance of knowing the concepts of Industry 4.0 and Internet of Things (IoT), as well as the effects on the surrounding reality.

The scope of this paper is to provide an overview of studies dealing with the concept of **Internet of Things** and its impact on the development process in the **Industry 4.0** context, thus contributing to a better understanding of the multidimensional impact of digitalisation on the human development process, an endeavour that could help delineate a clearer image of the impact of the *Fourth Industrial Revolution* on the evolution of humankind.

2. LITERATURE REVIEW

Designed as a series of transformations generated by the large-scale adoption of information technologies that create, process and convey information, digitalisation is a phenomenon that was produced and led by technological progress and the dissemination of innovations (Katz, 2017). The term “digital economy” refers to the recent transformations in all economic sectors. While the effects of this transformation are not fully known at the time, the role and impact of information technologies on economic development are constantly growing ((Brynjolfsson and Kahin, 2000).

The topic is an element of analysis with an ever-increasing level of interest for specialists and researchers. Some believe that the new digital technologies are a determinant factor for constraints’ relaxation in terms of achieving economies of scale, thus allowing for a more rapid growth of traditional economic sectors (Katz, 2017). On the other hand, the increase in productivity is seen as a result of streamlining productive processes by using information technologies (Atkinson, Castro and Ezell, 2009).

In reference to the impact of investments in the IT industry on economic growth, Jorgenson (2011) notes that the resumption of economic growth after 1995 is largely owed to the information technology field. The same study

highlights that the ushering in of new technological innovations had a substantial contribution to the economic growth of certain economic sectors, while the evolution of the results achieved by other was significantly influenced by the replicative, mimetic use of already available technologies (Jorgenson, 2011).

Some empirical studies conclude that by eliminating the constraint regarding access to resources, factors of production and the substantial expansion of markets, digitalisation caused the labour demand to increase (Crandall, Lehr and Litan, 2007). On the other hand, some studies have demonstrated that for certain industrial sectors the adoption of digital technologies generated drops in the volume of labour necessary to maintain or boost productivity (Thomson and Garbacz, 2008). Thus, the capacity and means of adopting and implementing new technologies in organisations become particularly important under the conditions of continuous acceleration of the process of substituting labour for capital (Basu and Fernald, 2008).

Digital technologies are deemed one of the most important factors of development (Brynjolfsson and McAfee, 2011). Moreover, given that the results of implementing such technologies can be seen in almost all fields of economic activity, information technologies take on the versatility that is specific of *general purpose technologies* (G.P.T.), a term that economists associate with a small group of technological innovations whose essential characteristic is the revolutionary acceleration of the economic development process. The most relevant examples of such technological innovations are the steam engine, electricity or the mass production method. The essential features of these technologies are defined by quasi-total use, potential for continued improvement, creation of new opportunities to innovate, as well as by the capacity to improve productivity. As general purpose technologies improve, they will be used throughout the economy, thus resulting into development.

On the topic of digitalisation, Brynjolfsson and McAfee (2011) highlight the importance of constantly creating new opportunities, on the one hand, as well as the fact that it is the most genuine expression of *creative destruction*; innovators use both old and new technologies, generating a profound transformation of the duties, activities, processes, and of the entire organisation itself. The authors argue that, in this way, innovations that are based on information technologies transform the current economy one sector at a time. Another relevant aspect of the *intangible economy* refers to the market expansion effect. In addition to the opportunity of identifying and satisfying the needs of an ever-increasing number of consumers in ever-shorter periods of time, digitalisation creates the opportunity of manifesting the talent, clairvoyance and reasoning of entrepreneurial decisions. Stiff competition, easier access to financing, cost reduction, and immense rewards are only a few attributes of the *intangible economy*.

However, not all opinions by economists converge in seeing the positive role of the information revolution in the economic development process. Noting the economic productivity downturn in America between 2006 and 2016, considering the increasing rate of innovation over the same period, Gordon (2018) argued that this apparent paradox was partially explained by reaching the maturity of information technology innovations, as well as by the lack of the revolutionary character of introducing new digital technologies – robotics and artificial intelligence (Gordon, 2018).

The ambiguous role of the “small business” sector in the current economy is yet another aspect analysed by the literature with respect to the implications of developing new information technologies (Brynjolfsson and Kahin, 2000). The conclusion reached by some researchers highlights the importance of innovative activities undertaken by small entrepreneurs, beneficiaries of financing availability and intellectual property rights’ protection from large corporations (Kortum and Lerner, 2000).

There are varied opinions on the role of governmental policies in the context of the digital era. Some studies argue for a proactive position of governmental actions: the state’s anticipation and intervention for minimizing the effects of losing comparative international advantages, as well as the effects of imbalances in the labour market (Pisano, Hayes and Wheelwright, 2012). Other analyses conducted from the libertarian “laissez faire” approach, considering the uncertainty of accurately anticipating possible effects and acknowledging the importance of digitalisation in regards to the development process, point out the role of the state in reducing capital cost and in the access to financing, as well as in terms of creating a permissive legislative framework for a more effortless adoption of new technologies, to the same extent as for ensuring the conditions for business operators to conduct activities in the sense of the “creative destruction” concept (Crafts and Toniolo, 2012; Van Ark, 2014; Nicoletti and Scarpetta, 2004).

3. METHODOLOGY

Starting from the aim of this paper, namely identifying the impact of IoT on the development process considering the transformations generated by the manifestation of the digitalisation phenomenon in the surrounding reality, known as Industry 4.0, the methodology employed refers to the analysis of the literature over the last several years, based on a qualitative approach – **content analysis**. The method used for data collection is **documentary research** (Zait, Spalanzani and Zait, 2015).

Regarding the **objectives of this paper**, the systematic analysis of recent studies in the literature are based on the meaning assigned to the two concepts – IoT and Industry 4.0 (O.1.), as well as the identification of the specific fields or

dimensions of the reality in which the two concepts manifest their transformative valences (O.2.).

3.1. Selection strategy and eligibility criteria

In order to ensure access to scientific literature, the database we considered is the one provided by the Institute for Scientific Information – Clarivate Analytics – Web of Science. We researched articles published between 2009 and 2018, and the keywords used for all possible selection fields were: Internet of Things and Industry 4.0.

Initially we identified a total of 34,426 works. Subsequent result filtering using keywords (digitalisation, development, impact) cut the results to 349 documents. After eliminating ineligible papers (fields other than those relevant to the aim and objectives of this endeavour, duplicates), the final results included a total of 66 articles.

After sorting them by the number of citations, the papers were subject to a subsequent analysis by going over their abstracts.

Of the total 66 scientific papers, the majority were specialty articles and papers presented in various conferences (33 articles and 32 proceedings papers). The year with the highest rate of works published on the topics selected as keywords was 2018.

3.2. Determining the final selection criteria and information extraction

The 66 eligible works were assessed per the following criteria regarding the final selection thereof for complete content analysis purposes:

- ☐ Type of work – scientific article;
- ☐ Year of publication – after 2014, inclusively;
- ☐ The approached themes refer to the process of development (economic, social, technological);
- ☐ The addressed topics concern the impact of Industry 4.0 and IoT on the various dimensions of the surrounding reality;
- ☐ The primary matters involved include the innovative process and entrepreneurial action.

Of all the articles subject to final selection and full content analysis thereof per the presented criteria, a total of 10 articles were included in the final synthesis of the qualitative analysis.

4. RESULTS

The content processing of articles selected in conformity with the proposed methodology was conducted using the specialized software for qualitative data analysis NVivo 12 Pro Plus. After inputting the selected articles into the aforementioned software and reading through the texts, we identified the frequencies of occurrence of certain terms and concepts, as well as their specific

themes or dimensions. For coding the themes, we established three dimensions of reality (economic, social and technological), with sorting thereof being performed per the association of the impact of IoT on the transformations within these dimensions in the context described by Industry 4.0.

The technological dimension comprises subcategories regarding the development of new digital technologies, including internal organisational strategies and processes of companies for the adoption or implementation thereof. This dimension is the most comprehensive of all those identified, with a total number of 238 references. The subtheme with most mentions in the analysed texts refers to **new equipment and concepts** (87 references), including terms such as “big data”, “data storage”, and “smart technologies”. The **communication technologies’ implementation and adoption** subcategory comprises a total of 61 references, the most frequently encountered of which refer to the interconnectivity of products and the evolution of communication technologies. For the **digitalisation process** subtheme we found 43 references, of which the most frequent refer to the revolution, evolution and transformations within the industrial sector, technological transfer, data and information processing via smart equipment. In the **development** subcategory (a total of 29 references), the most frequent aspects identify the possible revolutionary impact of technological transformations on future development in various fields of activity.

The economic dimension, with a total number of 178 references, comprises the following subthemes: **consumers** (14 references), **risks** (15 references), **production** (20 references), **economy** (43 references) and **organisational processes** (86 references). The latter was assigned three other theme categories that refer to the management activity, the production function and managing client relations. The subtheme regarding economy as a whole includes aspects and terms that refer to the knowledge-based economy, economic cycles, market/capitalist economy, digital economy, economic growth, added-value, and entrepreneurship.

The social dimension (66 references in total) was assigned subcategories that approach the change process (18 mentions), personal skills and the transformations that the human society is subject to in view of adopting the new digital technologies (24 references each). Each subcategory has other specific dimensions attached to it, marking aspects that refer to: (1) human behaviour and transformation of the role it plays in society, (2) personal liberties and maintaining the identity or particularities of the human being in the new socio-economic context, (3) the new skills required by the transformations engendered by the digitalisation phenomenon, (4) social innovation, (5) the educational system or (6) mastering digital skills for supporting the development process.

Two other themes and their respective subcategories emerged, namely **innovative process and transformation**. These themes centralize topics

concerning value creation and harnessing opportunities (“value creation”, “potentialities”), as well as in reference to the innovation process along with the typology and manifestation manner thereof (“processes”, “typology”).

The most frequently used terms in the analysed texts are: technology, products, services, industry, value, business environment, innovation, Internet, development, process, and social. This fact highlights the importance assigned to the development process of new information technologies within the industrial sector, via the capacity to innovate goods and services, as well as by highlighting the impact on achieving added value for the business environment, ultimately contributing to the economic and social transformation.

The information regarding the definition of the two concepts (IoT and Industry 4.0), as well as their impact on the development process, as identified in the specialty literature, can be found in Appendix 1.

5. DISCUSSIONS

A solid share of economic theories argues that implementing new technologies in view of substituting the factor of production labour for capital is a process that manifests in all the economic sectors and whose goal is to cut costs, boost productivity and satisfy consumer requirements insofar as possible. The largest share of works that were studied in reference to IoT and Industry 4.0 focus on the industrial sector, but the digitalisation phenomenon manifests in a multidimensional manner. The aim and objectives of this paper focused on identifying the conceptual framework for the theoretical understanding provided by the literature for the notion of Internet of Things, Industry 4.0 and their impact on the process of economic, social and technological development.

The **notion** of *Industry 4.0* is defined in the scientific literature as the specific phase of technological evolution that is based on concepts and technologies that include cyber-physical systems, Internet of Things (IoT) and Internet of Services (IoS), permanently connected to the online environment, where data and information are constantly communicated, not only between human users or between human users and IT equipment, but especially between self-contained pieces of IT equipment, without intervention of the human factor (Roblek, Mesko and Krapez, 2016). The non-intervention of the human factor stands out not only in terms of the capacity of IT equipment to communicate independently. Digital interconnectivity leads to automation and independent optimization of the production process and even of the delivery process thereof to the final user. Value chains are controlled in a decentralized manner, while computer systems have the capacity to make decisions autonomously (Maresova *et al.*, 2018; Morrar, Arman and Mousa, 2017).

Sometimes identified with the term referring to the *Fourth Industrial Revolution* (Industry 4.0), the **concept** of *Internet of Things* (IoT) describes the multitude of processes and uses of certain IT components by assigning a

network address and installing sensors. Ensuring the access to global information networks fundamentally contributes to the general perception on these pieces of equipment as achieving an intelligence of their own. The perception originates in these very features: communication, analysis and independent decision-making (Kaczorowska-Spychalska, 2018; Isada and Isada, 2018). Unlike other technologies recognized as components of the digitalisation phenomenon, IoT can be implemented in different fields of activity, on various levels of the society. Individual entrepreneurs, small human communities, economic sectors that are under governmental control or large organisations of private sectors form ecosystems of IoT by means of the power conferred by the combination of some relatively recent technologies: high-speed and high-capacity internet, integrated databases, smart services (Nicolescu *et al.*, 2018).

Another key aspect of the IoT concept is highlighted by the dynamism and speed of the information exchange between pieces of equipment, the final goal being to ensure the connectivity of all IT components – wherever, whenever and for whomever (Morrar, Arman and Mousa, 2017; Hudson, 2017). Moreover, the unprecedented acceleration in the implementation of new technologies determined the specialist at the Cisco Company to note that right now the number of devices that are connected to the Internet exceeds the number of living people (Wielki, 2017).

The **economic impact** of the development and implementation of IoT technologies in the Industry 4.0 context is an intensely debated topic in the literature. The adoption of new technologies result in improved flexibility of the productive process. Furthermore, a direct impact is identified on the motivation for implementing technologies, even by economic actors that are less likely to take the risk, based on the motivation for reducing costs and enhancing efficiency (Maresova *et al.*, 2018). Enhancing the efficiency of the production process also results from the access to an ever-growing quantity of data and information on optimizing the possibilities for production, use and consumption (Roblek, Mesko and Krapez, 2016; Saarikko, Westergren and Blomquist, 2017). Alternatively, some specialists point out that using advanced technologies determines a cost increase for the new production processes, which leads companies to policies focused on increasing the volume of sales in order to maintain the advantages provided by the economies of scale and to maintain competitiveness (Pomykalski, 2015). Another aspect approached in the literature refers to the importance assigned to the consumer's role, particularly in regards to the rapid changes to the latter's behaviour. New technologies enable companies to improve the accuracy of their marketing strategies, to obtain relevant and valuable information from consumers, ensuring a swift, real-time response to their changes in terms of consumption (Morrar, Arman and Mousa, 2017; Nicolescu *et al.*, 2018; Roblek, Mesko and Krapez, 2016).

The pressure of the stiff competition factor in the context of globalization generates sufficient motivations, yet for the implementation of new technologies and knowledge of Industry 4.0 and IoT in order to ensure new possibilities of creating added-value for business owners. Some authors argue that achieving this value is set to become a complex and interconnected process that will entail the presence of many economic actors with different perspectives. However, the motivation of immense rewards will contribute significantly to the evolution of the digitalisation process (Saarikko, Westergren and Blomquist, 2017).

One of the most important success factors in the process of adopting and implementing the new technologies proposed to humankind at the dawn of the fourth Industrial Revolution (Industry 4.0) is the development of professional competences and skills (Maresova *et al.*, 2018). The same study indicates that this process leads to **social and demographic transformations**.

On the one hand, the major concern resides either in the incomplete knowledge of the effects of these transformations, or in regards to the gaps in the professional training of the users of the new IT technologies. Studies show that the digitalisation process affects some people's capacity to maintain their employment (Morrar, Arman and Mousa, 2017). Maintaining one's capacity as an active employee on the labour market is increasingly conditional upon the existence of some new professional skills and competences in terms of communication, networking, organisation and working in teams, as well as regarding the degree of acceptance of diversity in the context of globalisation and blurring of cultural borders.

On the other hand, debates on the social impact of IoT in the context provided by Industry 4.0 highlight the fact that technological innovation and the rapid development of digital technologies can have a positive effect on the conveyance and dissemination process of social innovations. The technological revolution defining the concept of Industry 4.0 can reach its true potential only by understanding that the success of the fourth Industrial Revolution resides in identifying and using the right combination of elements from the social and economic field, alike (Morrar, Arman and Mousa, 2017). The arguments in the studies rely on the fact that digital technologies irreversibly shape the evolution of humankind. They influence the evolution of various fields of human activity and play an increasingly active role in our society (Kaczorowska-Spychalska, 2018).

From a **technological point of view**, the analysed studies point out that the novelty associated with the concept of IoT resides in the potentiality for quasi-total use of digital technologies determined by the constant erosion of technical barriers generated by high development costs (Saarikko, Westergren and Blomquist, 2017). One by one, these barriers disappear as IoT technologies mature and as apps based on these technologies propagate. The only real limitations are in connection with the own imagination of IoT users. On the one

hand, digital technologies are consequences of the digitalisation process; on the other hand, these are a strong determining factor for this process. New information technologies have the capacity to create new technologies, which in their turn create the need for others to emerge and include the consumer as an integrated part, with a fundamental role (Kaczorowska-Spychalska, 2018; Nicolescu *et al.*, 2018; Wielki, 2017).

The development of new information technologies in the context of the *digital era* generates a series of challenges in terms of (Nicolescu *et al.*, 2018): (1) a better understanding of the socio-economic impact of cyber-physical systems, as well as the interconnectedness between IoT, AI or IoS; (2) the development of IT technologies entails rather a combination of several technologies that also pertain to other fields of activity, not just to the IT sector; (3) breaking through the technical limits for the quantity, quality and speed of data and information transmission; (4) standardization of interoperability and intensifying collaboration relations between participants in the digital technologies' development process for the purpose of harnessing innovation opportunities and adopting technologies in various social contexts; (5) including a new approach to technological processes in IoT systems, managing risks throughout the entire lifespan of products and services, internal organisation, so as to address the structural changes within the production process or consumption practices.

Opinions regarding the impact of new information technologies on the **innovative process** highlight the radical and disruptive character thereof in terms of the immense potential for transforming the reality of the modern economy (Wielki, 2017; Nicolescu *et al.*, 2018; Morrar, Arman and Mousa, 2017; Hudson, 2017) or the capacity to be used in innovating new products, services, successful business models in all economic sectors (Roblek, Mesko and Krapez, 2016; Isada and Isada, 2018). Another aspect identified in our literature review refers to discovering and harnessing **entrepreneurial opportunities**. The implementation and adoption of IoT in the context of Industry 4.0 enable the discovery of innovative opportunities by ensuring an ever-growing number of investment possibilities for entrepreneurs (Hudson, 2017). The same study points out that IoT create entrepreneurial opportunities particularly in respect of innovating new business models or in terms of internal organisation, at the expense of developing other new technologies.

Pomykalski (2015), Kaczorowska-Spychalska (2018) and Hudson (2017) also identify certain negative aspects to the innovative process and to the results of entrepreneurial actions: (1) the process of disseminating the value created by the business environment fails to contribute in reducing the trend of unequal income distribution, with potential social implications; (2) the uncertain evolution and dynamics of the future development process, given the virtualization of behaviours, attitudes and decision-making processes, including

in terms of consumers; (3) the immaturity and diversity of technologies can create difficulties regarding the relation between demand and offer.

6. CONCLUSIONS

The phenomena entailed by the manifestation of concepts regarding Industry 4.0 and Internet of Things into the surrounding reality is an intensely debated topic in scientific research efforts. Starting from the proposed aim and objectives, this paper presented certain opinions on the understanding of the Industry 4.0 and IoT concepts. The paper identified the dimensions of the surrounding reality that highlight a significant impact of the two concepts: the economic, social and technological dimensions. In order to point out the impact of IoT on the development process in the context of Industry 4.0, we analysed papers from the Clarivate Analytics collection, and the method employed for collecting data was the documentary research method. The content analysis performed on the papers highlights the fact that the literature primarily addresses the economic implications (production process, efficiency and costs, business organisation, competition, the consumer's role, innovation process, entrepreneurial action, and motivation thereof), the socio-demographic transformations (professional skills and competences, social inequality, and labour market), as well as the technological impact, along with the challenges engendered by the development, implementation and adoption of new digital technologies.

In our opinion, the process of development and evolution of humankind in the context of the Fourth Industrial Revolution cannot be boiled down to a single dimension, whether it be economic, social or technological. The majority of studies in our analysis focus on a singular dimension. Owing to the complexity of the Industry 4.0 phenomenon, we believe that a multidimensional approach to the latter could offer a clearer view on the development process in the context of the digital era.

One of the limitations of this paper is the failure to cover the cultural dimension of the digitalisation phenomenon. Future research could approach an analysis of potential bidirectional effects of the digitalisation process on the cultural factor. Furthermore, studying the impact of the entrepreneurial function and the innovation process on current and future economic development in the context of Industry 4.0 will help shape a comprehensive point of view on the ubiquitous digitalisation phenomenon.

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Appendixes

Appendix 1. Main information/findings in the analyzed articles

| No. | Article | Objectives | Main findings |
|-----|---|---|--|
| 1. | Maresova P. et al. (2018), Consequences of Industry 4.0 in Business and Economics | <i>Fill in the gap and provide an overview of studies dealing with Industry 4.0 from the economic perspective defined by keywords such as economics, economic development, production economics, financial sector</i> | <ul style="list-style-type: none"> • skills development, which will lead to demographic and social changes, is one of the most important key factors for a successful adoption and implementation of the Industry 4.0 framework • implementation of new technologies and the substitution of labour by capital is a process taking place in all industries in order to reduce costs, increase productivity, and facilitate the provision of individual customer solutions (p. 9) • young workers are neither prepared for nor aware of the upcoming trend that they will most probably live and work in • routine-job workers will face a challenge to retain their jobs • one of the main recognized benefits is an ability to adapt faster to the rapidly changing environment • the process of adoption does not only facilitate production flexibility enhancement, there are also direct economic incentives in costs and efficiency that could eventually persuade even cautious adopters • the government and its policies are usually in the role of a needed supportive element or a required framework that should enable, enhance, and promote the Industry 4.0 adoption process in numerous ways (p. 9-10) • Industry 4.0 may contribute significantly to the continuing trend where a structure of industrial indices no longer corresponds to the GDP structure (p. 10) • Industry 4.0 is a factor of growth by either the adoption of manufacturing technologies by existing companies or the formation of new ones in the IT industry • the relevant key competences of the future will be those pertaining to IT, software, application programs, and automated systems • more general skills and competences will also be increasingly important • communication skills, social skills, organizational skills, team work, project work, but also intercultural awareness and language skills • in the future, an increasing interconnection of industry, science, research, and • innovative new technologies can be expected, which needs to be approached in a complex way if the transition to Industry 4.0 is to succeed |

| No. | Article | Objectives | Main findings |
|-----|---|---|--|
| 2. | Roblek, V., Mesko, M. and Krapez, A. (2016), A Complex View of Industry 4.0 | <i>To synthesize the known theory and practices of Industry 4.0, and to investigate the changes that will result from Industry 4.0 and with the development of the Internet of things</i> | <ul style="list-style-type: none"> the IoT and the IoS have led to the emergence of changes in consumers' behaviour related to 4.0 (Dominici <i>et al.</i>, 2016) KM 4.0 processes will allow marketing strategists to improve accuracy, obtain relevant and valuable content from customers, and reply to them in real time constantly, with the intention of changing or enhancing customer behaviour (p. 2) will have an important influence on the complete transformation of industry because it represents progress on three points (Almada-Lobo, 2016; Schlechtendahl <i>et al.</i>, 2015): <ol style="list-style-type: none"> 1. Digitization of production—information systems for management and production planning; 2. Automation—systems for data acquisition from the production lines and using machines; 3. Linking manufacturing sites in a comprehensive supply chain—Automatic Data Interchange (p. 2-3) one positive aspect of Industry 4.0 is the value creation effects from gains in efficiency and new business models, but technological change may have both a positive and a negative impact on employment. the IoT allows monitoring of all manufacturing processes with the purposes of maintenance, production quality, and energy management optimization. The goal of the smart factory is to connect all smart devices with higher decision making (Dutta and Bose, 2015) (p. 5) products integrated with cloud computing in the field can provide data that enable a predictive maintenance and provide information about optimization possibilities in production the IoT technology enables the creation of completely new products, services, and business models that promise gains in virtually all industries the IoT will enable new business models in insurance, such as, for example, car insurance, which is based on actual usage, calculated on the basis of information obtained in real-time driving (Dutton, 2014) |
| 3. | Saarikko, T., Westergren, U.H. and Blomquist, T. (2017), The Internet of Things | <i>a) reviewing the complexity of the IoT, the complexities of an increasingly interconnected environment, and the increasing need to</i> | <ul style="list-style-type: none"> The novelty associated with IoT stems from its potential for widespread application as technical barriers associated with automated surveillance have been gradually eroding, drastically decreasing the associated costs in its wake (p. 668) One by one, the technical barriers are crumbling. The IoT is growing more mature and its applications more prolific. The only real limitations that remain are the ones held firmly in |

| No. | Article | Objectives | Main findings |
|-----|---|---|---|
| | Are you ready? | <p><i>develop partnerships</i></p> <p><i>b) describe a number of fundamental issues related to business models, partnership strategy, data ownership, and technology diffusion</i></p> | <p>place by our lack of imagination (p. 669)</p> <ul style="list-style-type: none"> • Digital technology is not only powering the internet and our social media accounts, but is increasingly becoming an integral part of all products and processes (p. 669) • creating value using the IoT will be a complicated and interconnected process involving multiple parties and perspectives. However, the potential payoff is significant, as a connected product can provide valuable information regarding location, status, and usage—insights that in turn can be used to enhance efficiency in logistics, efficacy in service and maintenance, and innovation in new product development (p.670) • Firms that embrace the IoT will need to do both (automate or informate), and think carefully to determine what mix of computer efficiency and human judgment fits their specific needs (p. 674) • connected devices and products offer new possibilities for everything from pre-emptive maintenance to new services and business models (p. 675) • managers need to consider their digital strategy in relation to their own business and the ecosystem of partners, as well as emerging technology (p. 675) |
| 4. | Wielki, J. (2017), The Impact of the IoT concept development on Enterprises | <p><i>a) to analyse the impact of the IoT concept on the operations of modern organizations and the implementation of changes related to its use (p.262)</i></p> <p><i>b) to identify the potential impact of the Internet of Things concept on the functioning and competitive capabilities of modern business organizations both in the context of the major opportunities and challenges that emerge in relation to the development of this phenomenon. (p. 263)</i></p> | <ul style="list-style-type: none"> • McKinsey included the Internet of Things to the group of twelve so-called disruptive technologies, i.e., the technology with the greatest transformative potential in terms of its impact on the modern economy in the coming years (Manyika <i>et al.</i>, 2013) (p. 262) • Internet of Things is also seen as one of the three main factors stimulating the fourth phase of the industrial revolution referred to as Industry 4.0 (Schwab, 2016) (p. 262) • the progress in the “cloud” technology taking place in recent years has become an important driver of IoT market development (Dwyer, 2015). “Cloud” technologies are also the basis for the advanced Big Data analytical systems, which are one of the foundations of the operation of solutions based on the Internet of Things concept (Bauer, Patel and Veira, 2014; Burkitt, 2014; Heppelmann and Porter, 2014; Heppelmann and Porter, 2015; ITU, 2015) (p. 265) • the situation in which it is possible to increasingly use the Internet infrastructure to receive data from virtually any type of physical object provides companies with a whole range of unprecedented opportunities in terms of their performance and value creation (p. 273) • it is in a relatively early stage of development at the moment, hence adequate and fast positioning in the emerging IoT ecosystem may be a determining factor for the further development of the organization and its competitive position for many years to come (p. 273) |

| No. | Article | Objectives | Main findings |
|-----|--|--|---|
| 5. | Nicolescu, R. et. al. (2018), Mapping the values of IoT | <p>a) <i>discussing the concept of “value” as pertaining to IoT from three different perspectives: social, economic, and technical.</i> (p. 345)</p> <p>b) <i>at a higher analytical level, this article focuses on the relationship between current IoT developments and the creation and nurturing of their value</i> (p. 346)</p> | <ul style="list-style-type: none"> the mass adoption of IoT technology seems to depend on the success of this technology to address the relative reticence of consumers and most market segments to actually embrace products and services enabled by IoT (Thierier, 2015) (p. 345) this points to the need to understand and develop digital technology as dialectics between – on the one hand – control and sociality and – on the other hand – increased autonomy and human freedom (p. 347) individual entrepreneurs, small communities, areas of the public sector, and large organizations from major industries (some of them with leading roles in the Second and Third Industrial Revolutions) form a rather diverse IoT ecosystem (p. 347) in early 2010s, IoT emerged as a technology with great disruptive potential, capitalizing on the advances in broadband communication, distributed computing, and smart mobility. However, to a large extent IoT is tributary to the current digital innovations that happen in the technologically advanced societies (p. 348) what is characteristic for the IoT is the complementarity, interdependence, and co-evolution of the two spheres. For example, innovation in start-up cultures (micro-sphere) needs the infrastructure and support of bigger industrial players and the public sector (macro-sphere). At the same time, major players in the macro-sphere need the levels of flexibility and risk-taking that start-ups can provide and internalize when needed. On the other hand, small businesses, organizations, and research professionals can produce services to balance out the possible social and economic disruptions that might happen in the macro-sphere (p. 348) it is thought that the impact of the IoT on industrial structure is considerable and its coverage is wide. The IoT constitutes a significant business opportunity (p. 217) industry platforms tend to facilitate and increase the degree of innovation in complementary products and services. The greater the innovation in such complementary aspects, the more value is created for the platform and its users via network effects, creating a cumulative advantage for existing platforms (p. 219) the analysis shows a significant correlation between network breadth and the number of registrations of patents. In the IoT field, R&D results can be generated through wide-ranging cooperation with many companies. This shows that open innovation is effective in R&D within the IoT field. This may be because IoT is realized through cooperation among wide-ranging technologies and industries (p. 223) to succeed in the face of extreme innovation competition, it is important to have an |
| 6. | Iasada, F., Iasada, Y (2018), Network Analysis of Innovation in the Internet of Things | <i>to clarify empirically the influence of the network structure among organizations on innovation in the Internet of Things (IoT) business field.</i> | |

| No. | Article | Objectives | Main findings |
|-----|---|--|--|
| | | | <p>excellent technological strategy. It is considered desirable to strengthen strategic cooperation, makes the company the platform of an innovation network and selecting an external company or companies with which to cooperate carefully rather than distributing R&D resources widely, thus increasing the efficiency of R&D (idem)</p> <ul style="list-style-type: none"> • Industry 4.0 is not an exception to the previous eras of industries, but it is expected to bring immense benefits and many challenges (p. 13) • the same drive to innovate technologies to increase productivity can also be utilized to improve welfare and societal needs of the world population. (p.13) • the debate is driven by uncertainty about the best way to exploit the fast pace of technological innovation to improve various aspects of human life (p. 13) • expect that the impact of Industry 4.0 will be more profound, irreversible, and much more rapid than the previous three generations (p. 13-14) • Industry 4.0 is highly connected with innovation (p. 15) • Industry 4.0 enables the transformation of modern economies to become more innovative and hence increase productivity (idem) • it highlights the role of consumer as a co-producer and puts them in the centre of all activities (idem) • it will enable sustainable prosperity through the use of modern technologies to find solutions to the challenges related to energy, resources, environment, and social and economic impacts (idem) • Industry 4.0 represents a shift toward an innovation-based economy with knowledge, data, and the IoT as central concepts. This will affect the current structure, markets, and business processes of the industrial age and pave the way to a new age of digitization, “smarter” networking of production systems, and interlinked business processes. In the new industrial revolution, traditional competitive factors such as market share, economies of scale, and access to resources are now linked or joined with other factors such as innovation, intellectual property rights, smart technology, and access to knowledge (Geiger and Sá, 2013) (p. 15) • the increasing possibilities of the substitution of the human role by new technological innovations in the form of artificial intelligence, robotics, drones, virtual reality, and the IoT (p. 16) • technical innovations and fast technological development can positively affect the diffusion and dissemination of social innovation, and technical innovation often develops its |
| 7. | Morraz, R., Arman, H. and Mousa, S. (2017). The Fourth Industrial Revolution (Industry 4.0) | <p><i>a) to discuss how we can tackle Industry 4.0 from a not only economic view but also from social and environmental perspectives.</i></p> <p><i>b) to bridge some of the theoretical gaps about how Industry 4.0 can be discussed from both technological and social innovation perspectives.</i></p> <p><i>c) to facilitate this bridging of gaps, we propose a simple framework to address the above issues using a holistic perspective that aims to ignite an innovative and constructive conversation rather than specific technical solutions.</i></p> | |

| No. | Article | Objectives | Main findings |
|-----|--|---|--|
| 8. | Pomykalski, A. (2015), Global business networks and technology | <p>a) <i>To describe selected aspects of gradual adoption of innovation management concepts in firms</i></p> <p>b) <i>An overview of concepts described in innovation management literature during the last decade and of new concepts evolving</i></p> | <p>true potential in combination with social innovation. (p. 16)</p> <ul style="list-style-type: none"> • jobs may be made redundant or obsolete through automation and the digitization of production process, the qualification requirements of new jobs will be stricter, and new skills and knowledge will be required. (p. 17) • the importance of the duality between social and technological innovation, which can be achieved only if the Industry 4.0 is recognized simply in the form of technical and social innovation. (p. 18) • the technological revolution that accompanies the Industry 4.0 achieve its true potential in combination with social innovation. Hence, businesses that succeed in Industry 4.0 will be those that offer both social progress and economic benefits. (p. 18) • new products, services, business models and even organizational forms may appear as mass information flows connect customer needs and product offers. (p.48) • the technology globalization trend has become a necessity for international companies characterized by high competitiveness, since (Boutellier, Gassman and von Zedtwitz, 2008) (p. 48) • advanced technology causes a rise in the cost of making new products processes, which makes companies to increase the volume of sales to create a possibility of taking advantage of the scale effect to maintain competitiveness (p.49) • in the face of pressure of competitors in the conditions of globalization, both new technologies and the knowledge of a company open up new possibilities of creating value for shareholders (p. 50) • from the point of view of a company, technology entails introducing knowledge into all business processes from strategic to key ones to supporting ones (p. 50) • companies develop internal R&D initiatives, cooperate in networks and join or create open innovation systems. Suppliers, competitors and clients cooperate in networks to create better products, develop new business plans and share created value (p. 54) • data flows generated by the Internet of Things will increasingly alter our lifestyle and create new business opportunities. Unfortunately changes that seem to focus on sharing the value created in business are not sufficient to weaken the trends of uneven income distribution. (p. 54) |
| 9. | Kaczorowska-Spychalska, D. (2018), Digital | a) <i>to identify a way and assessment of differences in the perception and</i> | <ul style="list-style-type: none"> • digital technologies are, on the one hand, a consequence of digitization processes, on the other one, its powerful driving force. (p. 188) • now we have some series of new technological moments that creates other new |

| No. | Article | Objectives | Main findings |
|-----|---|---|--|
| | Technologies in the Process of Virtualization of Consumer Behaviour – Awareness of New Technologies | <p><i>acceptance of devices and equipment based on digital technologies, in particular the Internet of Things (IoT) and Artificial Intelligence (AI) in particular,</i></p> <p><i>b) to identify the impact of digital technologies (IoT and AI) on attitudes, preferences and decisions of consumers</i></p> | <p>technology, technology that creates the need for other new technology that then includes customers as a part of it (Wuebben 2017, pp. 85-93) (p. 191)</p> <ul style="list-style-type: none"> digital technologies entered a human life for good influencing various areas of human activities and a role fulfilled in the society. (p. 200) what causes some uncertainty is the dynamics with which further changes will appear while leading to virtualization of behaviour, attitudes and decisions, including those concerning consumer space. (p. 200) |
| 10. | Hudson, D. (2017), Value Propositions for the Internet of Things | <p><i>a) to review the value proposition literature for approaches to best answering those test questions: What are the two or three value points about my IoT offer that a customer must hear, believe, and remember? What makes those points compelling compared to my competitors' value points?</i></p> <p><i>b) to review the tools and provides guidance that can assist the IoT entrepreneur to refine their value proposition to make it specific and compelling.</i></p> | <ul style="list-style-type: none"> provides the opportunity for innovation, as there are many points where an entrepreneur might apply assets in a novel manner to establish a position in the new value chains that IoT will opportune. Such breadth also creates a pitfall in that IoT entrepreneurs may position their offers as tackling a full vision of IoT-enabled transformation. (p.5) the entrepreneur must be focused on determining who among the various stakeholders is the decision maker for the initial purchase and what problem that decision maker wishes to solve. (p.6) the IoT entrepreneur must resist the temptation a stay focused on sustainable differentiation and customer willing to pay for such value. (p.6) innovation in the business model rather than the technology itself is a potential area for entrepreneurs to exploit. (p.7) the breadth of IoT potential can be tempting to the IoT entrepreneur, however, the diversity and immaturity can make reaching a real buyer difficult if there is too much focus on broad positioning or a lack of focus on the correct portion of the value chain. (p.7) building from an entry point of strength will allow IoT entrepreneurs to address increasingly sophisticated opportunities that may span business process improvement through transformational opportunities as well a multiple use cases that span customers, geography, time, or other dimensions. (p.10) |

THE IMPACT OF THE COUNTRY RISK ON THE LOCALIZATION OF THE INVESTMENTS

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Abstract

Country risk analysis attempts to identify imbalances that increase the risk of a deficit in the expected return on a cross-border investment. This paper describes the general process used to create risk measures and discusses some of the weaknesses of this process. Evaluation by specialized agencies also plays an important role in decision-making by participants in capital market transactions. With the significant development of foreign direct investment flows, country risk is an element that economic agents take into account when questioning the internationalization or expansion of their businesses. Country risk is an important factor in attracting foreign direct investment, and therefore increased attention should be paid to it.

In this paper, the issue of risk is addressed from two perspectives. First, it proposes to understand several conceptual approaches and the evaluation process, and second, it studies its applicability in the institutional sphere.

Keywords: *country risk; investment; foreign direct investment; sovereign risk.*

JEL Classification: F22, H54, P33

1. INTRODUCTION

Country risk is an actual topic, representing an increasingly important element for participants in the global economic and financial circuit. Although this concept originally emerged in connection with international crediting activity, today it can no longer be ignored in the field of foreign investments. Country risk, viewed from the perspective of investors, is an interesting problem and, at the same time, a very impressive one. Its assessment is a fundamental step in making decisions regarding internationalization.

Foreign direct investments are a “moving factor” that affects the location of international production, the structure of trade, and the internationalization of national companies.

The present study starts from the notion of country risk, which affects the choices in location of investments. The study is structured in three parts, the first part analyzing the evolution of country risk in the countries of Central and Eastern Europe, the second, the effects of privatization and the increase of foreign direct investments, and the third, the particular case of Romania, analyzing the FDI share of GDP. Thus, foreign investment becomes the essential engine of the economic development and modernization strategy, income and jobs growth, especially for developing countries, emerging economies and countries in transition.

Increased attention to the field of foreign direct investments is justified by the fact that they are seen as the main factor for stimulating economic growth. They are part of the class of financial flows that do not generate external debt and are considered to be a complement to domestic investment and, at the same time, a significant financing of the current account deficit. It is therefore clear that foreign direct investment is preferable to other sources of capital if we take into account that the involved capital outflows – repatriation of profits – depend on the economic results obtained, responding to both the specific interests of the investor and the state, which pursue economic growth.

2. LITERATURE REVIEW

During the transition and the privatization process, the ECE countries' industry faced the obsolete technology problem, with the lack of managerial and technical skills, which are indispensable to a modern production activity. In addition, the absence of a rational pricing system has negatively influenced decisions in resource allocation and in the distribution of incentives for employees in the enterprise structure.

Under these circumstances, it is highlighted that the transition and privatization have imposed tremendous social costs, since with the cutting of subsidies and the liberalization of prices, many enterprises have been forced to close down, workers to be fired, which has led to significant social problems (Frydman and Rapaczynski, 1999). The typical size of a firm, from the point of view of employment, differs somewhat from country to country, with the largest companies identified in Poland and Romania. This is not surprising, as these countries also had the biggest savings. The average size of the industrial firms in the region at the beginning of the transition was much higher than in the Western European countries, with developed market economies (Pohl *et al.*, 1997).

According to the analysis made by Pohl *et al.* (1997), in the early 1990s, Romania, Poland and Hungary had the most companies in industries, when they were on the road to the transition towards the market economy. In 1992,

Romania had more than 2 million employees in more than 1,000 industrial firms, Poland had 1.3 million people employed in 1,066 industrial companies, and Hungary had only 429 thousand employees in 1,044 firms.

Compared with Western European countries, Central and Eastern European countries have developed more heavily, lacking adequate resources and technology, and their growth is conditioned by major foreign investments. Political changes have made the development of these countries different. Authors such as Rapachi and Prochniak (2009) and Estrin *et al.* (2009) analyze the changes that have taken place during the transition of the CEE countries to the market economy. Bandelj (2010) highlights in his study that the accession of these countries to the European Union also facilitated the attraction of foreign direct investments in a larger proportion. Foreign direct investments facilitate the economic development of CEE countries. The paper focuses on the issue of country risk and the location of foreign direct investments in the countries of Central and Eastern Europe. Countries that, due to their geographical location, have attracted foreign direct investments that have played an important role in their economic growth and development (Kornai, 2006).

Curwin and Mahutga (2014), Kornecki and Raghavan (2011), and Leibrecht and Riedl (2014) analyzed the transition of economies of CEE countries and the role of foreign direct investments in this respect. The attraction of foreign direct investment varies from one country to another or from one sector to another (Pavlinek, 2012) due to technological progress (Bucar, Rojec and Stare, 2009), but also to institutional framework (Tun, Azman-Saini and Law, 2012).

The analysis of the impact of foreign direct investment in CEE countries (Yucel, 2014) was addressed in the literature as follows: Lithuania or Estonia (Tvaronaviciene and Grybaite, 2007; Ginevicius and Tvaronaviciene, 2005) or Latvia (Revina and Brekis, 2009; Boudier-Bensebaa, 2005), Poland (Gorynia, Nowak and Wolniak, 2007), Czech Republic (Tousek and Tonev, 2003; Hlavacek and Koutsky, 2011); Slovakia (Wokoun *et.al.*, 2010) and Slovenia (Bucar, Rojec and Stare, 2009). The study conducted Aebi, Sabato and Schmid (2012) highlights the fact that country risk influences have a significant impact on economic growth. Alter and Beyer (2014) highlight the importance of risk in institutional changes, demonstrating that the latter may affect the country risk score.

The purpose of the article is to identify the impact of foreign direct investment on economic growth in CEE countries and the case of Romania in particular. The study also looks at the importance of country risk in what it concerns the localization of foreign direct investments.

3. RESEARCH METHODOLOGY

The paper analyzes the impact of foreign direct investments on the CEE countries' industry, but also the importance of the Country Risk Score on the choice to invest. In the first phase, we used a comparative analysis to highlight

the CEE countries' country risk scores, and then we highlighted their impact on foreign direct investment. In the second part, we highlighted the role and effects of foreign direct investments, the need of our country to attract foreign direct investments, which have a significant influence on the modernization of the economy, analyzing the particular case of Romania.

The overall objective of the paper is to identify the impact of the country's risk on the location of foreign direct investment. The paper deals with the role of foreign direct investments in the development of industries in CEE countries, as well as the role of investments in economic growth in Romania. In this sense, we used comparative analysis and regression analysis and correlation to highlight the link between the above-mentioned variables.

4. THE POSITION OF CEE COUNTRIES IN INTERNATIONAL COUNTRY RISK RANKINGS

The level of foreign direct investment is an essential condition for financing the current account deficit if it is at a high level, as a result of the deepening of the trade deficit, representing a major risk to economic stability. The interest of foreign investors towards Romania has increased since 1990, having seen a significant increase since 2004. Maintaining a high volume of foreign direct investments is important for increasing and modernizing the competitiveness of the economy.

The usefulness of the analysis of country *rating* (suverain) is to influence the costs of financing the private economy, as well as the decision to make an investment, but also the state's access to international crediting. Romania started to receive ratings from financial assessment agencies in March 1996 when the National Bank of Romania requested the first credit risk assessment to obtain loans on international markets. The top three major international rating agencies that included Romania in their rankings were: Standard&Poor's, Moody's Investors and Fitch Ratings.

In the following period (2001-2007) there was a country risk improvement, reaching the quotes in investment classes (2004-2008), because then, amid the negative effects of the global financial crisis, our country's rating would reach the "investment grade" category in October 2008. Between 2010 and 2017, the country's risk experienced a slight improvement on an upward slope.

At present, Romania receives an investment recommendation rating only from Moody's. By making a regional comparison in Table 1, we note that Romania's rating is one of the lowest in the region. In S&P and Fitch's vision, only Romania and Latvia are triggered by the "investment grade" category, while Moody's places our country on the last step of the investment class (Baaa3), along with Bulgaria and Latvia. At the opposite end there are states such as Poland, Slovenia, Slovakia, the Czech Republic and Estonia in the "A" rating classes.

Table 1. Country rating – regional comparison (August 2018)

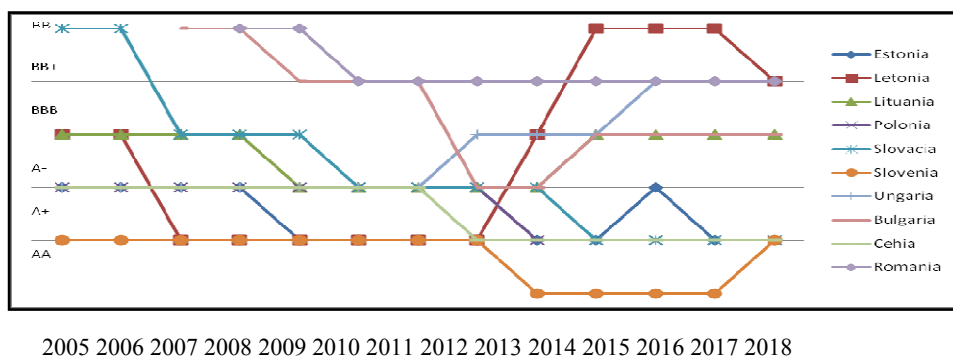
| Country | Global score | currency, TL / perspective / score (numeric transformation) | | | | | | | | |
|----------------|--------------|---|---------------|-----------|-------------|---------------|-----------|-------------|---------------|-----------|
| | | Standard & Poor's | | | Moody's | | | Fitch | | |
| Slovenia | 3.0 | AA | stable | 3 | Aa2 | stable | 3 | AA | stable | 3 |
| Slovakia | 5.0 | A+ | stable | 5 | A1 | stable | 5 | A+ | stable | 5 |
| Czech Republic | 5.3 | A | positive | 6 | A1 | stable | 5 | A+ | positive | 5 |
| Estonia | 5.6 | A | stable | 6 | A1 | stable | 5 | A | stable | 6 |
| Poland | 6.6 | A- | stable | 7 | A2 | stable | 6 | A- | stable | 7 |
| Lithuania | 8.6 | BBB | negative | 9 | Baa1 | stable | 8 | BBB | stable | 9 |
| Hungary | 9.0 | BBB- | negative | 10 | Baa1 | RUR-** | 8 | BBB | negative | 9 |
| Bulgaria | 9.6 | BBB | stable | 9 | Baa3 | positive | 10 | BBB- | negative | 10 |
| Letonia | 10.0 | BBB | stable | 10 | Baa3 | stable | 10 | BBB | stable | 10 |
| Romania | 10.6 | BB+ | stable | 11 | Baa3 | stable | 10 | BBB- | stable | 11 |

**) Rating Under Review negative

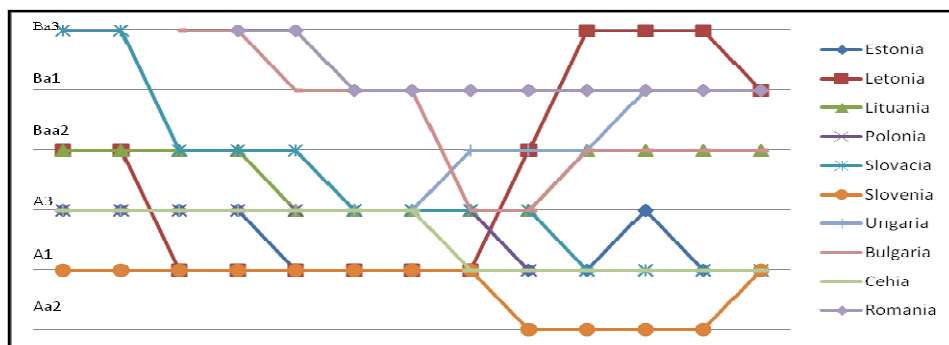
Source: processed based on data provided by Standard&Poor's (2019), Moody's (2019) and Fitch Ratings (2019)

Analyzing the evolution of the ratings for the Eastern and Central European countries (as seen in Figure 1, Figure 2, Figure 3 and Figure 4), we find that Romania has quotations that are slightly lower than the other countries in the region. This confirms the significant gaps between Romania and the CEE countries, which existed during the transition period and which, unfortunately, continues to be maintained.

Figure 1. S&P – Ratings history for CEE Countries

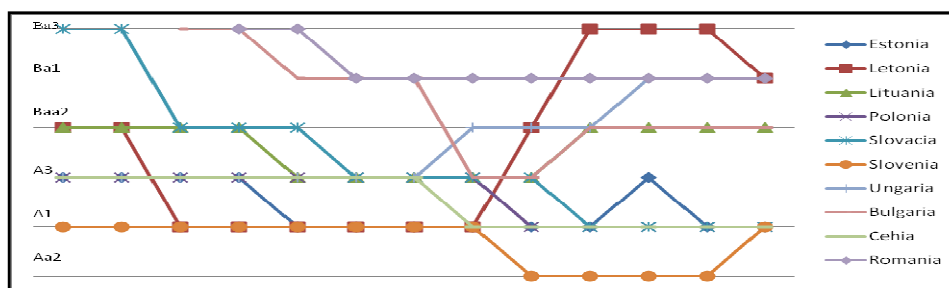


Source: processed based on data provided by Sandard&Poor's (2019)

Figure 2. Moody's – Rating history for CEE Countries

2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

Source: processed based on data provided by Moody's(2019)

Figure 3. Fitch – Rating history for CEE Countries

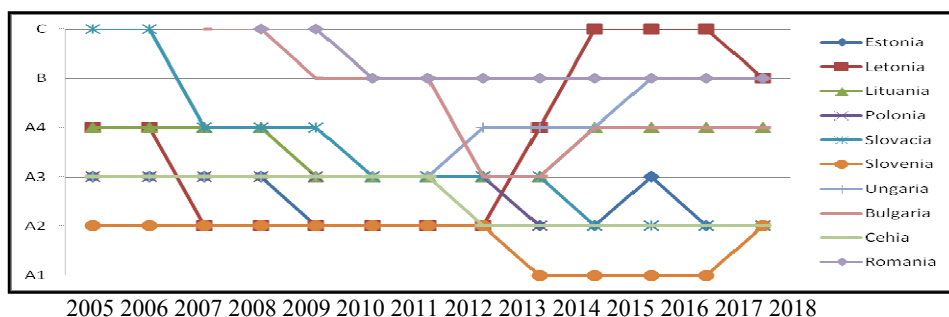
2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

Source: processed based on data provided by Fitch Ratings (2019)

A premiere for the Romanian economy was the year 2006 when the Coface rating company ranked Romania in the “A” group of the countries with the lowest risk of non-payment of foreign currency loans. Coface’s analysts has identified strong strengths in Romania as: the large size of the domestic market, the significant increase in foreign direct investments and foreign exchange reserves, the reasonable level of public debt, and the near entry into the European Union. On the weak side, the increase in the current account deficit (which emphasizes Romania’s foreign capital dependency), the sub-state credit growth (on medium and long term) affect the quality of banks’ loan portfolios; low energy prices. However, Coface maintained the “A4” for Romania until April 2009 (from October 2007 with a “negative” perspective), when the B-grade downgrade was announced, joining the other agencies that placed Romania in the category of countries without investment recommendation.

Neither at this time the quotation attributed to Romania has seen any positive changes.

Figure 4. Coface: Rating History for CEE Countries



Source: processed based on data provided by Coface (2019)

The critical context of the world's economies is currently considered to be an opportunity to adjust and implement structural reforms postponed in the growing years. Economic recovery depends on how states react to overcome the crisis and the speed and efficiency with which macroeconomic policies have been adjusted to meet the new challenges.

As far as our country is concerned, Romania is expected to recover more than it did in 2008 to get closer to the level of central and eastern European countries. Romania tries to identify ways of economic recovery, the measures taken so far have mainly targeted the reduction of the budget deficit, without stimulating economic growth, supporting production and certain competitive sectors.

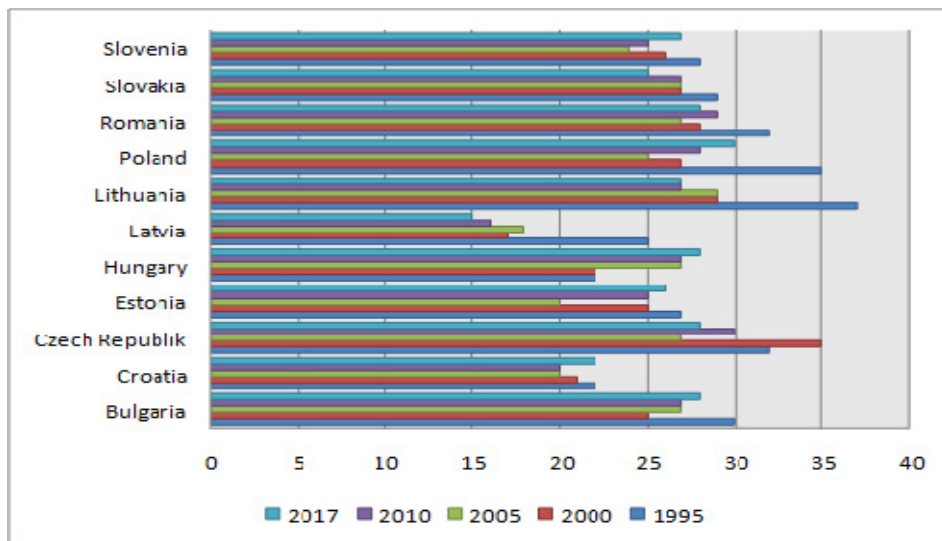
In this context, Romania has no chances of improvement but negative changes, which would lead to an unfavorable outward picture that would have the effect of lowering FDI or a possible depreciation of the national currency, as well as counteracting more expensive funding. For a positive country rating, effective measures should be taken in areas such as stimulating investment, both domestic and foreign, reducing unemployment and inflation, fighting tax evasion and corruption, stabilizing the economic environment, etc.

5. PRIVATIZATION OF INDUSTRY IN THE COUNTRIES OF CENTRAL AND EASTERN EUROPE

The concept of privatization is the transfer of property rights owned by the government to private individuals or legal entities. The privatization of industrial companies in the CEE states has grown since the 1990s, following liberation from the political and economic influence of the former Soviet Union (Neagu, Dragu and Costeiu, 2016).

The privatization process was the consequence of the structural reforms in the societies of the transition countries. Privatization of the industrial sector, analyzed in this section, focuses on former communist and current member states of the European Union: Poland, the Czech Republic, Slovakia, Hungary, Romania, Bulgaria, Latvia, Lithuania, Estonia, Slovenia and Croatia. The economic development of the Communist period in the countries under the influence of the USSR was based on the massive development of the industry, as seen in Figure 5. Therefore, the share of the industrial producer in the gross domestic product of all the former communist countries of the CEE was about 50% in 1989. This also implies a fierce concentration of the labor force in the industrial sectors, and with the transition to the market economy, the restructuring and privatization of industrial collisions involved investments in technology and social protection. The new free governments in the CEE states could not economically support these investments, having to resort to attracting foreign investors through government policies.

Figure 5. The share of industry in the National Gross Domestic Product in the countries of Central and Eastern Europe



Source: own calculation after the data provided by the European Bank for Reconstruction and Development (2018)

The process of privatization of the industrial sector in the CEE countries has started hard and has had a difficult evolution. Privatization methods have been implemented differently in each country (Table 2). The success of the

privatization process depended on government policies and on how to address this process.

Table 2. Privatization methods used in the industry of Central and Eastern European countries

| Country | First metod applied | Second metod applied |
|----------------|---------------------|----------------------|
| Bulgaria | Direct sales | Vouchers |
| Croatia | MEBO | Vouchers |
| Czech Republik | Vouchers | Direct sales |
| Estonia | Direct sales | Vouchers |
| Hungary | Direct sales | MEBO |
| Letonia | Direct sales | Vouchers |
| Latvia | Vouchers | Direct Sales |
| Poland | Direct sales | MEBO |
| Romania | MEBO | Direct Sales |
| Slovakia | Direct Sales | Vouchers |
| Slovenia | MEBO | Vouchers |

Source: (European Bank for Reconstruction and Development, 2018)

CEE countries have started on the road to transition to market economy from relatively similar premises but have not had uniform developments. Differences can be explained by a different position both in terms of content and the consistency of decision-makers, especially of policymakers, over foreign direct investment. A relevant case is that of Hungary. In the early 1990s, the country's political class reached a consensus, namely that foreign direct investments, especially those made by transnational corporations, should be encouraged. Implementation of this idea has led to rapid export growth, which has also led to the stabilization of the economy and further attraction of new FDI. The approach to this succession (first privatization, priory to transnational companies, then greenfield investments) was the successful transition to Hungary (Bjørnskov and Potrafke, 2011).

During the transition and the privatization process, the CEE countries' industries faced the obsolete technology problem with the lack of managerial and technical skills, which are indispensable to a modern production activity. In addition, the absence of a rational pricing system has negatively influenced decisions in resource allocation and the distribution of incentives for employees in the enterprise structure. Under these circumstances, it is highlighted that the transition and privatization have imposed enormous social costs, because with the cutting of the subsidies and the liberalization of prices, many enterprises have been forced to close down, the employees were dismissed, which has led to significant social problems (Milea, 2015).

MEBO (Management Employee Buyouts) assumed the transfer of the means of production of the privatized enterprise from state ownership to the employees. Initially, the state transforms the company into a joint stock company, then gives employees priority in buying shares.

The *direct sale* of the assets of the company was the method by which the transfer of ownership of the whole or part of the organization was made to a single strategically named investor. The sale could be through auctions, actions or direct negotiations with the investor.

Privatization based on vouchers (coupons / certificates) is the most commonly used method for state-owned companies in CEE countries. This method involved the distribution of property ownership to all citizens of the country concerned, free of charge or at a very modest price, which the later persons could change to their free choice by ownership of a public enterprise or lands (Bjornskov and Potrafke, 2011).

Privatization through MEBO methods, vouchers and direct sales was mainly used by countries in transition in Central and Eastern Europe. Countries like Hungary, Estonia, Latvia and Poland have adopted, in the first phase, the privatization policy through direct sale, with minor restrictions for foreign investors. Countries such as the Czech Republic and Lithuania chose the voucher / voucher privatization option by selling the companies to the resident citizens. Such methods provide reduced opportunities for foreign investments.

Also, the MEBO method of privatization, adopted by Croatia, Romania and Slovenia, has limited the access of foreign companies to the privatization process. The choice of the privatization method was influenced by the political factors, the level of development of the capital market in the country, as well as the specific character of the privatized company. One of the main factors that determined the level of foreign direct investment (FDI) in the first years of the transition, in the former communist countries of the CEE, was the privatization process and highlighted the government's commitment to move away from state ownership to private ownership. This allowed government institutions to channel foreign capital to those vulnerable economic sectors (large-scale state-funded).

Attracting foreign capital flows was easier in the case of more open economies (Poland, Hungary) than in those in which the notion of private investment was totally non-existent before 1989 (Bulgaria, Romania). In this respect, foreign direct investment (FDI) in the industry of countries covered by this article has evolved as reflected in Table 3.

The inflow of foreign investments is generally considered to be an important channel for the implementation of new ideas, innovative technologies, and management skills through cross-border transfer. Attracting the capital of the country can improve the prospects of economic growth by introducing technologies and productive techniques. Prior to the fall of Communism, CEEC countries were subject to strict limitations on industry access to frontier

technologies. With the introduction of privatization reforms, barriers to communication with developed countries have become more prominent, and thus foreign capital has fallen into the economies of the CEE countries, with a major positive impact on the potential for productivity growth and the creation of market structures. FDIs have essentially contributed to the transformation of formerly planned and centralized economies into competitive market economies.

Table 3. Foreign Direct Investment in Central and Eastern European Industries, 2000-2017

– Million Euro -

| | 2000 | | 2010 | | 2017 | |
|----------------|--------|------------|--------|------------|--------|------------|
| | value | % of total | value | % of total | value | % of total |
| Bulgaria | 804 | 89.0 | 11580 | 32.8 | 1071 | 80.4 |
| Croatia | ... | ... | 6.931 | 26.5 | 2104 | 17.6 |
| Czech Republic | 11.416 | 48.1 | 40.937 | 43.5 | 7412 | 59.7 |
| Estonia | 742 | 26.1 | 2.817 | 22.5 | 784 | 17.1 |
| Hungary | ... | ... | ... | ... | 2492 | 21.2 |
| Latvia | 506 | 28.1 | 1.891 | 23.3 | 821 | 15.2 |
| Lithuania | 831 | 33.1 | 3.612 | 36.7 | 595 | 24.5 |
| Poland | 17.227 | 46.8 | 63.669 | 39.6 | 62.434 | 39.8 |
| Romania | ... | ... | 25.819 | 48.8 | 5.160 | 38.4 |
| Slovakia | ... | ... | 2.858 | 26.4 | 2.277 | 25.4 |
| Slovenia | 2.269 | 46.7 | 19.653 | 52.2 | 12.456 | 46.8 |

Note: (...) unavailable data

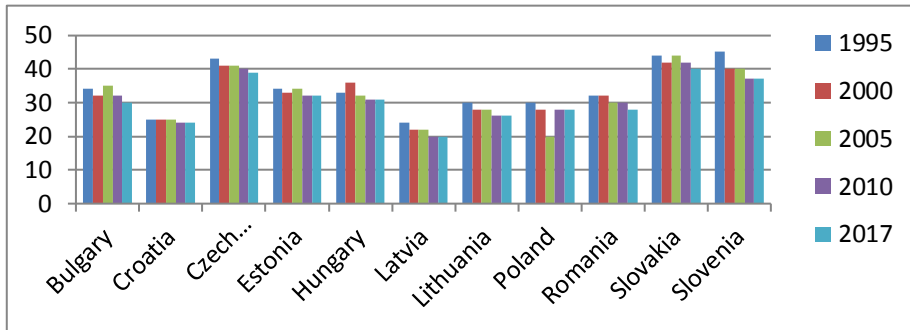
Source: Source: own calculation based on the data provided by Eurostat Reports (European Commission, 2019)

Numerous specialized studies have suggested that investment and economic growth in transition countries are positively associated with the “openness” and export promotion indicators (Balasubramanyam, Salisu and Sapsford, 1996). In that sense, it is noted that investors preferred the liberal-trading countries and very few constraints on repatriation, especially those countries that had regional free trade agreements concluded. Labor costs in the host country are an important factor in locating the site for foreign investors, as most of the firms that invest in want to produce especially for export. In the first years of the transition, the ECE countries’ advantage was that of low labor costs, which, along with other factors, helped attract FDIs.

During the Communist era, state-owned companies were overloaded with employees, from the desire of the central state management to work most of the active population. After the 1990s, a large part of the employees of state-owned enterprises were laid off in order to make companies more efficient (Figure 6), but also because of the gradual imposition of large industrial collapses, which

had a monopoly on domestic or regional markets. The reform of state-owned companies has resulted in the social availability of employees in public enterprises, the loss of job security and, most importantly, the diminishing of wages.

Figure 6. The share of industrial labor force in the total labor force in the CEE countries, 1995-2017 (%)



Source: own calculation based on the data provided by Eurostat (European Commission, 2019)

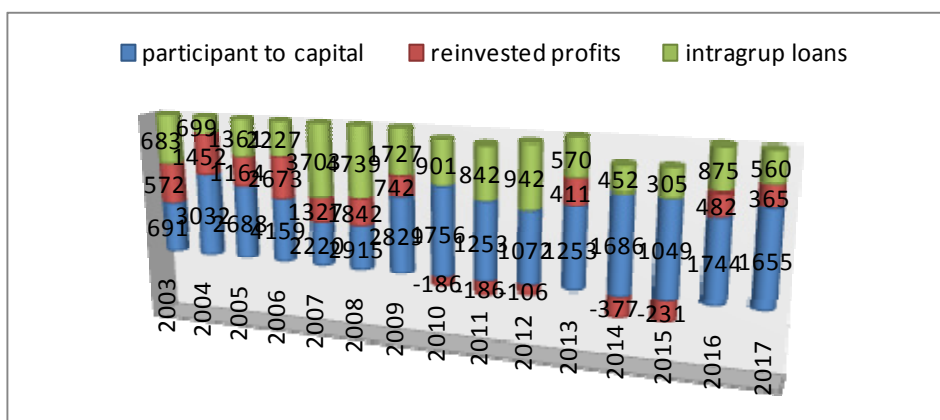
Privatization of industry in the CEE countries had a different path in each state because, since the start of the transition process, there has been a gap between the countries barely out of tutelage of communism and centralized planning. According to the specialty studies, labor productivity is higher in the privatized companies than in the state ones. An analysis of Pohl *et al.* (1997) carried out under the aegis of the World Bank shows that only between 1992 and 1995, the average annual growth rate of labor productivity in privatized companies was positive, of 7.3%, while in state-owned companies it was negative (-0.2%). Some analyzes show that managers of state-owned companies have applied the restructuring process in anticipation of the privatization process. For example, in the Polish privatization program, about 512 firms included in the program saw a rapid improvement in profitability, after restructuring, compared to other firms. Privatization has contributed by about 70-90% to the increase in the productivity of imported goods, observed in countries with large private transfer programs for private property. An exception was made by Hungary, where almost half of the labor productivity registered in the privatized companies reached almost half of the public capital. Unlike Hungary, in countries where privatization was a tedious process, such as Romania and Bulgaria, labor productivity in state-owned enterprises has become more pronounced.

6. FOREIGN DIRECT INVESTMENT AND ECONOMIC GROWTH IN ROMANIA

The Romanian business environment requires economic freedom and friendly taxation for entrepreneurs and especially for foreign investors. Close competition has developed between the world's countries to create favorable conditions for attracting foreign direct investments. Thus, world experience has shown that the main condition for attracting foreign investors is to improve the investment climate. If we refer to the dynamics of foreign direct investments in Romania, we can say that since 2003 they have registered a positive trend. This is mainly due to the increase in the flow of foreign direct investment from the EU to our country (Romania was close to the moment of accession), but also due to the economic performance registered by our country. This growth can be explained by the fact that foreign investors have seen relatively high profit opportunities in the Romanian economy either in the form of greenfield investments or through purchases – mergers and acquisitions.

Figure 7 shows the evolution of the foreign direct investment flow in the period 2003-2017.

Figure 7. Romania – FDI flows (components), by components (EUR million)



Source: own calculation based on the data provided by National Bank of Romania (2004-2018)

Throughout the analyzed period, 2012-2017, there is a continuous increase of the foreign direct investment balance, but starting with 2008, when the economic and financial crisis also felt on the Romanian economy, we can observe a balance of foreign direct investments cumulated with very low increases.

It can also be noticed that the value of loans has increased over the entire period, indicating a negative situation, leading to the idea that foreign firms have

significantly decreased or even suspended investments from net realized revenues, some of these companies being significantly affected of the losses suffered.

According to the information provided by the National Bank of Romania Anual Report 2017, foreign direct investment was directed to areas such as manufacturing (31.5% of the total), financial intermediation and insurance (18.2%), trade (11.4%), construction and trade real estate (10.7%), information and communications technology (5.4%). In terms of country of origin, the top four positions are occupied by the Netherlands (21.7% of the FDI balance at the end of 2011), Austria (17.5%), Germany (11.4%) and France (9, 1%), unchanged positions in 2009 (European Commission, 2019).

Regarding the content of economic growth, a variety of opinions have emerged that lead to a number of definitions of it.

Economic growth expresses those changes occurring within a certain time horizon and in a certain space, materialized in the increase of the macroeconomic outcome dimensions, closely related to the factors influencing its size, including the economic and social environment in which it takes place. These results can be measured by means of synthetic indicators that are significant in appreciating the economic dynamics of a country. The most appropriate indicator for measuring economic growth is gross domestic product.

This macroeconomic indicator has seen an impressive growth in the period 2003-2008, this year's GDP reached its maximum value of 136.8 billion euros, coinciding with the increase in the level of foreign direct investment. Since 2009, both variables have declined significantly as a result of the effects of the economic and financial crisis that affected the entire world (National Institute of Statistics, 2019a).

The increase in 2011-2017 is due significantly to industry, exports and agriculture. Relatively small increases in activity have been recorded in areas such as construction, commerce, hotels and restaurants.

In order to analyze the influence of foreign direct investments on economic growth during the period 2003-2017, we used the econometric modeling method using E-views 7.1. Thus, we will follow in Table 4 the relation between Foreign Direct Investment and Economic Growth in Romania FDI, this being the independent variable, and GDP, considered to be the dependent variable.

Table 4. Economic indicators used for econometric study (billion euro)

| Year | FDI | GDP |
|-------------|------------|------------|
| 2003 | 9.66 | 50.3 |
| 2004 | 15.04 | 58.9 |
| 2005 | 21.88 | 79.2 |
| 2006 | 34.51 | 97.1 |
| 2007 | 42.77 | 121.2 |

| Year | FDI | GDP |
|------|-------|-------|
| 2008 | 48.79 | 136.8 |
| 2009 | 49.98 | 115.9 |
| 2010 | 52.58 | 122.0 |
| 2011 | 55.13 | 136.4 |
| 2012 | 48.6 | 110.6 |
| 2013 | 42.3 | 97.3 |
| 2014 | 42.5 | 89.6 |
| 2015 | 39.5 | 91.2 |
| 2015 | 38.4 | 115.8 |
| 2017 | 37.6 | 96.3 |

Source: (Trading Economics, 2019; National Institute of Statistics, 2019b)

The econometric model used to determine the influence of foreign direct investment on economic growth during the period 2003-2017 implies the use of a simple linear regression, as follows:

$$Y = \alpha + \beta \times X + \varepsilon \quad (1)$$

Where:

Y = the dependent variable, GDP;

α = term free;

β = parameter of the independent variable;

X = independent variable, ie FDI;

ε = the error term of the equation.

Table 5. Results of the estimation of parameters

Dependent Variable: GDP

Method: Least Squares

Sample: 2003-2017

Included observations: 9

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| C | 34.72487 | 6.625917 | 5.240765 | 0.0012 |
| ISD | 1.832232 | 0.165065 | 11.10007 | 0.0000 |
| R-squared | 0.946241 | Mean dependent var | | 101.9778 |
| Adjusted R-squared | 0.938562 | S.D. dependent var | | 32.46266 |
| S.E. of regression | 8.046451 | Akaike info criterion | | 7.201469 |
| Sum squared resid | 453.2177 | Schwarz criterion | | 7.245297 |
| Log likelihood | -30.40661 | Hannan-Quinn criter. | | 7.106889 |
| F-statistic | 123.2115 | Durbin-Watson stat | | 1.808076 |
| Prob (F-statistic) | 0.000011 | | | |

Source: own results

Consequently, the regression equation becomes:

$$\text{GDP} = 34,72487 + 1,832232 \text{ ISD} \quad (2)$$

As we can observe in Table 5, the value of the correlation coefficient between the two variables, $R=0,946241$ being close to the value 1 indicates that there is a close correlation between the GDP and investment values, i.e. the increase in the value of investments also takes place in GDP growth. The value of the adjusted multiplied determinant ($R^2=0.938562$) reveals that 93.95% of GDP is influenced by the value of the investments. Since credit worthiness indicators have values close to 1, one can appreciate that the simple regression model is well-chosen.

Because $F=123.2115$ and Prob (F-statistic) is 0.000011 (lower value of 0.05), this model is valid. The estimated coefficient for FDI is correctly estimated (accepting the null hypothesis) and has statistical relevance, the t-statistical value (11.10007) is well above the critical one, and the standard error records low values (0.165065).

7. CONCLUSIONS

This paper looked at the importance of country risk in regards with the location of investments in the CEE countries, but also the importance of the latter in economic growth. We also analyzed the particular case of Romania, following the relationship between GDP and FDI.

Our study indicates that Foreign Direct Investments in Central and Eastern European countries has been a major indicator of economic development and external economic confidence in the stability and development of their economies. During the economic transformation, foreign direct investments in Central and Eastern European countries has become an important indicator of economic development and an indicator of external economic confidence in the stability and development of their economy. National governments have expected foreign direct investment to curb the economic and social impact of the transformation and to contribute to the growth and competitiveness of the economies, as confirmed by the positive impact of foreign investment on exports and rising gross value added in companies under foreign control.

In the case of Romania, we have noticed that although the number of statistical observations is relatively small, we can assume that the built model is representative to illustrate the link between foreign direct investment and economic growth at a macroeconomic level. Regarding the period considered, the variation of the FDI flow has a moderate impact on the variation in economic growth. The phenomenon studied, namely the impact of FDI on GDP, which is considered to be the best indicator of economic growth, determines a positive relationship between these two macroeconomic indicators. Thus, GDP is

sensitive to changes that may occur over a period of time, but economic growth depends heavily on foreign investment flows.

The analysis carried out demonstrates that FDI has a positive impact on economic growth, improving the overall productivity of production factors and, more generally, the efficiency of resources use in the beneficiary economy. Several specialists appreciated that the Romanian authorities did not carry out enough activities to attract foreign investors, and the high volume of investments that our country managed to attract during the period 2006-2008 was due to favorable conjuncture related to the accession to the European Union.

Following the analysis, it can be said that both on the domestic market and the international one foreign direct investments contribute to the economic growth of the countries of Central and Eastern Europe and the increase of the competitiveness of Central Europe in the world economy. The future risk, which is beginning to emerge, is the successive decrease in the direct flow of foreign investors' investment that is starting to place its investments in more cost-effective countries in Europe and Europe around the world. In terms of future development, according to Tun, Azman-Saini and Law (2012), institutional quality will have a greater role to play than market size and infrastructure quality.

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A CASE STUDY ON CSR PRACTICES IN ROMANIA IN THE CONTEXT OF EU LEGISLATION

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Abstract

Since the 1990s and especially after the Green Paper in 2001 (European Commission, 2001), the European Union has promoted the importance of CSR as part of its sustainable development strategy. Thus, EU strongly encourages the effective implementation of CSR in European enterprises, even more after 2008 financial and economic crisis, as a crucial push factor that contributes to the Europe 2020 Strategy, aiming for sustainable development through smart, sustainable and inclusive growth. As member of EU, Romania has to subscribe to the European regulations on CSR and to implement them.

The objective of the paper is to identify how Romanian companies implemented CSR practices, the challenges and benefits that companies have. The first part of the paper reviews the literature regarding the CSR concept, highlighting the EU approach by presenting the evolution of European policy regarding CSR and the implementation of European Directives in Romania. The second part of the paper pays attention to the CSR practices in Romania. As research method, we use the case study and we consider two samples of companies. First, we analyse a sample which consists from the largest companies, by turnover. The results obtained show that the areas most frequently covered by CSR initiatives in Romania are education, environment and responsibility for culture and tourism. Secondly, we consider a sample of companies from Iasi County (the North-Eastern region of Romania) that implement CSR practices. The results highlight that CSR strategies adopted by these companies have an important impact to the local society through helping sick children, offering scholarships for children and reducing school dropout. Finally, we conclude that companies are starting to be aware of the potential benefits of socially responsible practices, to their business activity and also to the society.

Keywords: *corporate social responsibility; sustainable development; case study; Romania.*

JEL Classification: M14, O52

1. INTRODUCTION

The last financial crisis revealed the beginning of a revolution in the field of CSR, both theoretically and practically. Among the causes of the worst crisis that economies have experienced since the Great Recession, the behaviour of large companies, often regarded as irresponsible, is considered one of the most important. CSR supporters consider this crisis a confirmation of the need to strengthen corporate social responsibility, a way to avoid major turmoil in the future (Zaharia and Grundey, 2011).

In this context, on April 15, 2014 the European Parliament adopted the Directive 2014/95/EU on disclosure of non-financial and diversity information by large companies and groups, which entered into force on December 6, 2014. According to this Directive, large public-interest companies with more than 500 employees are required to include non-financial statements (regarding environmental protection, social responsibility and treatment of employees, human rights, anti-corruption and bribery issues) in their annual reports from 2018 onwards. By implementing this Directive, the EU aims at increasing companies' transparency and performance on environmental and social matters and, therefore, to contribute effectively to long-term economic growth and employment. Also, through CSR, corporations importantly contribute to the EU's treaty objectives of sustainable development and highly competitive social market economy (Mullerat, 2013).

Regularly, around 2,500 large EU companies, which represented less than 10% of the EU large companies have disclosed environmental and social information regularly. According to the European Commission (2019), the Directive 2014/95/EU affected around 6,000 large companies and groups across the EU. Regarding Romania, there were almost 700 companies (The Azores Sustainability & CSR Services, 2017) covered by the Directive and which in 2018 had to disclose non-financial information regarding the year 2017.

According to the Flash Eurobarometer (European Commission, 2013), Europeans consider job creation (57%) to be the most positive influence companies have on society, followed by contributing to economic growth (32%) and providing training to employees (31%). Europeans consider corruption (41%), reducing staff (39%) and environmental pollution (39%) as the main negative effects of companies on society. The studies in the field show that Rolex, Lego Group and The Walt Disney Company are the most socially reputable companies (Reputation Institute, 2019).

The EU member states had two years to transpose the Directive into their national legislation (the deadline was December 6, 2016). As member of EU, Romania has to subscribe to the European regulations, including those related to CSR and to implement them. In Romania, the requirements have been adapted or are the same as in the Directive and are mentioned in Order no. 1.938 of August 17, 2016 on the Amendment and Completion of Accounting

Regulations. In Romania, the companies under the Directive are companies with more than 500 employees and also public-interest entities (PIEs), such as: listed companies, credit institutions, insurance and reinsurance undertakings, non-bank financial institutions, payment institutions and e-money institutions, privately managed pension funds, financial investment services companies, national/state owned/companies, companies with full or majority state capital, self-managed public company.

In Romania, the field of CSR is still at its early stages of development. While multinationals and large Romanian organizations have gradually developed a culture of responsible conduct, in many cases CSR is still associated with philanthropy and focused on donations, sponsorships and public relations. Only few companies adopted a strategic approach, integrating CSR into core business practices, informing about company decisions and activities. The CSR instruments most frequently considered are: corporate codes of conduct, social investments, audit and social and ecological reporting.

Our contribution consists in filling the gap in CSR research and developing the literature through observing and analysing companies, which have distinguished themselves by their CSR practices.

The paper is organized as follows: section 2 reviews the literature regarding the CSR concept and the importance of CSR activities. In order to capture the impact of CSR activities, section 3 focuses on the case of Romania, first on the largest Romanian companies, by turnover and secondly, on a sample of companies from Iasi County (the North-Eastern region of Romania). Sections 4 highlights the conclusions of the present research.

2. LITERATURE REVIEW

The most common definitions of CSR and mostly used as reference by many organizations are those provided by the World Business Council for Sustainable Development, and the European Union Green Paper on Promoting a European Framework from 2001.

Among organizations that defined the concept of CSR, first we mention the approach of World Business Council for Sustainable Development (Holme and Watts, 2000) that consider CSR as “the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life”.

In European Union, the official position on CSR comes in 2001, when it was published The Green Paper – Promoting a European framework for Corporate Social Responsibility (European Commission, 2001). EU concern about CSR comes, also as a result of the strategic objective set out at the Lisbon European Council: to become “the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion” (European Parliament, 2000). In the

Green Paper EU defines CSR 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” (European Commission, 2001). In October 2011, the European Commission proposed a new definition of CSR: “CSR refers to companies taking responsibility for their impact on society” (European Commission, 2011). Also, the European Commission believes that CSR is important for the sustainability, competitiveness, and innovation of EU enterprises and the EU economy because “it brings benefits for risk management, cost savings, access to capital, customer relationships, and human resource management.”

According to the International Institute for Sustainable Development (2019, pp. 18-19), the social responsibility of an organization should define its contribution to the balanced promotion of all three pillars of sustainable development: economic growth, social development and environmental protection.

Carroll (1999) considers that CSR is the decision-making and implementation process that guides all company activities in protecting and promoting international human rights, labour and environmental standards, and compliance with legal requirements within its operations and in its relations to the societies and communities where it operates.

For a deeper understanding of the concept of CSR, we refer also of the Mironescu (2016) approach according who CSR takes into consideration the overall impact a company produces upon a society and the need to responsibly and specifically manage this impact on each stakeholder. When a company has a high economic performance, it can afford to devote a significant amount of its resources for social performance. Also, a large financial performance leads to a greater social performance.

Few studies focused on CSR practices in Romania, but there is a growing concern for social responsibility at the corporate level.

According to Stancu and Olteanu (2008), in Romania CSR was still in his infancy in 2008. The most important companies in the field were the multinational ones, because of their corporate culture. In that period, few companies published CSR reports or included in their annual report information regarding their CSR activity. Often, companies used CSR as a tactical instrument, and this fact explains why most of CSR projects in Romania are on short term. At the governmental level the CSR strategy is mostly imported from the EU.

In her research, Grosu (2011) emphasized the situation regarding the practical implementation of CSR in Romania, based on a sample of 40 companies (multi)national during the period of 2006-2010. She found that in Romania CSR is often confused with philanthropy and corporate involvement is based in particular on occasional donations and sponsorships, without a strategic dimension, in line with corporate long-term objectives. Also, CSR is perceived

more as a tool to promote company image and not as a long-term commitment to contribute to the development of the modern society which suppose that companies are economically efficient, socially responsible and environmentally committed.

Obrad *et al.* (2011) performed an analysis of the way that Romanian companies develop CSR activities and the way they understand to draw social references and communicate their content, using the same sample as Grosu (2011) of the 40 most important companies in Romania that developed CSR activities. Their study confirmed the reality of some issues that Romanian companies have to solve and they also identified several aspects that need to be improved, such as communication and transparency of CSR documents.

An important finding is that of Popa (2015) and Obrad *et al.* (2011) who highlighted the fact that at corporate level, the social responsibility initiatives focus mainly on areas such as education, environment and community support.

An interesting study is that of Pop (2016) who arrives to several conclusions regarding CSR activities in Romania, based on Ernst & Young surveys of 2013, 2014, and 2015. Thus, Pop arrives to the same conclusion as Stancu and Olteanu (2008) that CSR in Romania is still at an early stage of development and agree with Grosu (2011) that mainly at Romanian companies' level, CSR is similar to philanthropy.

Mironescu (2016) emphasized that a company that does not respect the environment, the community, its employees or the ethical principles, will lose credibility and will move away customers and suppliers.

The importance of CSR activities is well recognized both by academics and practitioners, because CSR has many benefits for a company, among which we can mention: it helps the company to hire and to retain personnel, brand awareness, improves the relationships with suppliers, and also helps the company to improve its public image. Of course, there are also some criticism in the literature regarding CSR activities, because the main purpose of a business is to bring added value for its shareholders, while CSR will spend this value.

Most definitions of Corporate Social Responsibility describe it 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. Being socially responsible means not only fulfilling legal expectations, but also going beyond compliance and investing 'more' into human capital, the environment and the relations with stakeholders. The experience with investment in environmentally responsible technologies and business practice suggests that going beyond legal compliance can contribute to a company's competitiveness.

Thus, we consider that CSR is a form of corporate self-regulation integrated into a business model. CSR is the decision-making and implementation process that guides all company activities in protecting and promoting international

human rights, labour and environmental standards, and compliance with legal requirements within its operations and in its relations to the societies and communities where it operates (Carroll, 1999).

3. CASE STUDY ON CSR PRACTICES IN ROMANIA

3.1. The background

When analysing the understanding and application of CSR within a particular country/region across diverse types of organizations in different areas of operation, it becomes evident that they might vary from a narrow focus only on ad hoc philanthropic acts, to a broader and long-term approach that takes into account the overall sustainable development of society.

In the present study we define social responsibility in a broad sense. Diana Klusch, director of Ursus Breweries, said: “We operate and we think based on the overall principles for sustainable development which basically include everything the company does to ensure long term development of both the business and society. At a global level, we operate based on 10 main sustainable development priorities, only one of which refers to community development and community involvement. These latter two are what is most often referred to as “CSR” in Romania” (Anca *et al.*, 2011, p. 9).

Another director, Elisabeta Ghidiu, from Transgaz said about CSR: “The social responsibility component of our company is part of our overall development strategy. We see CSR as a modern way of doing business and of promoting cohesion and understanding between management and employees, between management and the community. It is also a way of increasing company value in time by helping those that help us” (Anca *et al.*, 2011, p. 9).

In Romania, the field of CSR is still at its early stages of development. While MNEs and large Romanian organizations have gradually developed a culture of responsible conduct, in many cases CSR is still associated with philanthropy and focused on donations, sponsorships and public relations.

The CSR/SR instruments most frequently considered are: corporate codes of conduct, social investments, audit and social and ecological reporting.

Only few companies adopted a strategic approach, integrating CSR into core business practices, informing company decisions and activities.

The concept itself seems not too well known by SMEs, although the respective practices appear to be well implemented and numerous.

In this context, the areas most frequently covered by CSR initiatives are children welfare, education, art, religion, environment and sport. Depending on the communities, some of the causes, such as children welfare and education, at-risk social group services and religion are much more frequently reported to other community initiatives.

3.2. CSR practices according to Romania CSR Index

The Index is a comparative analysis of social responsibility and environmental impact among large companies in Romania, developed for the first time in Romania by The Azores Sustainability and CSR Services.

The objectives of the index were to recognize the leading companies in the sustainable development, to analyse the trends in Romania, to provide a comparative analysis tool for companies and to increase the awareness of CSR in Romania.

Romania CSR Index (2015 and 2017) analyses the social responsibility of the 100 top companies in our country, according to Top 100 published by Ziarul Financiar. CSR index 2018 includes all 696 Romanian companies with more than 500 employees in the context of the 2014/95 / EU Directive.

The most important conclusions of the report on *CSR Index 2015* (The Azores Sustainability & CSR Services, 2016) mentioned the following aspects:

- The results of the analysis show a low interest of companies in CSR strategy and activities. For example, one-third of top 100 companies did not publish any information about social responsibility;
- The CSR categories shared by most companies were Community Programs, Economic Impact and Employee Information;
- 22% of the surveyed companies expressed their high interest in engaging in community life, through financial contributions, donations, pro bono activities or through various development programs;
- At the opposite end, the categories less communicated by companies are the Value Chain, Environment and Human Rights, and Anti-Corruption Policy;
- 30% of the evaluated companies do not publish any information about their impact on society and the environment.

According to *Romania CSR Index 2017* (The Azores Sustainability & CSR Services, 2017), the level of companies' interest for CSR has increased to a small extent compared to last year and remains at a low level. This slight upturn is mainly due to the 2014/95/EU Directive which require that public interest entities with more than 500 employees to publish non-financial information from 2018 onwards.

The results show that a large number of companies continue to focus on community involvement, but projects have become more strategic in the sense that some companies are investing more in vocational education, for example, trying to find and form a skilled workforce or highly-qualified.

There increased also investments in facilities that help to increase energy efficiency or use renewable energy.

In addition, the interest in cultural responsibility is growing: campaigns that help communities to preserve their traditions, projects to protect cultural heritage or support young artists.

CSR Index 2018 (The Azores Sustainability & CSR Services, 2018) highlighted that:

- Companies continued to invest more rapidly in CSR campaigns and put more emphasis on projects and programs with long-term impact;
- Banks have focused on financial education programs, food retailers have promoted more local suppliers, and beverage producers have been looking for solutions to better manage natural resources and waste;
- As in previous years, companies continued to support NGOs, whether they provided grants, donations, or sent volunteers to help run projects;
- There is also a growing number of campaigns which promote cultural heritage and Romanian tourism, as well as campaigns in the “Healthy Lifestyle” area.

Summarizing, it is obvious that there is an increase in companies' interest in sustainable development, both at operational level and in reputation because a higher level of transparency of social and environmental responsibility will increase the resilience of companies and will improve both the financial and non-financial results.

3.3. Case study on CSR practices in North-Eastern region of Romania

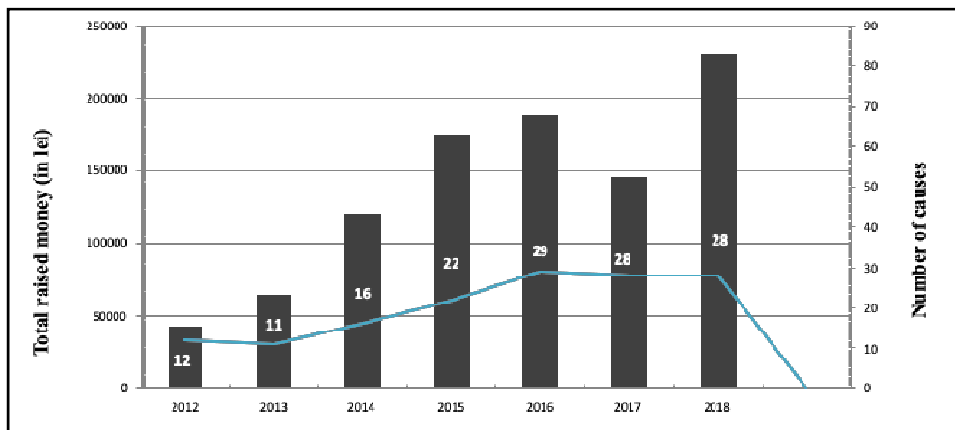
In this case study we focus on community involvement by companies. Initiatives in this area focus on supporting the education and health of underprivileged children or the elderly, humanitarian actions and volunteering. The primary means of support consists of sponsorships, in-kind donations, providing free services or products and are addressed to NGOs, schools and hospitals.

For our sample we consider a number of 18 companies that were implied in sporting activities (Swimathon Iasi), in the last four years 2015-2018.

Swimathon is an event organized by Community Foundation Iasi. Swimathon is a fundraising mechanism by which the local community from Iasi participate in the implementation of various projects, and it looks like a swimming competition. The money raised are used to support the causes and projects enrolled in the competition.

From the first edition of the Swimathon event, 2012, the number of causes that benefited from donations have raise until 2016, reaching the value of 29. The years 2017 and 2018 had a similar number of projects applied for donations but we must point out that were not the same projects. With the exception of several main projects, that remained overs the years, the rest of the projects changed, according to the needs of local community in that specific year. Moreover, the total amount of donations raised registered a significant increasing, from 42,359 lei (in 2012) to 230,568 (in 2018), with a small drop down in 2017 (Figure 1).

Figure 1. Total donation by years made for Swimathon Iasi (in lei)



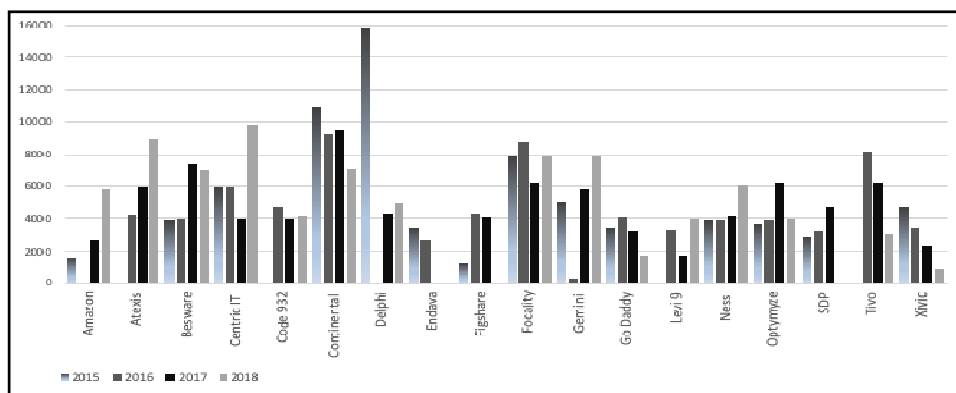
Source: own elaboration based on Swimathon Activity Reports
(Fundația Comunitară, 2013-2018)

Main projects supported on donations from Swimathon Iasi, between 2015 and 2018:

- A Gesture for a Lifetime – Equipment of the Clinical Hospital for Children “Holy Mary”;
- Scholarship Fund – Community Foundation;
- Recovery Centre for Children with Disabilities – Bethany Social Services Foundation;
- Mobile School – Save Children Iași Association;
- START – Scholarship Program from children in rural areas – Bethany Social Services Foundation;
- Centric Scholarship Fund – Centric It Solutions Romania;
- Childhood – by sound and colour and Childhood workshops- Prolife Association;
- Movement with sense – Waldorf Association Iasi;
- Together for a smile – the “Save a Heart” Association and Plus Communication;
- HUMAn 2016 Visual Arts Symposium – “Cucutenians”;
- CyLIIS Robotics Workshop – “Grigore Moisil” Theoretical High School of Iasi.

In 2018 were also added several causes with the purpose of helping some people to raise the money they need to get treatment for serious diseases.

Figure 2. The dynamics of donations made by local companies between 2015 and 2018



Source: own elaboration based on Swimathon Activity Reports (Fundatia Comunitara, 2015-2018)

Our findings point out that enterprises from North-eastern region of Romania are continuously implementing CSR practices, by making donations and the effective participation of their employees in sporting events organized in Iasi. The CSR strategies have a significant impact to the local society because there are mainly focused on helping sick children or adults with serious diseases, offering scholarships for underprivileged children and ensuring the reduction of school dropout, and also scholarships for performing children. As we can see from Figure 2, especially large international companies have made donations from Swimathon event in the last four years. Besides the companies presented in Figure 2 that participated for several years in a row are also several companies that participate just for one year, like: eMag, BRD and Ford. We explain this participation by the fact that the big corporations have a good foundation of CSR practices, the smaller and the local companies are not sufficiently familiar with the concept and the way of applying these practices in their business.

The positive results obtained by companies following their involvement in CSR activities consist in:

- Better image;
- Better custom relations;
- Better atmosphere between employees, by participating together as a team to swimming activities (*in our case study*);
- Increase market share;
- Enhances reputation;
- Increase brand loyalty;
- Attract and retain valuable employees.

4. CONCLUSIONS

Most definitions of CSR describe it 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.

The potential benefits that socially responsible practices can bring to the business environment and to the society are: increased competitiveness, motivation, retention and development of staff, customer loyalty, business reputation, and overall competitiveness of a business.

The results obtained show that CSR strategies adopted by the companies from North-Eastern region of Romania implicated in sustaining local sporting events have an important impact to the local society helping sick children, offering scholarships for children, reducing school dropout. Thus, we conclude that companies are starting to be aware of the potential benefits of socially responsible practices, to their business activity and also to the society.

Our contribution consists in filling the gap in CSR research and developing the literature through observing and analysing companies, which have distinguished themselves by their CSR practices.

Further research can extend and develop our analysis by including also the CSR activities realized by local SMEs, taking into consideration their contribution to economic growth, social cohesion and regional and rural development in the EU.

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EFFECTS OF BOARD INDEPENDENCE ON FIRM PROFITABILITY. EVIDENCE FROM CENTRAL AND EASTERN EUROPE

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Abstract

The role of the board of directors is to supervise and control the activity of managers and to see if they are responsible for the effectiveness of the company. The independence of the board of directors can be viewed as its ability to objectively judge the company's activity and not to be subordinated to other interests, in particular management interests and other external parties' interests. The aim of this paper is to analyze the role and implications of independent board of directors in companies and its effects on firm profitability expressed through return on assets (ROA) and return on equity (ROE) ratios. Our empirical findings are based on results provided by an OLS regression on panel data, controlling for individual effects, using a sample of listed companies from Central and Eastern (CEE) countries from 2004 to 2013 period. Data regarding financial characteristics of companies was collected from Orbis database and data regarding the independence of the board of directors, as a corporate governance characteristic, was manually collected by analyzing the Annual Reports of the companies in our sample. Our findings suggest that independent board of directors has a positive statistically significant effect on company's profitability on both ROA and ROE in Central and Eastern European listed companies (entities with independent board have a higher profitability rate).

Keywords: board independence; financial reporting; firm profitability; CEE countries.

JEL Classification: G34, L25

1. INTRODUCTION

The board of directors (BoD) represents the foundation of the corporate governance system and the interface between shareholders and managers (Onofrei, 2007). The board of directors supervises and monitors the management in a way in which they make the managers responsible for the effectiveness of the company. The European Commission defines an independent director among

other criteria as a person that “cannot be an executive or managing director of a company or an associated company or have been in such a position within the previous five years and cannot be an executive or managing director in another company” (European Commission, 2005). Therefore, the independence of the board of directors can be viewed as its ability to objectively judge the company’s activity and not to be subordinated to other interests, in particular management interests and other external parties’ interests and to avoid conflict (of interests). Our analysis (that focuses on the impact of the independence of BoD and its effects on firm profitability, expressed through return on assets *ROA* and return on equity *ROE* ratios) is based on hand-collected data from the Annual Reports of listed companies in Central and Eastern European countries. The findings deliver evidence of the corporate governance practices in emerging countries regarding the board composition and offers suggestions in improving corporate governance practices. The paper contributes to the specialized economic literature with further analyze of the effects of Board independence on firm profitability in Central and Eastern European transition countries. Moreover, we consider that our analysis could be important for shareholders, companies and other institutions in avoiding conflict of interests and assuring long-term development and added value.

The reminder of this paper is organized as follows: Section 2 reviews the specialized literature in the field; Section 3 describes the data and methodology used in our analysis; Section 4 provides the results of our panel data regression and Section 5 delivers conclusions.

2. LITERATURE REVIEW

The literature in the field positions the Board’s independence with mixed results regarding the impact on firm profitability. There are studies that positions the Board’s independence as a factor that positively contributes on firm performance (Gompers, Ishii and Metrick, 2003; Dittmar and Mahrt-Smith, 2007; Brown and Caylor, 2006). Rosenstein and Wyatt (1990), argue that an independent Board of directors contributes in increasing the value of the firm. Moreover, (Bonn, 2004) strengthens this idea through an analysis of the impact of the governance characteristics regarding the board of directors, on the performance of 84 large listed companies in Australia. Using multiple linear regression, Bonn (2004), analyzed the impact of the size of the board of directors, its independence, the age of the members and the number of women in the Board on firm performance. The results showed that the independence of the board of directors is positively associated with company profitability, expressed by return on equity ratio (ROE). Other studies position the Board’s independence with no significant association on firm profitability (Fosberg, 1989; Bhagat and Black, 2002; Lehn, Patro and Zhao, 2009; Ramdani and van Witteloostuijn, 2010; Dahya *et al.*, 2016). Rodriguez-Fernandez, Fernandez-

Alonso and Rodriguez-Rodriguez (2014) analyzed on a sample of listed companies from Madrid Stock Exchange the corporate governance characteristics such as independent directors, CEO duality, the level of occupation of directors and the activity of the Board on firm profitability measured by ROA and ROE. Their results suggest that independence of the Board has no significant effect on ROA and ROE. Kral *et al.* (2012) analyze the implications of corporate governance characteristics on company performance expressed through ROA on a sample of 83 companies in the Czech Republic. Their results suggest that some companies analyzed in the Czech Republic did not have a system of corporate governance upgraded to the requirements of the governance principles, which led to lower performance compared to other companies that had an efficient corporate governance system and updated to the principles governance. Singh and Gaur (2009) suggest that the independence of the board of directors leads to a decrease in the company's profitability. They analyze the impact of the board of directors' independence on performance for the top 500 companies in India and China in 2007, expressing performance through ROE and ROA, and found that the independence of the board of directors leads to lower firms' performance. Consistent with this perspective (Khosa, 2017) suggests a reverse relationship between the independence of the board of directors and the performance of the firm, analyzing for a period of 5 years (2008-2012) 317 listed companies from India and measuring performance through the market value of the firm. Other studies (Kiel and Nicholson, 2003; Mangena, Taurangana and Chamisa, 2012; Zhou, Owusu-Ansah and Maggina, 2018) stated the negative association between Board independence and company profitability. Choi, Park and Yoo (2007) argued that independent board of directors leads to a positive and significant effect on firm performance express through Tobin Q. Kao, Hodgkinson and Jaafar (2018), using a sample of Taiwanese listed firms, argue that independent Board of directors has a positive and significant effect on firm profitability express through both ROA and ROE and also on market based performance express through Tobin Q and market value of equity. O'Connell and Cramer (2010) explored the relationship between board composition and firm performance measured by stock returns, financial q and returns on assets ratio (ROA) for a sample of Irish firms. Their results suggest a positive and significant effect of board impendence on return on assets ratio (ROA).

Based on the prior economic literature, agency theorists argue that independent Board of directors has a positive effect on firm performance and are more efficient in monitoring the management's activity and assuring their activity in accordance with the firm's interests. Therefore, we conducted the following hypothesis: *H.1.a: Board independence has a positive effect on firm profitability.* The null hypothesis is that "*Board independence has no effect on firm profitability*" – the respective coefficient in equation can have zero values.

If our result rejects the null hypothesis (p-value of the coefficient is below 0.05), the alternative hypothesis is true.

3. DATA AND METHODOLOGY

At first our sample was composed of 118 selected listed companies from Central and Eastern Europe from 2004 to 2013. As a result of the lack of accessing some financial data and some Annual Reports from a total of 1180 observation, our sample varies between 767 and 887 observations regarding listed companies from Romania, Slovenia, Czech Republic, Latvia, Croatia, Romania, Estonia, Bulgaria, Lithuania Hungary, Slovakia and Poland.

The data regarding financial characteristics of the firms in our sample was collected from Orbis database and data regarding our interest variable, Board Independence (coded iBoD), was hand-collected from the Annual Reports of the companies in our sample.

As dependent variables we used two measures of profitability: return on assets ratio (ROA) and return on equity ratio (ROE). These independent variables are in line with other studies (Bonn, 2004; Singh and Gaur, 2009; Rodriguez-Fernandez, Fernandez-Alonso and Rodriguez-Rodriguez, 2014; Kao, Hodgkinson and Jaafar, 2018). Succinct description regarding our variables (dependent, independent and control variables), data source for our variables and the estimated sign is presented in Table 1.

Table 1. Variable description

| Variable | Description | Data source | Expected sign |
|--|---|---------------------------|---------------|
| <i>Dependent Variables</i> | | | |
| ROA | Return on assets ratio computed as net income divided by total assets. | Orbis | |
| ROE | Return on equity ratio computed as net income divided by total equity. | Orbis | |
| <i>Corporate Governance Variable</i> | | | |
| iBoD | Dummy variable representing the independence of the Board, noted 1 if the Board is composed of independent directors and 0 otherwise. | Hand- collected data | +/- |
| <i>Control Variables (Company Financial Characteristics)</i> | | | |
| lnLIQ | Liquidity ratio, considered as natural logarithm of liquidity ratio | From Orbis and calculated | + |
| lnSTK | Stocks, calculated as natural logarithm of stocks | From Orbis and calculated | +/- |
| lnDEBT | Debtors, calculated as the natural logarithm of debtors | From Orbis and calculated | - |

| Variable | Description | Data source | Expected sign |
|---------------|---|--------------------------------|---------------|
| lnSL | Sales, calculated as the natural logarithm of sales | From Orbis and calculated | +/- |
| rCS | Fixed asset turnover ratio | From Orbis and calculated | +/- |
| ChS | Cash, calculated as Cash flow divided by operating revenue | From Orbis and calculated | +/- |
| Zscore | Z-Score indicator regarding the probability of bankruptcy of the company. | Calculated after Altman (2000) | - |

Source: authors' computation

Our control variables are used consistent with (Zhou, Owusu-Ansah and Maggina, 2018; Ramdani and van Witteloostuijn, 2010) described in Table 1. In our analysis, we use seven control variables such as the natural logarithm of liquidity ratio (coded lnLIQ); the natural logarithm of debtors (coded lnDEBT); stocks (coded lnSTK) and sales (coded lnSL); fixed asset turnover ratio (coded rCS), cash (coded ChS) and the indicator Z-Score regarding the probability of bankruptcy of the company (coded Zscore).

Our interest variable, iBoD, is a dummy variable and indicates the independence of the board of directors, coded with 1 if the board of directors is independent and 0 otherwise. Descriptive Statistics of our unbalanced panel data is presented in Table 2.

Table 2 Descriptive statistics

| Statistic | N | Mean | St. Dev. | Min | Pctl(25) | Pctl(75) | Max |
|---------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|
| ROA | 887 | 5.940 | 6.807 | -8.158 | 1.691 | 10.074 | 20.008 |
| ROE | 887 | 12.453 | 13.666 | -16.028 | 3.935 | 19.741 | 42.092 |
| lnLIQ | 880 | 0.310 | 0.496 | -0.673 | 0.0004 | 0.621 | 1.294 |
| lnSTK | 854 | 10.469 | 1.298 | 8.162 | 9.559 | 11.408 | 12.773 |
| lnDEBT | 865 | 10.830 | 1.332 | 7.963 | 10.047 | 11.884 | 12.949 |
| lnSL | 878 | 13.085 | 1.021 | 11.508 | 12.398 | 13.700 | 15.347 |
| rCS | 878 | 0.582 | 0.507 | 0.020 | 0.176 | 0.827 | 1.932 |
| ChS | 767 | 0.111 | 0.104 | -0.034 | 0.036 | 0.154 | 0.354 |
| Zscore | 820 | 6.343 | 7.513 | 0.667 | 2.488 | 6.336 | 31.892 |
| iBoD | 881 | 0.856 | 0.351 | 0.000 | 1.000 | 1.000 | 1.000 |

Source: own calculation

Table 2 shows descriptive statistics of the full unbalanced panel dataset. Our results are comparable with other related results such as Kao, Hodgkinson and Jaafar (2018) who analysed Taiwanese listed companies. For example, our first dependent variable, ROA, has the mean 5.940 vs 5.255, standard deviation

6.807 vs 7.105 and the variation between -8.158 and 20.008 vs -22.870 and 27.410. Our second dependent variable, ROE, has the mean 12.453 vs 7.180, standard deviation 13.666 vs 12.295 and the variation between -16.028 and 42.092 vs -61.860 and 41.060.

The panel data model is described through some restrictions such as parameter homogeneity (Croissant and Millo, 2008), for all i, t , applied to the general model (equation 1), resulting a linear model pooling all the data across i and t (equation 2). To model individual heterogeneity, the error term has two separate components μ_i and ε_{it} , μ_i being specific to the individual and not changing over time (equation 3). In the case of *fixed* or *random* effects models: the estimation depends on the properties of the error component, which may be either uncorrelated with the regressors (*random effects* model) or correlated (*fixed effects*, *within* or *least squares dummy variables* model).

$$y_{it} = \alpha_{it} + \beta_{it}^T x_{it} + u_{it} \quad (1)$$

$$y_{it} = \alpha + \beta^T x_{it} + u_{it} \quad (2)$$

$$y_{it} = \alpha + \beta^T x_{it} + u_i + \varepsilon_{it} \quad (3)$$

When time specific components are taken into consideration (e.g. Year) the error has three components:

$$u_{it} = u_i + \lambda_t + \varepsilon_{it} \quad (4)$$

The individual component may be either independent of the regressors or correlated. If it is correlated, the ordinary least squares (OLS) estimator of would be inconsistent, so it is customary to treat u_i as a further set of n parameters to be estimated, as if in the general model $\alpha_{it} = \alpha_i$ for all t . This is called the fixed effects (a.k.a. within or least squares dummy variables) model, usually estimated by OLS on transformed data, and gives consistent estimates.

Our fixed effects equation becomes:

$$ROA_{it} = \beta_1 \ln LIQ + \beta_2 \ln STK + \beta_3 \ln SL + \beta_4 \ln DEBT + \beta_5 rCS + \beta_6 ChS + \beta_7 Zscore + \beta_8 iCA + \alpha + u_i + e_{it} \quad (5)$$

$$ROE_{it} = \beta_1 \ln LIQ + \beta_2 \ln STK + \beta_3 \ln SL + \beta_4 \ln DEBT + \beta_5 rCS + \beta_6 ChS + \beta_7 Zscore + \beta_8 iCA + \alpha + u_i + e_{it} \quad (6)$$

Where:

u_i is correlated with the independent variables;

e_{it} is the error term (idiosyncratic errors);

α – constant.

The variables employed in equations are:

1. Firm specific financial characteristics (used as independent/control variables):

- lnLIQ (natural logarithm of Liquidity ratio);
- lnSTK (natural logarithm of Stocks);
- lnDEBT (natural logarithm of Debtors);
- lnSL (natural logarithm of Sales);
- rCS (Fixed asset turnover ratio);
- ChS (Cash);
- Zscore (Z-Score regarding the probability of bankruptcy of the firm).

2. Corporate Governance characteristic (our interest variable):

- iBoD (representing Board independence).

The random effects models consider that u_i is uncorrelated with independent variables and it is incorporated in the error term.

We also computed some preliminary tests, such as poolability tests (available on demand) for checking the regression assumptions, as recommended by the economic literature (Gujarati, Porter and Gunasekar, 2013).

Regarding the inspection of possible high correlated independent variables that can cause multicollinearity, we calculate the Pearson Correlation matrix, which is presented in Table 3.

Table 3. Pearson Correlation Matrix

| | lnLIQ | lnSTK | lnDEBT | lnSL | rCS | ChS | Zscore | iBoD |
|--------|--------|-------|--------|-------|--------|-------|--------|--------|
| lnLIQ | 1 | 0.182 | 0.089 | 0.008 | -0.117 | 0.249 | 0.347 | -0.048 |
| lnSTK | 0.182 | 1 | 0.568 | 0.696 | 0.047 | 0.094 | 0.042 | 0.107 |
| lnDEBT | 0.089 | 0.568 | 1 | 0.75 | 0.196 | 0.234 | 0.087 | 0.143 |
| lnSL | 0.008 | 0.696 | 0.75 | 1 | 0.173 | 0.215 | 0.116 | 0.193 |
| rCS | -0.117 | 0.047 | 0.196 | 0.173 | 1 | 0.534 | 0.06 | 0.031 |
| ChS | 0.249 | 0.094 | 0.234 | 0.215 | 0.534 | 1 | 0.318 | 0.119 |
| Zscore | 0.347 | 0.042 | 0.087 | 0.116 | 0.06 | 0.318 | 1 | -0.012 |
| iBoD | -0.048 | 0.107 | 0.143 | 0.193 | 0.031 | 0.119 | -0.012 | 1 |

Source: own calculation

As Table 3 suggests, correlation coefficients were all found to be below 0.8, as recommended by econometric studies therefore, there is no correlation problems, as the largest correlation is between variables stocks (lnSTK) and sales (lnSL) of 0.696. Furthermore, performing the variance inflation factors (VIFs), our outputs imply that there are no problems regarding multicollinearity.

Stationarity tests (available on demand) had been conducted for our variables operating different panel unit root tests, generally used in unbalanced panel datasets. Our tests results suggest that all data series included in the panel indicates no stationarity problems.

4. RESULTS

To test the robustness of our results we conducted, both, fixed and random effects. The full random and fixed effects models are presented in Appendix 1, 2, 3 and 4. Analysing both models, we conclude that our results are robust. We discuss only the fixed effects model as Hausman tests (available on demand) (Hausman, 1978) for all implied equations suggest.

In Table 4 we present the results considering the effects of Board independence (iBoD) on firm profitability expressed by dependent variables return on equity ratio (ROE) and return on assets ratio (ROA). The first two columns are represented by the fixed effects model, column 1 shows the results of fixed effects model on dependent variable ROA and column 2 offers the results of fixed effects model on dependent variable ROE. Columns 3 and 4 are represented by the random effects model on both ROA and ROE.

Table 4. Results of panel data regression of both fixed and random effects on dependent variables ROA and ROE

| Variables | (1) Within. individual. Dependent variable: ROA | (2) Within. individual. Dependent variable: ROE | (3) Random. individual. Dependent variable: ROA | (4) Random. individual. Dependent variable: ROE |
|---------------|---|---|---|---|
| iBoD | 3.6203*** (0.8839) | 5.8100** (2.6613) | 1.9349*** (0.6453) | 1.7504 (1.6774) |
| lnLIQ | 1.0024** (0.4271) | -2.0881 (1.2858) | 1.2854** (0.3879) | -1.4130 (1.0969) |
| lnSTK | -0.5965** (0.2800) | -1.3892* (0.8430) | -0.4282* (0.2303) | -0.4495 (0.6186) |
| lnDEBT | -1.0384*** (0.3340) | -3.0817*** (1.0057) | -0.9961*** (0.2616) | -2.6125*** (0.6896) |
| lnSL | 1.6419*** (0.5189) | 4.5870*** (1.5623) | 0.9614** (0.3900) | 1.6977* (1.0247) |
| rCS | -6.0529*** (0.5295) | -12.2985*** (1.5943) | -6.7938*** (0.4382) | -15.8410*** (1.2036) |
| ChS | 71.0195*** (2.5904) | 150.6948*** (7.7995) | 65.8985*** (2.2761) | 127.0739*** (6.3972) |
| Zscore | 0.0186 (0.0205) | -0.0806 (0.0618) | 0.0128 (0.0199) | -0.0987* (0.0581) |

| Variables | (1) Within. individual. Dependent variable: ROA | (2) Within. individual. Dependent variable: ROE | (3) Random. individual. Dependent variable: ROA | (4) Random. individual. Dependent variable: ROE |
|-------------------------------|---|---|---|---|
| Constant | - | - | 3.5159 (3.2290) | 18.7370** (8.1754) |
| Observations | 699 | 699 | 699 | 699 |
| R² | 0.6298 | 0.4283 | 0.6225 | 0.4103 |
| Adjusted R² | 0.5750 | 0.3436 | 0.6181 | 0.4035 |
| F Statistic | 129.3146*** (df = 8; 608) | 56.9303*** (df = 8; 608) | 1,137.628*** | 480.1451*** |

Note: standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Source: own calculations

As Table 4 suggests, independent board of directors (coded iBoD) has a positive and statistically significant effect on both dependent variables ROA and ROE (variable iBoD has a positive sign). Our control variables stocks (coded lnSTK), debtors (coded lnDEBT), and fixed asset turnover ratio (coded rCS) have a negative and significant effect (their coefficient has a negative and statistically significant sign) on both dependent variables ROA and ROE. Sales (coded lnSL) and Cash (coded ChS) variables have a positive and significant effect (their coefficient has a positive and statistically significant sign) on both dependent variables ROA and ROE. Z-Score indicator regarding the probability of bankruptcy of the company (coded Zscore) presents no statistically significant association with our dependent variables.

Regarding our interest variable, (iBoD), our results suggest that independent board of directors contributes to greater profitability measured by both return on assets ratio (ROA) and return on equity ratio (ROE). Our results are in line with other studies from the economic literature such as (Gompers, Ishii and Metrick, 2003; Dittmar and Mahrt-Smith, 2007; Brown and Caylor, 2006; Bonn, 2004; Kao, Hodgkinson and Jaafar, 2018; O'Connell and Cramer 2010). Companies from Central and Easter European countries that have an independent board of directors have a higher profitability expressed through ROA (value is 3.6203) and ROE (value is 5.8100). Therefore, independent board of directors present a direct positive and statistically significant effect on profitability (measured by both ROA and ROE) of listed companies from Central and Eastern Europe.

5. CONCLUSIONS

The paper analyzes the effect of independent board of directors on firm profitability using as profitability measures return on assets ratio (ROA) and

return on equity ratio (ROE), on a sample of listed companies from Central and Eastern European emerging countries.

Our results suggest that independent board of directors increases company's profitability expressed by both return on assets ratio (ROA) and return on equity ratio (ROE). Therefore, companies from Central and Eastern European countries that have independent board of directors perform better in terms return on assets (ROA) and return on equity ratios (ROE) than companies that do not have an independent board of directors.

We consider that assuring the independence of the board of directors is important in order to avoid conflict of interests because of the role of the board of directors in supervising and monitoring the management in a way in which they make the managers responsible for the effectiveness of the company and consequently produces higher profitability (according to our results).

In order to improve their corporate governance system, companies must ensure the independence of the board of directors, and by doing that companies ensure the effectiveness of their assets and capital management, avoid conflict of interest and assure long-term development and higher profitability in terms of ROA and ROE. The main limitation of this paper resides in the lack of accessing all financial characteristics and corporate governance data from the Annual Reports of the companies from our sample. As further data will be accessible additional research will be conducted.

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Appendixes

Appendix 1. Results of fixed effects model regarding dependent variable ROA

| Data Panel regression Results | | | | | | | | |
|-------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Dependent variable: | | | | | | | | |
| | within. individual. nROA.iBoD.1 | within. individual. nROA.iBoD.2 | within. individual. nROA.iBoD.3 | within. individual. nROA.iBoD.4 | within. individual. nROA.iBoD.5 | within. individual. nROA.iBoD.6 | within. individual. nROA.iBoD.7 | within. individual. nROA.iBoD.8 |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| iBoD | 1.3692 (1.3171) | 1.9094 (1.3009) | 1.6919 (1.2885) | 1.7030 (1.2969) | 1.4421 (1.3238) | 1.7423 (1.2697) | 2.0679*** (0.7883) | 3.6203*** (0.8839) |
| lnLIQ | | 3.0079*** (0.5917) | 3.4856*** (0.6187) | 3.4361*** (0.6300) | 3.5073*** (0.6309) | 2.9816*** (0.6084) | 0.7447* (0.4102) | 1.0024** (0.4271) |
| lnSTK | | | -0.6877** (0.3305) | -0.7706** (0.3832) | -1.0456** (0.4411) | -1.0798** (0.4229) | -0.6021** (0.2755) | -0.5965** (0.2800) |
| lnDEBT | | | | 0.0460 (0.4042) | -0.3536 (0.4797) | -0.5289 (0.4604) | -1.1623*** (0.3265) | -1.0384*** (0.3340) |
| lnSL | | | | | 0.8958 (0.7714) | 0.6937 (0.7400) | 1.8251*** (0.5023) | 1.6419*** (0.5189) |
| rCS | | | | | | -6.4534*** (0.7949) | -5.9931*** (0.5075) | -6.0529*** (0.5295) |
| ChS | | | | | | | 72.6168*** (2.4423) | 71.0195*** (2.5904) |
| Zscore | | | | | | | 0.0186 (0.0205) | 0.0186 (0.0205) |
| Observations | 874 | 874 | 848 | 838 | 837 | 837 | 736 | 699 |
| R ² | 0.0014 | 0.0336 | 0.0467 | 0.0463 | 0.0489 | 0.1270 | 0.6327 | 0.6298 |
| Adjusted R ² | -0.1220 | -0.0872 | -0.0752 | -0.0788 | -0.0773 | 0.0097 | 0.5820 | 0.5750 |
| F Statistic | 1.0808 (df = 1; 777) | 13.4795*** (df = 2; 776) | 12.2649*** (df = 3; 751) | 8.9730*** (df = 4; 740) | 7.5964*** (df = 5; 738) | 17.8712*** (df = 6; 737) | 158.9387*** (df = 7; 646) | 129.3146*** (df = 8; 608) |

Appendix 2. Results of fixed effects model regarding dependent variable ROE

| Data Panel regression Results Dependent variable: ROE | | | | | | | | |
|--|--|--|--|--|--|--|--|--|
| | within. individual. nROE.iBoD.1 (1) | within. individual. nROE.iBoD.2 (2) | within. individual. nROE.iBoD.3 (3) | within. individual. nROE.iBoD.4 (4) | within. individual. nROE.iBoD.5 (5) | within. individual. nROE.iBoD.6 (6) | within. individual. nROE.iBoD.7 (7) | within. individual. nROE.iBoD.8 (8) |
| iBoD | 0.8532 (3.1158) | 1.3265 (3.1213) | 1.0191 (3.1536) | 0.9127 (3.1692) | 0.6118 (3.2366) | 1.1943 (3.1553) | 1.7300 (2.3637) | 5.8100** (2.6613) |
| InLIQ | | 2.6357* (1.4197) | 2.9891** (1.5142) | 2.9175* (1.5395) | 3.0974** (1.5426) | 2.0772 (1.5118) | -2.9590** (1.2301) | -2.0881 (1.2858) |
| InSTK | | | -0.4839 (0.8089) | -0.4938 (0.9364) | -1.2511 (1.0784) | -1.3174 (1.0509) | -1.3840* (0.8260) | -1.3892* (0.8430) |
| InDEBT | | | | -0.3446 (0.9876) | -1.3535 (1.1727) | -1.6938 (1.1440) | -3.1513*** (0.9790) | -3.0817*** (1.0057) |
| InSL | | | | | 2.5444 (1.1227) | 2.1522 (1.1400) | 4.4648*** (1.5063) | 4.5870*** (1.5623) |
| rCS | | | | | -1.8860 (1.8860) | -12.5246*** (1.8389) | -11.9992*** (1.5216) | - |
| ChS | | | | | | | 149.7995*** (7.3231) | 150.6948*** (7.7995) |
| Zscore | | | | | | | -0.0806 (0.0618) | |
| Observations | 874 | 874 | 848 | 838 | 837 | 837 | 736 | 699 |
| R ² | 0.0001 | 0.0045 | 0.0057 | 0.0058 | 0.0088 | 0.0600 | 0.4331 | 0.4283 |
| Adjusted R ² | -0.1234 | -0.1199 | -0.1214 | -0.1245 | -0.1229 | -0.0662 | 0.3350 | 0.3436 |
| F Statistic | 0.0750 (df = 1; 777) | 1.7609 (df = 2; 776) | 1.4251 (df = 3; 751) | 1.0823 (df = 4; 740) | 1.3066 (df = 5; 738) | 7.8465*** (df = 6; 737) | 70.5029*** (df = 7; 646) | 56.9303*** (df = 8; 608) |

Appendix 3. Results of random effects model regarding dependent variable ROA

| | Data Panel regression Results | | | | | | | |
|-------------------------|--|--|--|--|--|--|--|--|
| | Dependent variable: ROA | | | | | | | |
| | random. individual. nROA.iBoD.1 (1) | random. individual. nROA.iBoD.2 (2) | random. individual. nROA.iBoD.3 (3) | random. individual. nROA.iBoD.4 (4) | random. individual. nROA.iBoD.5 (5) | random. individual. nROA.iBoD.6 (6) | random. individual. nROA.iBoD.7 (7) | random. individual. nROA.iBoD.8 (8) |
| iBoD | 1.6878* (1.0028) | 2.2141** (0.9403) | 2.1677** (0.9212) | 2.1649** (0.9222) | 1.8779** (0.9225) | 1.9864** (0.9200) | 1.1996** (0.6081) | 1.9349** (0.6453) |
| lnLIQ | | 3.6864*** (0.5237) | 4.2605*** (0.5382) | 4.2375*** (0.5452) | 4.4124*** (0.5464) | 4.0175*** (0.5415) | 1.0542*** (0.3741) | 1.2854*** (0.3879) |
| lnSTK | | | -0.4776* (0.2491) | -0.5403* (0.2946) | -0.9080*** (0.3364) | -1.0213*** (0.3346) | -0.4012* (0.2265) | -0.4282* (0.2303) |
| lnDEBT | | | | 0.0500 (0.2976) | -0.4441 (0.3624) | -0.3855 (0.3603) | -1.0757*** (0.2575) | -0.9961*** (0.2616) |
| lnSL | | | | | 1.2051** (0.5577) | 1.3211** (0.5556) | 1.1188*** (0.3822) | 0.9614** (0.3900) |
| rCS | | | | | | -3.7210*** (0.6227) | -6.7572*** (0.4240) | -6.7938*** (0.4382) |
| ChS | | | | | | | 67.3537*** (2.1397) | 65.8985*** (2.2761) |
| Zscore | | | | | | | 0.0128 (0.0199) | 0.0128 (0.0199) |
| Constant | 4.5371*** (0.9997) | 2.9323*** (0.9448) | 7.5232*** (2.6978) | 7.6349*** (3.1344) | 1.2690 (4.5356) | 2.4775 (4.5416) | 2.6030 (3.1224) | 3.5159 (3.2290) |
| Observations | 874 | 874 | 848 | 838 | 837 | 837 | 736 | 699 |
| R ² | 0.0014 | 0.0546 | 0.0706 | 0.0702 | 0.0763 | 0.1120 | 0.6265 | 0.6225 |
| Adjusted R ² | 0.0002 | 0.0524 | 0.0673 | 0.0657 | 0.0707 | 0.1056 | 0.6229 | 0.6181 |
| F Statistic | 0.7578 | 50.2601*** | 64.0437*** | 62.7914*** | 68.5187*** | 104.6249*** | 1,221.1290*** | 1,137.6280*** |

Appendix 4. Results of random effects model regarding dependent variable ROE

| Data Panel regression Results | | | | | | | | |
|-------------------------------|--|--|--|--|--|--|--|--|
| Dependent variable: ROE | | | | | | | | |
| | random. individual. nROE.iBoD.1 (1) | random. individual. nROE.iBoD.2 (2) | random. individual. nROE.iBoD.3 (3) | random. individual. nROE.iBoD.4 (4) | random. individual. nROE.iBoD.5 (5) | random. individual. nROE.iBoD.6 (6) | random. individual. nROE.iBoD.7 (7) | random. individual. nROE.iBoD.8 (8) |
| iBoD | 2.4632 (2.0657) | 2.9386 (2.0299) | 2.8951 (2.0200) | 2.9705 (2.0185) | 2.4415 (2.0342) | 2.5750 (1.9986) | 0.5395 (1.6004) | 1.7504 (1.6774) |
| InLIQ | | 3.6613*** (1.1907) | 4.2900*** (1.2413) | 4.2657*** (1.2528) | 4.5687*** (1.2622) | 3.8054*** (1.2446) | -2.2176* (1.0564) | -1.4130 (1.0969) |
| InSTK | | | -0.5125 (0.5515) | -0.4241 (0.6535) | -1.0733 (0.7524) | -1.3590* (0.7404) | -0.3751 (0.6076) | -0.4495 (0.6186) |
| InDEBT | | | | -0.3210 (0.6548) | -1.1767 (0.8080) | -0.9717 (0.7943) | -2.5936*** (0.6792) | -2.6125*** (0.6896) |
| InSL | | | | | 2.0812* (1.2371) | 2.4834** (1.2169) | 1.7187* (1.0032) | 1.6977* (1.0247) |
| rCS | | | | | | -8.1901*** (1.3737) | -15.5579*** (1.1643) | -15.8410*** (1.2036) |
| CHS | | | | | | | 126.5342*** (6.0059) | 127.0739*** (6.3972) |
| Zscore | | | | | | | | -0.0987* (0.0581) |
| Constant | 10.3150*** (1.985) | 8.7628*** (2.0020) | 13.5276** (5.9290) | 16.0521** (6.8229) | 5.2598 (9.8554) | 5.6146 (9.6867) | 17.9349** (7.9395) | 18.7370** (8.1754) |
| Observations | 874 | 874 | 848 | 838 | 837 | 837 | 736 | 699 |
| R ² | 0.00001 | 0.0093 | 0.0118 | 0.0123 | 0.0155 | 0.0557 | 0.4103 | 0.4103 |
| Adjusted R ² | -0.0011 | 0.0070 | 0.0083 | 0.0075 | 0.0096 | 0.0488 | 0.4094 | 0.4035 |
| F Statistic | -1.4716 | 7.9163** | 9.7038** | 9.9565** | 12.7504** | 48.7474*** | 516.4581*** | 480.1451*** |

FINANCIAL AND AUDIT REPORTING REGARDING ACCOUNTING ESTIMATES RELATED TO LISTED ENTITIES ON THE REGULATED MARKET IN ROMANIA

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Abstract

The objective of financial statements is to give a true and fair view of financial position and of the performance, a true and fair view which will be useful for a wide range of users to take economic decisions. Accounting policies choice involves setting options that generate the best financial and accounting information. The best information must be in agreement with the most accurate image of financial position, performance and changes in financial position and performance. It is, therefore, necessary to refer to estimates for the purpose of assessing the elements of the annual financial statements, because in the activity of an entity there are inherent uncertainties, which require recourse to judgments of value based on the most relevant and credible information that the entity has at its disposal at a given time. In order to respect the principle of permanence of the methods, since accounting policies have been established, it is relevant that they are retained during a financial year, but also from one financial year to another. However, changes in accounting policies and accounting estimates on financial reporting are inevitable. Most of them happen, because, in the preparation of annual financial statements, entities must make estimates and judgments in order to allocate expenses and revenues.

The purpose of this study is represented by the identify of types of accounting estimates reported in the financial statements by listed entities on the regulated market in Romania. This study started from the recent requirement included in the Romanian accounting standard, which requires responsibility for administrators and for the estimates made. This provision underlines the fundamental nature of accounting estimates in the preparation of financial statements, but also in the formulation of the audit opinion as they also come and to the attention of auditors. The study was carried out on a sample of listed companies at BSE, on the regulated market, in 2017. The results of the research aim at the most common types of accounting estimates in the

financial statements, elements that must draw the attention of financial auditors in formulating their opinion.

Keywords: *accounting estimates; accounting policies; financial reporting; regulated market.*

JEL Classification: M41, M42, M48

1. INTRODUCTION

The aspects related to the changes in the policies and accounting estimates are circumscribed in the area of application of IAS 8 “Accounting policies, changes in accounting estimates and errors”. In the Romanian accounting reference, this issue is found in the OMPF no. 1802/2014 for the approval of accounting regulations regarding the annual individual financial statements and annual consolidated financial statements, with subsequent amendments and additions, within section 2.5 “Accounting policies, correction accounting errors, estimates and events after the balance sheet date”.

In some circumstances, entities tend to modify the accounting methods and revise initial estimates in line with the newly available information, all of which are intended to adapt to the economic requirements that may arise or for the purpose of improving the image of the financial position and financial performance or their cash flows (Hall and Aldridge, 2014). Each change in the policies and accounting estimates will lead to different results (Borfoaia, 2016; Sacer, Malis and Pavic, 2016). Changes in accounting policies are accepted only if they are claimed by a competent authority (regulatory change) or if they result in more credible and relevant information related to the financial position and performance of the entity (voluntary change). The effects of the change in accounting policies for the current financial year are recorded on account of the expenses and revenue accounts of the period, and those relating to the previous financial years shall be counted on account of the retained earnings, if the effects of change can be quantified.

The freedom of entities in the choice of methods of accounting for transactions can also be used to manipulate, legally, the content and presentation of financial statements. These choices are, largely, dependent on the financial communication objectives and the behavior of the entity’s management. Thus, the emergence of ad-hoc financial reporting puts the issue of the economic consequences of the accounting choices (Casta and Ramond, 2009; Mardiros, Dicu and Grosu, 2015). Certainly, the new addition to the OMPF no. 2844/2016 by OMPF no. 3189/2017 regarding the modification and completion of accounting regulations in accordance with the International Financial Reporting Standards on the fact that it is clearly stated that both the administrator and the other persons responsible for the management also respond and for the estimates made, which underpin the records in the accounting, pursue the empowering of the persons, previously specified, in relation with making and assumption of the estimates in the most justified manner.

This requirement has also entered and in the winking eye of auditors in conducting the statutory audit (ACCA, 2018), the thing which is identified through the independent auditor's report, namely, it is noted that from the year 2016 the estimates made by the company are identified and discussed as Key audit matters, most of the time. Basically, this approach helps auditors in shaping the opinion on financial statements, since, the more accounting estimates that are subject to greater uncertainty are better substantiated, the more reliable financial statements are (Bunget, 2010; Robu and Robu, 2015). Starting from the issue of identifying accounting estimates in financial reporting, the purpose of this study is to establish a statistical situation on the types of accounting estimates used in the financial statements (Bălăsoiu, 2012).

In order to achieve the purpose of the research, the following objectives are pursued: identification of the accounting estimates included in the Section: "Key audit matters" from the audit reports on the sampled companies, identification of the accounting estimates not included in this section (Șpan, 2013) and the establishment of the most common types of accounting estimates between those identified.

2. LITERATURE REVIEW

It is understandable that, in Romanian accounting during the communist regime, the issue of accounting policies was limited to meeting the needs of the planned and centralized economy, and the issue of accounting options had a quite low area of coverage (Manea, 2006). However, the optics should have changed with the reform of the years 1991 – 1994, because were created the premises on other coordinates of accounting policies and options. The reality is that, both normalizers, and practitioners have never given a crucial role to these problems. The presence of the annex "Other information on accounting rules and methods and complementary data" was just a window of the normalizer act, allowing beginners the feeling that, in our economic and social environment, it can operate on the pedal of the policies and the accounting choices, to meet the wishes of entities (Feleagă and Malciu, 2002).

The concept of accounting policy, as well as the accounting estimate, is first found, in the Romanian accounting standard, with the introduction of international accounting standards (Neacșu, 2005). At the international level, the reference system in terms of formulation and exposure of enterprise policies is IAS 8 "Accounting policies, changes in accounting estimates and errors". Applied for the first time in 1980, under a different name (IAS 8 "Net profit or net loss for the period, fundamental errors and changes in accounting policies") and a different content than today, the IAS 8 standard is revised in 1993 (Cernușca, 2012, 2013).

Thus, the accounting policies are the specific principles, bases, conventions, rules and specific practices applied by an entity in preparing and presenting

financial statements (IASB, 2017; Gurău, 2014). On the other hand, for the notion of accounting estimation, there is no clear definition either at the national or international level. However, the international standard explains the changes in accounting estimates, illustrating and establishing the accounting manner (Keune and Quick, 2017; CECCAR, 2018). In the standard setting process, the FASB faces to a compromise between creating standards with fewer rules that preparers could apply inconsistently and creating standards with more rules that could become too complex (Nelson, 2003). The primary principle the FASB considers in standard setting is decision usefulness for existing and potential investors (FASB, 2010). As the continued use of the same accounting method may not be as appropriate when company circumstances change, the FASB allows managers the discretion to switch from one acceptable accounting method to another preferred method that best fits a company's current circumstances (Hughen, Livingstone and Upton, 2011).

As regards changes in accounting policies, they must be applied retrospectively. This retrospective manner implies the application of a new accounting policy to transactions, as if that policy had always been applied (Cernuşca and Gomoï, 2012). The retroactive manner provides that the entity must adjust the initial balance of each affected component of equity, for the earliest prior period presented (usually the adjustment is made affecting the retained earning) and the other comparative values reflected for each previous period represented, as if the new policy had always been applied. However, if it is impossible to determine, either the period-specific effects of the change or the total effect of the change, the retroactive application cannot be achieved, as information is not available. For example, data may not have been collected in previous periods in a manner that permits the retroactive application of an accounting policy. Or, there are difficulties in assessing the previous conditions. For example, in the situation that estimates are needed when accounting procedures are used, their development is more difficult when an accounting policy is applied retroactively because of the longer period of time that is likely to have passed from the transaction or event affected, and the estimates must describe the circumstances that existed at the time of registration of the transaction or event.

In the case of the initial application of an IFRS (Istrate, 2014), it is necessary to specify: the title of the standard or interpretation and, where appropriate, to clarify that the modification of the accounting policy is carried out in accordance with its transitional provisions; the nature of the policy change and if is necessary the transitional provisions should also be presented; the amount of the adjustment for each row element of the financial situation and for the basic and diluted earnings per share; the amount of the adjustment for periods preceding those presented, where possible and the description of the situation in which the retroactive application imposed is impossible, and the

manner in which the change in accounting policy has been applied. In the case of a voluntary change, it is necessary to specify: the nature of the change in accounting policy; the reasons why the application of the policy determines the provision of more reliable and relevant information; then, both for the current exercise and for each of the preceding exercises presented, it is necessary to present the impact of change on each element affected in the financial statements and on the earnings per share; the size of adjustments relating to periods before the earliest reflected exercise and whether retrospective retreatment is impracticable for a given previous exercise, respectively the circumstances that led to this situation and a description of how and when the policy change was applied (Feleagă *et al.*, 2008).

An estimate may be changed if the circumstances underlying it have changed or if further information or experiences are available. By its nature, reviewing an estimate is unrelated to previous periods and does not mean the correction of an error. A change in the valuation base used is considered a change in accounting policy and not a change in the accounting estimate. If it is difficult to distinguish whether it is a change of policy or a change in accounting estimate, the modification is treated as a change of accounting estimate, asking and the provision of adequate information

The change in accounting estimate shall be applied in a prospective manner, so that the adjustment of the financial statements shall be made starting from the date on which it occurs. The prospective recognition of the effect of a change in accounting estimate suggests that the modification is applied to transactions or other events from the date of the modification of the estimate and affects the financial statements (IAS 8, 2005). An entity must present the nature and value of a change in accounting estimate which has a consequence in the current period or expects to take effect in future periods, unless an effect is given on future periods, where it is impossible to determine that effect. Making changes in accounting policies and accounting estimates is a very complex process that involves obtaining all necessary information, understanding the different alternatives resulting from international and national rules, recognizing the consequences of such alternatives and identifying the need for professional judgment in the future.

In view of the new requirement by the legislator to make and assume estimates as justifiable as possible, the annual financial reports of the listed entities on the Bucharest Stock Exchange market were further included in the analysis, precisely to identify the most common types of accounting estimates made, some of which are also reported by the financial auditors in the audit reports issued.

3. RESEARCH METHODOLOGY: POPULATION, SAMPLE, DATA SOURCE, DATA ANALYSIS METHODS

To identify the most frequent accounting estimates found after auditing and included in the audit report as “Key audit matters”, but also and those not included, but are presented in the notes to the annual financial statements, we have analyzed the data collected from audit reports and financial statements of Romanian companies listed on the Bucharest Stock Exchange (BSE) on the regulated market. These companies apply IFRS in financial reporting and are subject to statutory audit.

The studied sample includes only companies listed on the BSE section – regulated market. Currently, in BSE – regulated market, are listed a total of 85 Romanian companies (3 in the First category, 25 in the Premium category and 57 in the Standard category). Of the 85 companies listed was extracted a sample of 67 listed companies, for which was examined the financial statements reported in 2017. It was extracted a total of 67 listed companies, because were excluded insurance institutions, banks and other credit institutions, investment funds and other financial institutions.

Data regarding accounting estimates were collected manually from entities’ financial statements, published on the BSE website (BSE, 2019), and their analysis was performed using Microsoft Excel. Thus, for data analysis we used quantitative methods, namely: systematization (grouping, tabulation, graph) and the comparison. Below will be presented the final results and their interpretation.

4. RESULTS AND DISCUSSIONS

After analyzing the data collected, we identified several accounting estimates such as: estimate impairment of intangible, tangible and financial assets; estimate net realizable value (depreciation) inventories; estimate impairment of receivables; estimate fair value of investment property; estimate litigation provisions; estimate decommissioning provisions; estimate provisions for employee benefits; estimate provisions for guarantees; estimate provisions for fines and penalties; estimate revenue and estimate the recoverability of deferred tax assets.

However, during the analysis of financial statements were also identified and other useful information, such as: the amortization of intangible and tangible assets, policy of evaluation of intangible and tangible assets (identifying only a change in accounting policy), the policy of evaluation to exit of inventories, and the auditor of financial statements.

All this information will be grouped and presented according to certain criteria, in the following lines.

Information regarding the number of BSE listed companies that have carried out the types of accounting estimates identified, in 2017, is displayed in Table 1.

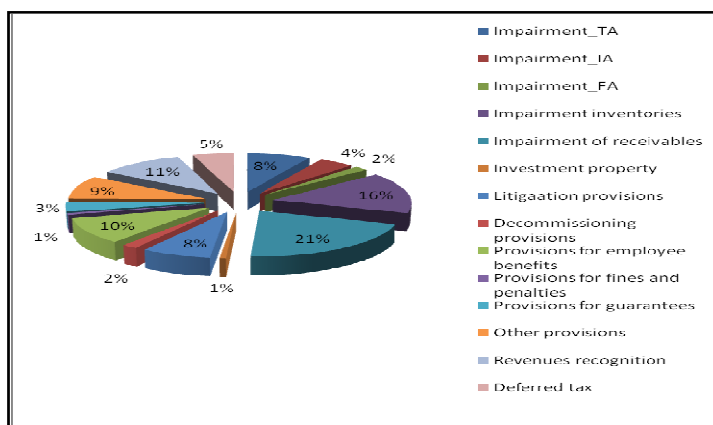
Table 1. The number of BSE listed companies that have carried out accounting estimates in 2017

| No. | Accounting estimate | Number of entities |
|-----|---|--------------------|
| 1 | Impairment TA | 23 |
| 2 | Impairment IA | 13 |
| 3 | Impairment FA | 5 |
| 4 | Net realizable value (impairment) inventories | 46 |
| 5 | Impairment of receivables | 61 |
| 6 | Investment property | 2 |
| 7 | Litigation provisions | 22 |
| 8 | Decommissioning provisions | 5 |
| 9 | Provisions for employee benefits | 29 |
| 10 | Provisions for fines and penalties | 2 |
| 11 | Provisions for guarantees | 10 |
| 12 | Other provisions specific to the activity | 26 |
| 13 | Revenue recognition | 31 |
| 14 | Deferred tax | 15 |
| | Total estimates | 290 |
| | Total Entities | 67 |

Source: own processing after collecting data from financial statements of entities, published on the BSE website (BSE, 2019)

Based on this table were developed two diagrams to capture the percentage of estimates in total and percentage of firms that carrying out certain types of accounting estimates (Figure 1 and Figure 2).

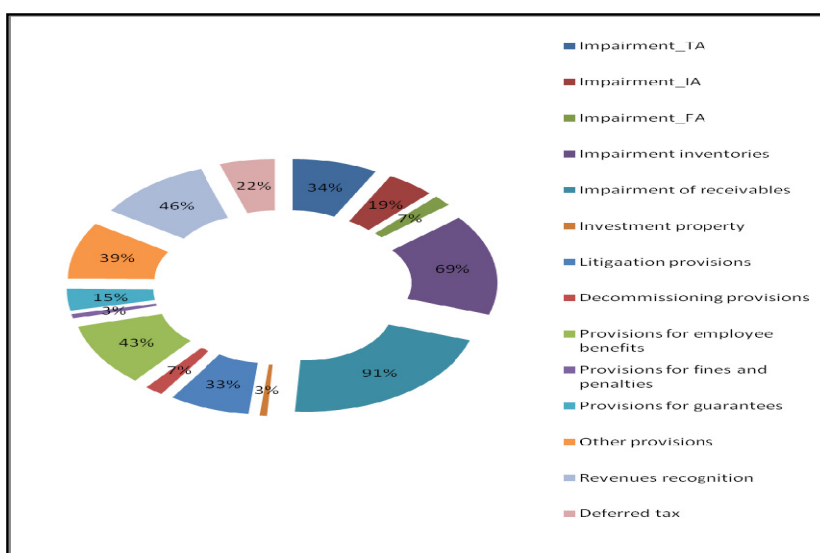
Figure 1. Percentage of accounting estimates in total



Source: own processing after Table 1

From the data in Figure 1, we can see that from the 14 types of accounting estimates, namely 290 on all companies, most accounting estimates made in 2017, by BSE listed companies, are: estimates of impairment of receivables which have a percentage of 21%, estimates of net realizable value of inventories which have a percentage of 16% and estimates of revenue which representing 11% of the total. On the other hand, the least common accounting estimates are those related to provisions for fines and penalties and the fair value of investment property, both holding a percentage of 1% in total.

Figure 2. Percentage of firms that carrying out certain types of accounting estimates



Source: own processing after Table 1

From the data in Figure 2, it can be noted that out of the 67 BSE listed companies most of them make accounting estimates related to: impairment of receivables (91% of companies), the net realizable value of inventories (69% of companies) and revenue recognition (46% of companies). A small number of companies make accounting estimates about investment property (3%) and provisions for fines and penalties (3%), and an average number of companies make accounting estimates relating to: provisions for employee benefits (43%) and impairment of tangible assets (34%).

Table 2 shows a group of BSE listed companies, depending on the object of activity, so that can achieve an analysis of the types of accounting estimates, based on the main objects of activity. After identifying the object of activity of

the BSE listed companies, we have been trying to structure them into trade, production and services, according to the specific industry.

Table 2. The grouping BSE listed companies that carrying out accounting estimate in 2017, depending on the object of activity

| No | Object of activity | Number of entities | Percentage of object of activity %) | Total types of estimates | Total estimates |
|----|---|--------------------|-------------------------------------|--------------------------|-----------------|
| 1 | Retail trade of pharmaceutical products, in specialised stores | 2 | 3% | 6 | 9 |
| 2 | Trade metallurgical industry | 1 | 1% | 1 | 1 |
| 3 | Production aeronautics industry | 3 | 4% | 7 | 13 |
| 4 | Production automotive industry | 2 | 3% | 5 | 5 |
| 5 | Production brewing industry | 1 | 1% | 3 | 3 |
| 6 | Production pulp and paper industry | 1 | 1% | 5 | 5 |
| 7 | Production chemical industry | 7 | 10% | 12 | 31 |
| 8 | Production car manufacturing industry | 3 | 4% | 10 | 18 |
| 9 | Production building industry | 4 | 6% | 10 | 23 |
| 10 | Production oil products industry | 3 | 4% | 10 | 23 |
| 11 | Production industrial equipment for the generation and transmission of electricity industry | 5 | 7% | 7 | 14 |
| 12 | Production electromagnetic industry | 3 | 4% | 8 | 15 |
| 13 | Production electronic industry | 1 | 1% | 5 | 5 |
| 14 | Production energy industry | 3 | 4% | 6 | 9 |

| No | Object of activity | Number of entities | Percentage of object of activity %) | Total types of estimates | Total estimates |
|--------------|--|--------------------|-------------------------------------|--------------------------|-----------------|
| 15 | Production pharmaceutical industry | 3 | 4% | 6 | 10 |
| 16 | Production metallurgical industry | 3 | 4% | 10 | 15 |
| 17 | Production manufacturing industry | 1 | 1% | 2 | 2 |
| 18 | Production steel industry | 1 | 1% | 4 | 4 |
| 19 | Production textile industry | 1 | 1% | 3 | 3 |
| 20 | Production wine industry | 1 | 1% | 4 | 4 |
| 21 | Services management shares | 1 | 1% | 3 | 3 |
| 22 | Services oil products industry | 4 | 6% | 10 | 20 |
| 23 | Services energy industry | 2 | 3% | 6 | 8 |
| 24 | Services hotel industry | 3 | 4% | 8 | 13 |
| 25 | Services real estate industry | 2 | 3% | 5 | 7 |
| 26 | Services telecommunications industry | 1 | 1% | 4 | 4 |
| 27 | Services management | 1 | 1% | 2 | 2 |
| 28 | Services transport oil products industry | 3 | 4% | 10 | 18 |
| 29 | Services pharmaceutical industry | 1 | 1% | 3 | 3 |
| Total | | 290 | 100% | - | 290 |

Source: own processing after collecting data from financial statements of entities, published on the BSE website (BSE, 2019)

It can be seen that, at the level of BSE listed companies, were identified 29 objects of activity.

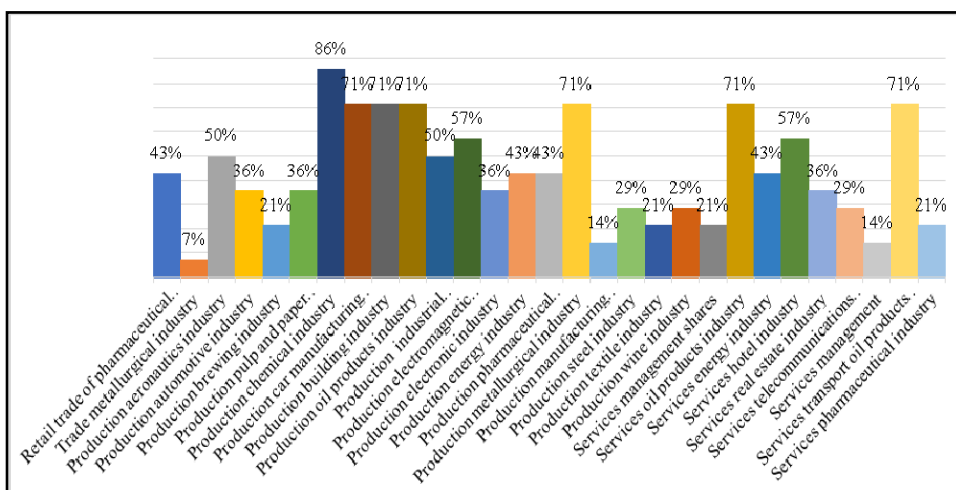
Therefore, the grouping of firms based on object of activity reflects the fact that most of the BSE listed companies operate in: production chemical industry

(10%), production industrial equipment for the generation and transmission of electricity industry (7%), production building industry (6%) and services oil products industry (6%).

Small and quite many percentages reflect the fact that the on Bucharest Stock Exchange activates companies with diversified objects of activity. Among those holding only the 1% of the total, is included: trade metallurgical industry, production brewing industry, production pulp and paper industry, production steel industry, services telecommunications industry and services pharmaceutical industry.

This table was used for the purpose of achieving the following analyses on the types of accounting estimates on objects of activity.

Figure 3. Percentage of types of accounting estimates on objects of activity



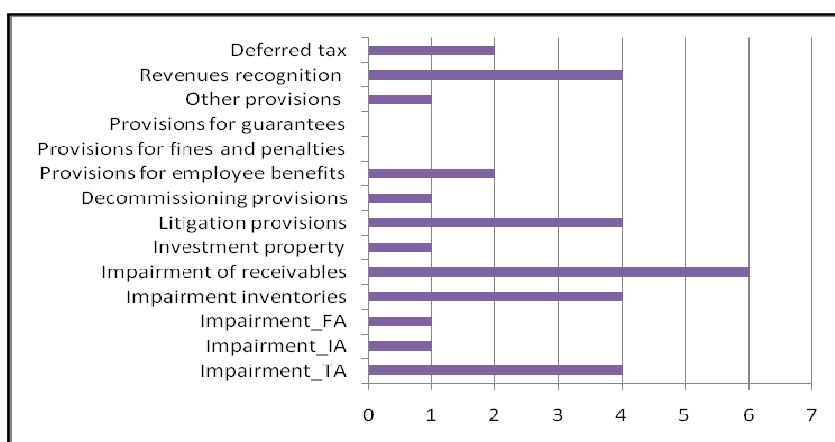
Source: own processing after Table 2

From the data presented in Figure 3, it can be seen that from the 14 types of accounting estimates most of them were identified for the following objects of activity: production chemical industry that performs 86% of total types of accounting estimates (i.e. 12 types), production car manufacturing industry, production building industry, production oil products industry, production metallurgical industry, services oil products industry and services transport oil products industry, in each of them applying 71% of the total types of accounting estimates (i.e. 10 types).

By the way, the fewest types of accounting estimates were identified in the trade metallurgical industry, only 7% (i.e. one type: estimates of impairment of receivables).

Analyzing Figure 3, it is found that the most estimates have been identified for companies that operate in the production of the chemical industry, these owning 10% of the total. In the financial statements, it represents 86% of the types of accounting estimates identified (i.e. 12 types out of 14), respectively 11% of the total estimates of 290 (i.e. 31 accounting estimates). Therefore, given that companies operating in the production of the chemical industry are the most representative, the following figure will reflect the accounting estimates identified at their level.

Figure 4. Accounting estimates at the level of production in the chemical industry



Source: own processing after collecting data from financial statements of entities, published on the BSE website (BSE, 2019)

Depending on this object of activity, presented in Figure 4, it is found that most accounting estimates identified in the financial statements are based on the estimation of impairment of receivables (6 accounting estimates), while there were no estimates of provisions for guarantees and provisions for fines and penalties.

Even though in the study we took into account both the estimates included, and those not included in the “Key audit matters”, the following will be carried out an analysis of the accounting estimates identified by the firm that audited the financial statements. This is important, because the auditor aims to ensure that the accounting estimates, as well as their changes, are based on the correct judgments of the management, without hidden intentions.

Thus, in Table 3 is presented a grouping of the total number of accounting estimates identified by each auditor, depending on the number of audited entities.

**Tabel 3. Total accounting estimates identified in 2017,
depending to the company that audited the financial statements**

| No. | Auditor | Number of audited entities | Total accounting estimates | Percentage estimates in total (%) |
|-----|---|----------------------------|----------------------------|-----------------------------------|
| 1 | DELOITTE AUDIT S.R.L. | 13 | 70 | 24% |
| 2 | Ernst & Young Assurance Services S.R.L. | 9 | 49 | 17% |
| 3 | KPMG Audit S.R.L. | 3 | 13 | 4% |
| 4 | BDO Audit S.R.L. | 4 | 18 | 6% |
| 5 | Others | 38 | 140 | 48% |
| | Total | 67 | 290 | 100% |

Source: own processing after collecting data from financial statements of entities, published on the BSE website (BSE, 2019)

Therefore, it is found that at the level of the 67 BSE listed companies were identified 34 audit firms, which we grouped in the categories presented in Table 3. Thus, it can be noted that most accounting estimates were identified at the level of the financial statements audited by Deloitte Audit S.R.L., respectively 24% of the total accounting estimates. Surely this happens also because the audit firm has audited the most companies, respectively 13 of the 67 companies. The next company is Ernst & Young Assurance Services S.R.L., which holds a percentage of 17% of accounting estimates and which has audited 9 entities. At the level of the financial statements, audited by KPMG Audit S.R.L. and BDO Audit S.R.L., it was identified a percentage of 4% and respectively 6% of accounting estimates.

Audit firms falling under the category “Others” are in total 30, and at the level of the financial statements audited by them, it has been identified a percentage of 48% of accounting estimates, respectively almost half of their total.

5. CONCLUSIONS

Following the results achieved, it can be concluded that Romanian BSE listed companies carry out, in particular, accounting estimates in financial reporting. Thus, in most financial reporting, it has been identified accounting estimates regarding the impairment of receivables, which means that the auditor who is carrying out the financial audit must verify that it has been correctly appreciated the degree of recoverability of claims.

Due to a large number of companies operating in the field of production in the chemical industry, in this representative object of activity are also identified the most accounting estimates. It can be said that the object of activity in which the company operates influences the types of accounting estimates made by the management.

It is noted that most accounting estimates were identified in the financial statements audited by Deloitte Audit S.R.L. and Ernst & Young Assurance Services S.R.L., Big Four firms. Depending on auditor's membership at the Big 4 group, it can be concluded that the experience and its notoriety can contribute to the manner in which the accounting estimates are made by the management.

As regards accounting policies, it can be appreciated that entities respect the principle of the permanence of methods, with only one case of changes in accounting policies and this is justified by the fact that it will render a more transparent and updated image of the value.

In conclusion, it is considered that this research makes certain contributions through the elements and ideas identified at the theoretical and practical level, namely: identification and capture the effects of changes in accounting policies and accounting estimates, as well as the presentation of a statistical situation on the types of accounting estimates used in the financial statements.

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PREDICTIVE ANALYSIS FOR CORPORATE STABILITY BASED ON THE RELATIONSHIP BETWEEN ORGANIZATIONAL ENVIRONMENTAL ORIENTATION AND EMS IMPLEMENTATION QUALITY

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Abstract

Corporate environmental orientation has become a real factor in current competitive context. Environmental management system (EMS) implementation represents an important “strategic move” which can bring real benefits, can determine corporate stability and could become competitive advantage leverage. The need to identify and to assess the evolution, associated to the “relation” between various representative organizational factors (corporate environmental orientation) and EMS, becomes an important managerial issue. The main objective of this research paper is to estimate the influence of corporate environmental orientation metrics on EMS implementation quality. The research results of this predictive analysis could help managers to take the necessary corrective measures and could lead to the improvement of the EMS implementation quality, with direct impact on corporate stability.

Keywords: *corporate stability; organization environmental orientation; environmental management system; predictive analysis.*

JEL Classification: C21, Q56

1. INTRODUCTION

Corporate environmental orientation and commitment have become a real variable in all the scenarios of the present competitive context. Thus, EMS implementation represents an important “strategic move” which can bring benefits and can become a real competitive advantage leverage. Taking also into account the organizations complexity, it can be certainly state that the “synergic relation” between an organization and the EMS will be a crucial element in its future development. Therefore, the improvement of understanding the EMS implementation quality should be a priority for managers (Herghiligi and Lupu, 2015).

ISO 14001 International Standard, states that EMS is characterized as “a component of the general managerial system that includes the organizational structure, the planning activities, liabilities, practices, procedures, processes and resources for the elaboration, implementation, performance, analysis and maintenance of the environmental policy” (ASRO, 2005a/b; Lozano and Valles, 2007; Herghiligi, 2013). Taking into account this definition (ASRO, 2005a) it can be stated that the aim of implementing an EMS consists in the continual improvement of the environmental performances and, thus, in the provision of a positive image, respectively of some competitive advantages (Teodosiu, 2005; Herghiligi, 2013).

The organizations aim to be flexible. However, the market dynamic change associated to organizational environment can seriously exert various perturbations (Herghiligi, Lupu and Robledo, 2012; Gavronski *et al.*, 2013). Hence in the actual context, the organizations acknowledge the fact that without an appropriate consideration to the environmental impact/ and sustainable environmental actions, will not be able to interplay effectively with other stakeholders and with the market, and finally will not be able to contribute in a sustainable manner to the economic welfare (Herghiligi and Lupu, 2012; Herghiligi, Lupu and Epure, 2012; Herghiligi *et al.*, 2016).

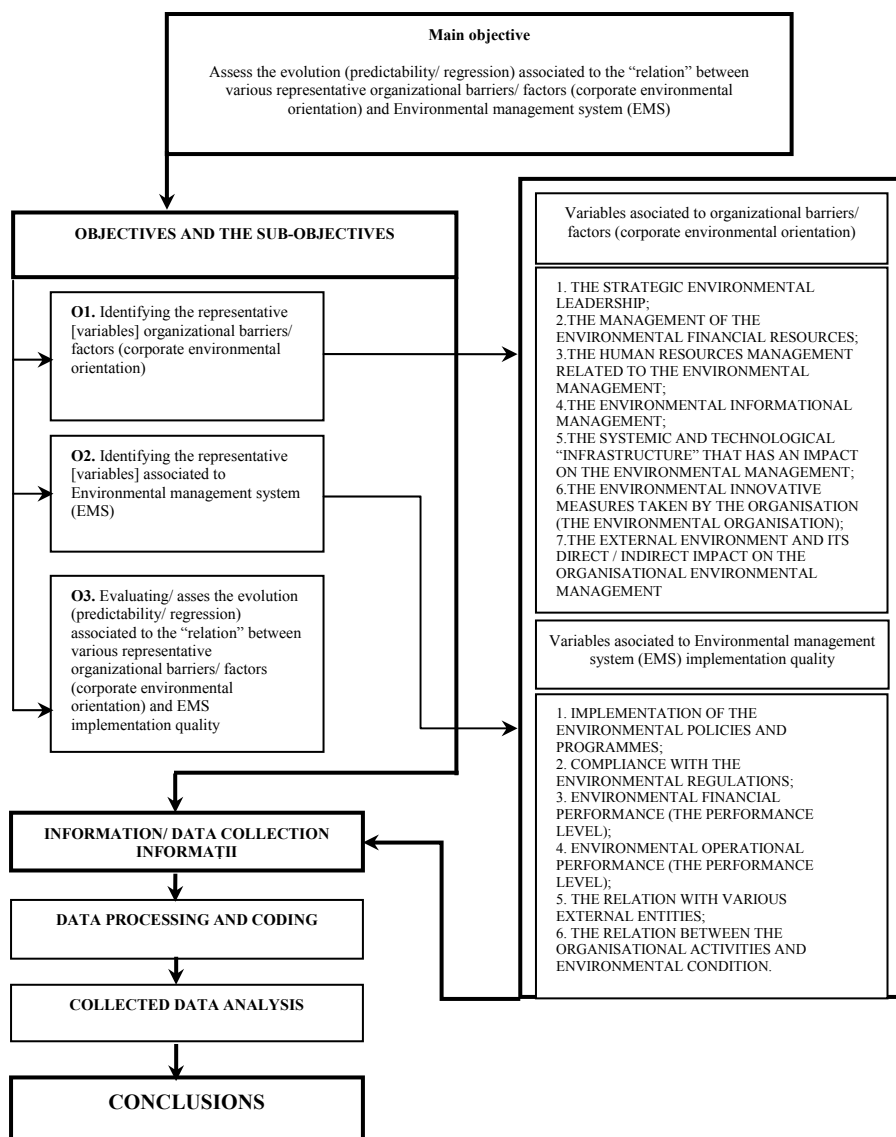
The need to identify and to assess the evolution (predictability/ regression) associated to the “relation” between various representative organizational barriers/ factors (corporate environmental orientation) and Environmental management system (EMS), becomes an important managerial issue – and the main objective of this research. The results of such an analysis could help managers to take the necessary corrective measures and could lead to the improvement of the EMS implementation quality.

Therefore, an accurate predictability assessment associated each factor that could exerts an influence on EMS implementation quality, can (i) increase the effectiveness of using the organizational resources, (ii) increase the effectiveness of organizational environmental objectives, as well as (iii) a global increase associated to environmental benefits (Tinsley and Pillai, 2006).

2. RESEARCH PROCESS STRUCTURE AND DESCRIPTION

The research aims to identify and to assess the predictability associated to the “relation” between various representative organizational barriers/ factors (corporate environmental orientation) and EMS implementation quality (Figure 1).

Figure 1. Research methodology – assess the predictability (regression) associated to the “relation” between various representative organizational barriers/ factors and EMS implementation quality



Source: (Herghiligu, 2013)

The research information sources (articles and practical environmental works/ discussions with environmental specialists), as well as the method to collect and systematize the information, represents an extremely important phase of this paper.

In order to achieve the main objective of this research, it was considered the following:

- a. the information gathered with the purpose to: a1. determine the most important factors that influence the EMS implementation quality; a2. determine the essential aspects relevant to EMS implementation quality; a3. investigate the relations between the most important factors that influence the EMS implementation quality and also characterize the corporate environmental orientation. In order to investigate these relations, it was used a survey – questionnaire based, with an ordinal scale (the Likert scale), applied in case of 171 (final validated number) managers from the largest North-Eastern Romanian organizations.
- b. the information processing/ coding was performed using the statistical software SPSS 22, in order to assess the considered “aspects”, as well as to obtain the patterns that present the architecture of these relations.
- c. the quantitative analysis were performed through statistical software SPSS 22 (by testing the internal consistency corresponding to the research variables – the Cronbach Alpha index/ by testing the normality of the variables distribution – the One-Sample Kolmogorov-Smirnov Test/ by using the Spearman non-parametrical tests/ by testing the multiple regression analysis, and so on).

Literature contains several classifications of the endogenous and exogenous factors that influence direct or indirect the EMS implementation; these classifications (Table 1) substantial contribute to a clear and solid methodology associated to this research.

Table 1. Organizational barriers/ factors (corporate environmental orientation) that could influence the EMS implementation quality

| No. | Authors | Impact factors |
|-----|--|---|
| 1. | Kitazawa and Sarkis (2000) | (a) senior policy makers capacity to influence the environmental activities; (b) integration of employees' various ideas/ suggestions concerning the environmental activities improvement; (c) managerial effort to encourage and support the employees' involvement in the environmental decisional process; |
| 2. | Babakri, Bennett and Franchetti (2003) | (a) environmental aspects identification; (b) EMS documentation; (c) training sessions concerning environmental issues; (d) EMS audit; |

| No. | Authors | Impact factors |
|-----|------------------------------------|--|
| | | (e) operational control; (f) environmental management program; (g) environmental objectives and targets; (h) document control; |
| 3. | Zutshi and Sohal (2004) | (a) the management support and leadership concerning environmental management issues; (b) training sessions and acquirement of environmental knowledge; (c) internal analysis; (d) sustainability; |
| 4. | Wee and Quazis (2005) | (a) top management involvement; (b) employees' involvement in environmental management issues; (c) environmental training sessions; (d) production of ecological goods; (e) supplier management; (f) monitoring; (g) informational management; |
| 5. | Sambasivan and Feis (2008) | (a) management approach; (b) organizational change; (c) social and external aspects; (d) technical aspects; |
| 6. | Padma, Ganesh and Rajendran (2008) | (a) top management involvement; (b) compliance with the environmental regulations and environmental issues identification (c) environmental management processes; (d) training sessions for emergency situations; (e) continuous improvement; (f) monitoring, evaluation and control; (g) human resource management; |

Source: (Herghiligu, 2013)

3. RESEARCH RESULTS

In order to assess the predictability (regression) associated to the “relation” between corporate environmental orientation (CEO) and EMS implementation quality (EMSIQ) was considered various representative variables for this two dimensions (CEO and EMSIQ), as follows: (i) independent variables: 7 for CEO; (ii) dependent variables: 6 for EMSIQ – Figure 1 and Table 2. Likewise with the purpose to test the internal consistency appropriate to the constructs the Cronbach Alpha index was applied (Jaba and Grama, 2004). Hence was obtain a Cronbach Alpha index values that indicate the presence of a high internal consistency – Table 2.

Table 2. Notation (N_t) and Cronbach Alpha values associated to research variables

| N _t | Variables asociated to Environmental management system (EMS) implementation quality [dependent variables – EMSIQ] / literature | Cronbach Alpha index values | N _t | Variables asociated to organizational barriers/ factors (corporate environmental orientation) [independent variables – CEO] / literature | Cronbach Alpha index values |
|----------------|---|--------------------------------------|----------------|--|--------------------------------------|
| I.1 | Implementation of environmental policies and programs / Lupu <i>et al.</i> , 2006; Teodosiu, 2005; Ionescu, 2005; Link and Naveh, 2006; Christman and Taylor, 2006; Naveh, Meilich and Marcus, 2006; Zutshi and Sohal, 2004 | 0.734 | II.1. | Environmental strategic leadership / Daily, Bishop and Steiner, 2003, 2007; Daily and Huang, 2001; Govindarajulu and Daily, 2004 | 0.671 |
| I.2 | Compliance with environmental regulations / Lupu <i>et al.</i> , 2006; Schoffman and Tordini, 2000; Zobel and Burman, 2004 | 0.650 | II.2. | Environmental management of financial resources / Lupu, 2008; Herghiligiu, Lupu and Epure, 2012 | 0.717 |
| I.3 | Financial performance environment / Lupu <i>et al.</i> , 2006; Klassen and Whybark, 1999 | 0.729 | II.3. | Human resource management in environmental management / Strachan, Sinclair and Lal, 2003; Daily and Huang, 2001; Rezaee and Elam, 2000; Kitazawa and Sarkis, 2000; Wee and Quazi, 2005 | 0.860 |
| I.4 | Environmental operational performance / González-Benito and González-Benito, 2005; Canon and Garcés, 2006; Menguc and Ozanne, 2005; Heras-Saizarbitoria, Molina- Azorín and Dick, 2011 | 0.595 | II.4. | Environmental informational management / Mori, 2010; Mahmoud, 2009; Sigel, Klauer and Pahl-Wostl, 2010; Zendehdel, 2010; Appelt <i>et al.</i> , 2011 | 0.900 |

| N_t | Variables asociated to Environmental management system (EMS) implementation quality [dependent variables – EMSIQ] / literature | Cronbach Alpha index values | N_t | Variables asociated to organizational barriers/factors (corporate environmental orientation) [independent variables – CEO] / literature | Cronbach Alpha index values |
|------------|---|-----------------------------|--------------|---|-----------------------------|
| I.5 | Relationship with various external entities / Darnall, 2001; Welch, Mazur and Bretschneider, 2000; Hoffman, 2000 | 0.610 | II.5. | Systemic-technological “infrastructure” with impact on environmental management / Klassen and Angell, 1998; Angell and Klassen, 1999 | 0.57 |
| I.6 | Relationship between the activities of the organization and the environment / Zobel and Burman, 2004; Cascio, Woodside and Mitchell, 1996; Schoffman and Tordini, 2000 | 0.832 | II.6. | Organization’s orientation to the environmental innovation / Wagner, 2007, 2008; Rehfeld, Rennings and Ziegler, 2007; Ziegler and Nogareda, 2009 | 0.904 |
| | | | II.7. | External environment with direct/ indirect implication in organization’s environmental management / Arora and Cason, 1996; Welch, Mazur and Bretschneider, 2000; Darnall, 2001, 2002; Lupu <i>et al.</i> , 2006; Schoffman and Tordini, 2000; Zobel and Burman, 2004 | 0.736 |

Source: computed by authors

To test the normality hypothesis, the non-parametric test Kolmogorov-Smirnov-Lilliefors was applied (Jaba and Grama, 2004). Hence it was obtained the following:

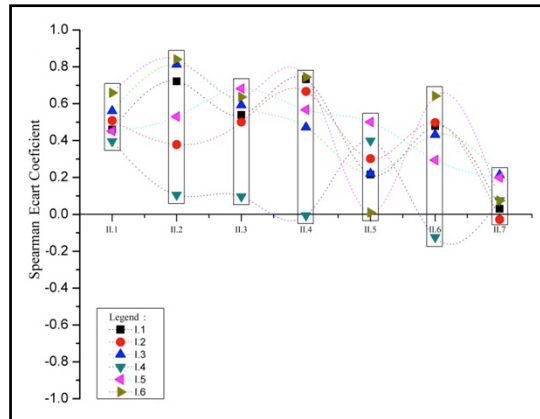
(i) for the variables associated to EMSIQ dimension – the value of Sig. is greater than 0.05, only for the variable measuring the Implementation of environmental policies and programs (0.318), all other variables recording a score below the reference value of 0.05, therefore, with a 95% confidence we can assert that the normality hypothesis of the data is confirmed for the variable – Implementation of environmental policies and programs (sig = 0.318) and invalidated for the variables – Compliance with environmental regulations (sig =

0.002), Environmental financial performance (sig = 0.021), Environmental operational performance (sig = 0.001), The relationship with various external entities (sig = 0.000), and for the variable Relationship between the activities of the organization and the state of the environment (sig = 0.000);

(ii) for the variables associated to CEO dimension – the Sig. value for all specific variables of “Organizations orientation to environmental issues and implicitly in the EMS implementation and integration” was below the reference value of 0.05, therefore with a 95% confidence. So it can be conclude that the normality assumption of the variables’ values was invalidated.

The EMS implementation quality characterized by the sum of its characteristics, fall into a complex subject, and it is the one that indicates directly (i) the effectiveness and functionality associated to this system integration, and indirectly (ii) the various organizational features resulted as a consequence of EMS implementation process (the intensity/ dynamics [Figure 2] of various relationships between different influencing factors and their issues, and so on).

Figure 2. Distribution of correlations between model variables



Legend: figure notations are detailed in Table 2.

Source: computed by authors

In order to assess the predictability associated to the “relation” between corporate environmental orientation and EMS implementation quality, multiple regression analysis was operated, based on:

H₀: The synthetic variable/ dimension EMSIQ is not directly influenced by each of the variables II.1. – II.7 (the null hypothesis).

H₁: The synthetic variable/ dimension EMSIQ is directly influenced by each of the variables II.1. – II.7 (the alternative hypothesis).

Decision rule (Jaba and Grama, 2004): (i) the sig value associated to t-statistic, for each of the parameters of the regression model should be smaller than the chosen risk α (0.05), for these to be statistically significant; (ii) if Sig. > α : H0 hypothesis is accepted, Sig. < α : H0 hypothesis is rejected.

The link between the dependent variable EMSIQ (Y) and the independent variables X (II.1 – “Environmental strategic leadership”/ II.2 – “Environmental management of financial resources”/ II.3 – “Human resource management in environmental issue”/ II.4 – “Environmental informational management”/ II.5 – “Systemic-technological “infrastructure” with impact on environmental management”/ II.6 – “Organization’s orientation to the environmental innovation”/ II.7 – “External environment with direct/ indirect implication in organization’s environmental management”) will be approximated using graphical representation of the simple relationship (Y, X).

Starting from the obtained shape of the cloud points resulted from the statistical analysis it was observe that there is a linear bond ($Y = a + b * X1 + X2 + + c * k * Xk + \varepsilon$) between the dependent variables (EMSIQ) and each of the factor variables considered. As some values for independent variables grow, an average increase in the quality aspects related to EMSIQ occurs.

The estimated value of the correlation coefficient $R=0,940$ (Table 3) indicates that between the independent and dependent variables (EMSIQ) there is a very strong bond, the coefficient approaching +1, and the sign indicates that there is a direct connection between them, meaning that the variables change takes place in the same direction (in a proportion of 88% by simultaneous changes in factor variables).

Table 3. Simple regression models for the dependent variable – EMSIQ (Backward method)
Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .940 ^a | .884 | .879 | .18499 |
| 2 | .939 ^b | .882 | .878 | .18595 |

a. Predictors: (Constant), II.7, II.1, II.5, II.2, II.3, II.6, II.4

b. Predictors: (Constant), II.7, II.1, II.5, II.2, II.3, II.4

Source: computed by authors

Hence applying ANOVA for the resulted models, it was observed that them are statistically significant (sig = 0.000 < sig = 0.05), and considering that the probability is below 5%, we can reject the null hypothesis, which says that the

factor variables do not influence the variable dependent on the EMS implementation quality.

After analyzing the regression model parameters, we can say that there is a connection between the dependent variable and the independent variables; the estimated equation is:

$$Y = 1.661 + 0.285 * II.1. + 0.080 * II.2. + 0.186 * II.3. + 0.100 * II.4. + 0.090 * II.5. - 0.192 * II.7. \quad (1)$$

[Y = 1.661 + (0.285 * “Environmental strategic leadership” variable) + (0.080 * “Environmental management of financial resources” variable) + (0.186 * “Human resource management in environmental management” variable) + (0.100 * “Environmental informational management” variable) + (0.090 * “Systemic-technological “infrastructure” with impact on environmental management” variable) – (0.192 * “External environment with direct/ indirect implication in organization’s environmental management” variable)]

Some estimations of regression parameters are positive (II.1., II.2., II.3, II.4., II.5), therefore the relationship between the dependent variable and the independent variables is straightforward, while the relationship between the dependent variable and predictor II.7. is reversed, this variable being accompanied by negative regression coefficients.

Concluding the analysis of specific factors associated to CEO and the variable that defines the EMSIQ, it is necessary, based on above obtained equation, to mention the following:

(i) medium level of the EMSIQ quality aspect when no factor is active is 1.661 (parameter β_0);

(ii) medium level of the EMSIQ quality aspect will increase by an average of 0.285 units if “Environmental strategic leadership” factors improve by one unit while the other variables remain unchanged (parameter β_1);

(iii) medium level of the EMSIQ quality aspect will increase by an average of 0.080 units if the “Environmental management of financial resources” factor improves by one unit while the other variables remain unchanged (parameter β_2);

(iv) medium level of the EMSIQ quality aspect will increase by an average of 0.186 units if the factor “Human resource management in environmental management” improves by one unit while the other variables remain unchanged (parameter β_3);

(v) medium level of the EMSIQ quality aspect will decrease by an average of 0.100 units if the “Environmental informational management” improves by one unit while the other variables remain unchanged (parameter β_4);

(vii) medium level of the EMSIQ quality aspect will increase by an average of 0.090 units if the “Systemic-technological “infrastructure” with impact on

environmental management” improves by one unit while the other variables remain unchanged (parameter β_5);

(vii) medium level of the EMSIQ quality aspect will decrease by an average of 0.192 units if the “External environment with direct/ indirect implication in organization’s environmental management” factor improves by one unit while the other variables remain unchanged (parameter β_7).

4. CONCLUSIONS

The society progress characterized by the expansive industrial activities development could determined a negative environmental impact. Likewise the introduction and development of environmental regulations stimulate the organizations to identify modalities to minimize the negative environmental impact. Thus a management system (EMS) that (i) could minimize the environmental risk, (ii) increase organizational resources efficiency, and (iii) enhance the environmental responsibilities integration, was considered the most viable solution associated to a performant environmental management.

The literature mentions that a correct assessment of the “relation” and its predictability between organizational barriers/ factors (corporate environmental orientation) and EMS could increase resources efficiency utilization, increase efficacy associated to organizational environmental objective, and enhance the environmental benefits.

The research also provides, based on the previously presented quantitative analysis, a number of possible measures/ solutions that could have a positive impact upon the EMS implementation quality – Table 4.

Table 4. Possible measures/ solutions that could have a positive impact upon EMS implementation quality

| No. | Variable | Possible measures/ solutions |
|-----|--|--|
| 1. | „Environmental strategic leadership” (+) | a. improving the establishment and communication process of the organization’s environmental vision, in order to improve the EMS implementation/ integration quality; b. improving the flexibility of changing process of the organizational structure (duration/ establishment or dissolution of departments); c. increase the flexibility of the internal regulations of the organization; d. improving the development/ communication and integration process of organization environmental objectives and targets; d. increasing the regularity of audits regarding to all organizations internal systems in order to improve the state of the environment; e. use of information obtained from the Environmental management system audit in improving its operation; f. increase the periodicity level of environmental performance |

| No. | Variable | Possible measures/ solutions |
|-----|---|--|
| | | evaluation/ analysis. |
| 2. | „Environmental management of financial resources” (+) | <p>a. increasing the amount of financial resources of the organization’s budget allocation for deployment of environmental activities/ projects;</p> <p>b. reassessment of the relationship between the allocation of financial resources for environmental protection and real needs:</p> <p>b1. assessing the efficiency and effectiveness of the current environmental procedures used at the organization level;</p> <p>b2. the use of new techniques and methods to quantify the financial resources necessary to various environmental actions/ projects;</p> <p>c. increased the absorption level of various funds (national or European) for various environmental projects:</p> <p>c1. increasing the skills of human resources;</p> <p>c2. employing specialized/experienced human resource in developing environmental projects;</p> <p>d. rethinking the organization’s priorities;</p> <p>e. improve environmental innovation process (investments/ fostering human resources in coming up with new ideas constantly/ developing procedures addressing environmental innovation, and so on.)</p> <p>f. increasing the allocation level of financial resources (internal budget of the organization/ attracting investors/ national funds or European funds) for improving the technologies owned by the organization.</p> |
| 3. | „Human resource management in environmental management” (+) | <p>a. increasing the number of environmental educational programs (trainings) for employees/ managers who are interested/ are regularly integrated in environmental activities/ and obtained good results in the last environmental trainings activities;</p> <p>b. increasing the number of environmental trainings that should aim at the transmission of information/ knowledge about the use of best practice in environmental tasks (condition: the real applicability of these practices);</p> <p>c. developing and establishing clear environmental responsibilities;</p> <p>d. rethinking the evaluation system of rewarding employees given the organization’s environmental performance;</p> <p>d. rethinking the system of promotion of employees considering the environmental performance</p> |
| 4. | „Environmental informational management” (+) | <p>a. improve the environmental decision making process through:</p> <p>a1. increasing the environmental knowledge level of the organizational human resource through different environmental trainings programs;</p> <p>a2. empower the organization employee at the level of various environmental activities;</p> <p>a3. clarifying the coordinates of environmental decision process;</p> <p>a4. clarify the methods used in environmental decision-making process – respecting the peculiarities of the process;</p> |

| No. | Variable | Possible measures/ solutions |
|-----|---|---|
| | | <p>a5. creating and maintaining a database of all environmental decisions taken;</p> <p>a6. where it is possible to use custom environmental decision making – using the same solutions that have positive results for similar situations;</p> <p>a7. increasing the credibility of environmental decision makers managers;</p> <p>b. improving environmental information system by:</p> <p>b1. using efficient software for transmitting, recording, processing, and so on. environmental information;</p> <p>b2. development of an environmental information system enabling real-time communication between the employees of the organization;</p> <p>b3. for the distribution of certain environmental information, different sessions are recommended at the organization departments level;</p> <p>b4. recording all the information of environmental expertise resulting from different environmental tasks;</p> <p>c. improving the knowledge management system through:</p> <p>c1. clarification at organization employees level, the basics notions regarding the environmental knowledge management;</p> <p>c2. using an electronic scoreboard for employees/ managers regarding the environmental tasks performed;</p> <p>c3. increase the employees/ managers access level at various electronic sources of environment knowledge/ different environment software for solving the assigned environmental tasks;</p> <p>c4. recording of important documents (environmental laws/ environmental education programs, and so on.) that have been used to solve various environmental activities;</p> <p>c5. organizing periodic meetings with employees in order to present/ explain different methods and techniques that address environmental issues;</p> <p>c6. promoting the use of intranet and internal newsletters to transfer various environmental information/ knowledge;</p> <p>c7. encouraging employees/ managers to share environmental knowledge between them;</p> <p>d. improve environmental monitoring and control by:</p> <p>d1. establishing a clear and fair system of environmental performance indicators;</p> <p>d2. monitoring the level of understanding of the basic knowledge necessary to perform assigned environmental tasks (employee/ manager).</p> |
| 5. | „Systemic-technological “infrastructure” with impact on environmental management” (+) | <p>a. organization’s orientation towards clean technology (non-polluting)</p> <p>b. improving production through process optimization, taking into account the overall environmental impact;</p> <p>c. reducing as much as possible the amount of waste and emissions generated by activities;</p> <p>d. the gathered experience within the organization as a result of</p> |

| No. | Variable | Possible measures/ solutions |
|-----|--|--|
| | | the implementation of Quality management system (ISO 9001) is used in the management of environmental assets. |
| 6. | „External environment with direct/ indirect implication in organization’s environmental management” (-) | a. raising awareness of the importance of environmental protection through various trainings and training programs; PS.: the implementation of a EMS should be the result of environmental awareness and not a consequence of indirect reasons (reasons of competition/ pressure of various stakeholders). |

Source: computed by authors

Likewise, this assessment could generate results that help managers to take the necessary corrective measures, at the right time, in order to improve the EMS implementation quality and overall business performance.

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COMPLEXITY AND ENTREPRENEURIALITY

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Abstract

The purpose of this paper is to study the correlation between economic complexity and entrepreneurship. Many scholars have pointed to the positive impact of the entrepreneurial economy on wealth creation. However, little attention has been paid to the meaning of entrepreneurial economy and how it is measured. According to the literature review, we argue that complexity and knowledge are fundamental explanations for entrepreneurial economy. The concept of economic 'entrepreneuriality' is introduced in this paper in order to assess the extent to which some economies provide more entrepreneurial opportunities than others. Complex economies are more entrepreneurial than simpler ones because they afford more entrepreneurial and innovative opportunities. Methodologically speaking, we use cross-section data at macro level. These secondary data are extracted from the Atlas of Economic Complexity in which the Economic Complexity Index (ECI) is calculated for each country. Moreover, we use the Entrepreneurship Global Index to assess the level of entrepreneurial economy. Using the Stata Software, our quantitative approach allows us to show a strong correlation between economic complexity and entrepreneurship. Furthermore, our findings have allowed us to conclude that complex economies (Japan, Switzerland, USA, Germany, etc.) are knowledge-based economies with a high level of entrepreneuriality. Nonetheless, all African countries, which have low economic complexity, are factor-driven economies and have consequently a limited level of entrepreneuriality. This goes hand in hand with Porter's theory on the stages of nations' development.

Keywords: *knowledge; entrepreneuriality; ubiquity; diversity; opportunity.*

JEL Classification: A10, L26

1. INTRODUCTION

Complexity and entrepreneurship are linked in different ways (Lichtenstein *et al.*, 2007; McKelvey, 2004). Academically speaking, the connection between these subjects began in 1989 with Bygrave's article in which he theorized entrepreneurship using the chaos theory. While many scholars were studying the relationship between entrepreneurship and economic growth (Wennekers and Thurik, 1999) providing a huge economic literature on entrepreneurship (Hébert and Link, 1989), some of them provided a new approach to predict the economic growth of countries which they called economic complexity.

According to Arthur (2014, p. 14), “*complexity is the study of the consequences of interactions, it studies patterns, or structures, or phenomena, that emerge from interactions among elements – particles, or cells, or dipoles, or agents, or firms*”. It studies the propagation of change through interconnected agents. We argue that this definition is in line with our main objective in this paper. Our proposal is to define opportunity as a consequence of web of interactions at national level in order to introduce the concept of ‘economic entrepreneuriality’.

At the economic level, some economies are more entrepreneurial (Audretsch, 2007) because they deliver more opportunities to create something new and start up a business venture. We think that complex economies with huge interactions generate more opportunities, while those with few interactions are simpler and less entrepreneurial. Entrepreneuriality focuses on the opportunities driven by an economy as an adaptive complex system.

One of the most important measures of economic complexity is provided by the Center for International Development at Harvard University (2019) using the economic complexity index. It is expressed in the composition of a country’s productive output and reflects the structures that emerge to hold and combine knowledge (Hausmann *et al.*, 2014, p. 18) through the web of interactions. An increased complexity is necessary for a society to be able to hold and use a larger amount of productive knowledge which is also necessary to become entrepreneurial.

Knowledge and innovation are placed at the heart of economic growth. At this stage, it is worth reviewing the interpretation of Smith’s view of wealth creation. The division of labour is what allows access to a quantity of knowledge that none of us would be able to hold individually (Hausmann *et al.*, 2014, p. 15). Wealth creation depends on the quantity of knowledge, but embedding it in products requires agents’ behaviors who interact continuously and possess an understanding of that knowledge.

The processes of embedding knowledge involving many interactions between agents are the foundations of economic complexity. At the national level, economic complexity is expressed in the composition of country’s productive output and reflects the structures that emerge to hold and combine knowledge (Hausmann *et al.*, 2014, p. 18). Hence, we argue that entrepreneuriality will be systematically greater in contexts that are rich in knowledge and its propagation gets through interconnected agents. On the whole, economic complexity is a:

*“measure of the knowledge in a society as expressed in the products it makes. The economic complexity of a country is calculated based on the **diversity** of exports a country produces and their **ubiquity**, or the number of the countries able to produce them (and those countries’*

complexity)” (The Center for International Development at Harvard University, 2019).

The aim of this paper is to study the relationship between complexity and entrepreneuriality within economies. More specifically, we are going to use empirical data extracted from the Atlas for Economic Complexity (Observatory of Economic Complexity, 2018) and the Global of Entrepreneurship Index (Acs, Szerb and Lloyd, 2018). Our ambition is to introduce the concept of entrepreneuriality and show its positive correlation with economic complexity.

The second section of this paper explains the theoretical relationship between complexity and entrepreneurship, showing knowledge as the core of economic complexity. Knowledge-based opportunities are seen as a nexus of entrepreneurship and complexity. We conclude this section by introducing and defining the concept of ‘*entrepreneuriality*’. The third section gives an overview of the measurement developed independently by both indexes: ECI and GEI. Finally, the fourth section focuses on the results and their discussion related to our theoretical background.

2. COMPLEXITY AND ENTREPRENEURSHIP

One of the most important issues noticed in the literature on complexity is the number of different definitions given by authors, which, consequently, means the existence of various concepts of complexity (Perona, 2007). Since its rising in economics, many concepts are developed with, unfortunately, a confusion in meanings. In contrast, literature has focused on the concept of opportunity as the core of entrepreneurship.

2.1. Knowledge as the core of economic complexity

Developed especially within natural sciences but also in other academic fields, complexity is nowadays seen as heterodox (Elsner, 2017). Moreover, it challenges the traditional neoclassical approach under which economy is machine-like. The economy cannot be reduced to simple equations studying a social behavior under conditions of equilibrium. The neoclassical economic approach fails to address the new challenges. As said by the former European Central Bank Governor Jean-Claude Trichet in 2010: “*in the face of the crisis, we felt abandoned by conventional tools*” (Trichet, 2010).

When we start discussing economic complexity, the term ‘*complexity*’ becomes a quality of almost any economic phenomena. This quality shows us the economic real world and gives an ontic meaning for economists (Perona, 2007). According to Perona (2007), among the authors who attempt to acknowledge an ontic dimension of complexity within economics and social sciences, we find Schenk (2003) and Amin and Hausner (1997).

In his ontological perspective, Schenk (2003) has emphasized the economy as a set of complex interactions among elements (Agents Based Modelling), the

structural patterns that emerge from such interactions and, in turn, their impact on individual agents' behavior (emergent structure). In other words, economy is, in reality, a whole complex system whose elements are constantly updating their behavior based on their present situations (Arthur, 2014). Taking the complexity of economic phenomena into consideration, economists become able to learn more about propagation of change through interconnected behaviors.

The term '*complexity economics*' was first used by Brian Arthur (1999). According to him, it is a different framework for thinking and emphasizes not the physics of goods and services, but the process of change and creation (Arthur, 2014), interactions, knowledge and its embeddedness (Hausmann *et al.*, 2014). This way of thinking is defined as an application of complexity science to the problem of economics. It gives more critical tools and fresh approaches to understand economic phenomena.

Since its first use in the economic field in 1999, many initiatives [1] have been launched in order to seize the opportunity to develop a new understanding of the economy as a complex adaptive system (Arthur, Durlauf and Lane, 1997; Beinhocker, 2006). It is not about what managers and policy makers have to do but how they should change their way of thinking. Viewing economy as a complex adaptive system provides new answers to old questions in relation to wealth creation, asked more than two hundred years ago by Adam Smith.

Given this point of view, Hausmann *et al.* (2014, p. 15) suggest a new reinterpretation of Smith's division of labour theory. This was also pointed by Hayek (1945) in an important research study called "*the use of knowledge in society*". Hayek's main feature of an economy is the division of knowledge among individuals and by consequence, its diffusion in the economy using webs of interactions in society. This point of view leads us to understand entrepreneurial opportunities and to discover and create goods and services.

The division of labour is what allows us to have an amount of knowledge that none of us would be able to hold individually. The term '*economic complexity*' focuses on the complex web of interactions between individuals and the patterns they construct together. Economists have to focus not only on the products but also on the knowledge embedded in those products. Markets and organizations allow the knowledge that is held by few to reach many (Hausmann *et al.*, 2014, p. 15). The ability of each country to create wealth depends on the individuals' abilities to form webs of interactions in order to combine and share knowledge with each other. More specifically, growth and wealth creation are related to tacit knowledge which is not easy to share and therefore hard to embed in people. At the national level, the division of labour has to create pieces of useful knowledge embedded in agent networks. Consequently, the complexity of an economy is designed by the multiplicity of its interactions with other economies.

According to the Economic Complexity Index (Hausmann *et al.*, 2014),

“complex economies are those that can weave vast quantities of relevant knowledge together, across large networks of people, to generate diverse mix of knowledge-intensive product. By contrast, simpler economies have a narrow of productive knowledge and produce fewer and simpler products, which require smaller webs of interaction”. (p. 18)

In addition to that, a nation's prosperity might be directly related to its economic complexity. This explains that countries with diverse portfolio of firms produce and export goods and services offered by few other nations. So, entrepreneurial driven economies create more complexities owing to opportunities to create new ventures. Complex economies are more entrepreneurial than simpler ones.

2.2. Opportunity as a nexus of complexity and entrepreneurship

According to the literature (Venkataraman, 1997, p. 120) entrepreneurship is an academic area in which scholars *seek to understand how opportunities to bring into existence “future” goods and services are discovered, created and exploited, by whom, and with what consequences.* Therefore, the central question they should ask is *where* do opportunities come from? Some of them have developed research studies on the sources of opportunities (Drucker, 1985; Holcombe, 2003; Sarasvathy *et al.*, 2003). Others have striven to link entrepreneurial opportunity to economic models (Kirzner, 1973). Entrepreneurship is related to a profit opportunity which does not exist on the state of equilibrium (Shane and Venkataraman, 2000). This means that there is no role of entrepreneurship in the economic mainstream theory. Others have focused on the equilibrating role of entrepreneurship. The concept of opportunity is foregone by economists and has pushed out most economic models.

Moreover, it is commonly known that some entrepreneurs are pushed by necessity because other options of work are absent. The entrepreneurial literature talks about the improvement driven necessity (Williams, 2008). On the other hand, scholars speak about entrepreneurs who are pulled by opportunity. They are more innovative than those who are pushed by necessity. According to some empirical studies, the driven-opportunity is more important in developed countries, which are more innovative and more complex. However, in developing countries, with simpler economies, the portion of necessity driven is higher than the opportunity one (GEM, 2019). Economic complexity, through its web of interaction amongst the actors, brings many entrepreneurial driven-opportunities. Entrepreneurial opportunities are an engine for economic growth (Schumpeter, 1912, 1934, 1942; Wennekens and Thurik, 1999; Audretsch, Keilbach and Lehmann, 2006; Acs *et al.*, 2012). Schumpeter is not alone to

provide entrepreneurial opportunity as an engine for economic growth arguing about the key role played by entrepreneurs as innovators. More extremely, Edward Lazear (2002, p. 1) emphasizes that “*the entrepreneur is the single most important player in modern economy*”.

As we previously said, the central question we should ask is *where* do opportunities come from. They are discovered and created from the economic context. If there are many webs of interaction and agents are connected, there will be a high potential of entrepreneurial opportunities. Economy, as a complex adaptive system, has a high entrepreneuriality. On the contrary, when agents are not well connected and only few goods are produced and sold to only few countries, the entrepreneuriality is not so high.

To sum up, the main idea we want to explore in this paper focuses on webs of interaction as a network of knowledge in which many entrepreneurial opportunities are seized. Moreover, we argue that complex economies, through knowledge and webs of interaction, provide more opportunities than simpler ones.

3. MEASURING ECONOMIC COMPLEXITY AND ENTREPRENEURSHIP

The measurement of our variables is based on the Global Entrepreneurship Index (GEI) and the Economic Complexity Index (ECI). Both of them are developed at national level.

3.1. Entrepreneurship

According to Acs, Szerb and Lloyd (2018), the Global Entrepreneurship Index (GEI) is a composite indicator of the health of the entrepreneurship ecosystem in a given country. It does not measure the entrepreneurship quantity but the entrepreneurship quality focusing on opportunity driven entrepreneurship, which means on the knowledge-based view. In line with this perspective, an entrepreneur is a person with a vision, based on his knowledge and webs of interaction, with innovation and the ability to bring it to market. The definition used in the GEI is related to the entrepreneurship driven by opportunity, not by necessity.

As a result, entrepreneurship is defined as “*the dynamic, institutionally embedded interaction between entrepreneurial attitudes, entrepreneurial abilities, and entrepreneurial aspirations by individuals, which drives the allocation of resources through the creation and operation of new ventures*” (Acs, Szerb and Lloyd, 2018, p. 32). In this perspective, entrepreneurship is related to high growth scalability and job creation. This point of view is in line with Schumpeter’s approach under which an entrepreneur is seen as an innovator.

This definition is operationalized by the Global Entrepreneurship Index as a composite indicator that is divided into three sub-indexes (with 14 pillars) through several steps [2]. The first one is to choose the variables that will be used in collecting data. This step is based on data coming from the original sources for each country involved in the analysis. Those related to the individual level are coming from the GEM Adult Population Survey (16 variables). However, those related to the institutional and contextual level are extracted from other sources (15 variables). The second step consists of pillars using the interaction variable method by multiplying individual variables with the proper institutional variables. All sub-indexes are operationalized as follows:

- **attitudes sub-index**: it reflects the people's thinking or feeling about entrepreneurship. It involves some individual abilities. Entrepreneurs have to be able to recognize opportunities and exploit them. Entrepreneurial attitudes depend on start-up skills, risk perception, networking and cultural supports. It also depends on the institutional context, especially the property rights and economic freedom, the quality of education, the riskiness of the country and the prevalence of corruption. The attitudes sub-index is given by:

$$ATT_i = 100 \sum_{j=1}^5 h_j \quad (1)$$

- **abilities sub-index**: this sub-index refers to the individual characteristics of the entrepreneur as an actor who has some attitudes toward entrepreneurship. It allows to assess the extent to which new ventures will have potential for growth. As an illustration, new ventures based on opportunity have more potential for growth than those based on necessity. Furthermore, this sub-index includes important indicators related to the potential technology-intensity of the startup, the entrepreneur's level of education, the level of competition and digital startup capabilities:

$$ABT_i = 100 \sum_{j=6}^9 h_j \quad (2)$$

- **aspiration sub-index**: entrepreneurial aspiration refers to the distinctive, qualitative, strategy-related nature of entrepreneurial activity. Several items are included to measure this sub-index. For instance, these items are technology transfer, the applied research potential of science, high growth of expectations, venture capital availability, internationalization and the availability of risk financing:

$$ASP_i = 100 \sum_{j=10}^{14} h_j \quad (3)$$

The GEI is the average of the three sub-indices for each country. It is calculated as follows:

$$GEI_i = \frac{1}{3} (ATT_i + ABT_i + ASP_i) \quad (4)$$

3.2. Measuring economic complexity

In order to construct the measure of economic complexity, Hausmann *et al.* (2014), use two dimensions: diversity and ubiquity. The first one depends on the amount of knowledge embedded and used to produce goods and services at the national level. The second one is related to the number of countries that product is connected to. After defining these two important dimensions, they conclude that the complex products, those that contain a large amount of knowledge, are produced by few countries. Those products are less ubiquitous. Ubiquity gives us information about the volume of knowledge needed to produce an output. Given these points, diversity is the volume of knowledge that a country has and the ubiquity of products that it makes.

Mathematically speaking, diversity and ubiquity are given by the following formulations:

$$Diversity = k_{c,0} = \sum_p M_{cp} \quad (5)$$

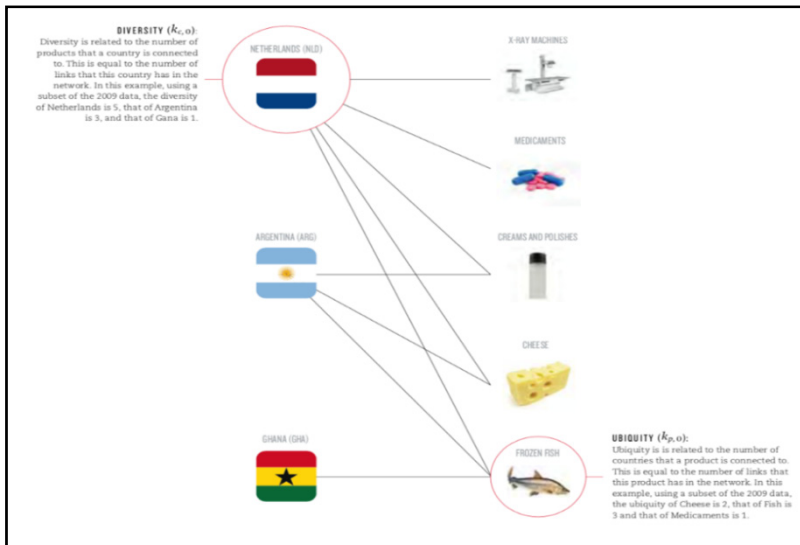
$$Ubiquity = k_{p,0} = \sum_c M_{cp} \quad (6)$$

Diversity measures the number of products “*p*” that a country “*c*” is connected to. It gives the number of links that a country has in global network.

Ubiquity is the fact that products seem to be everywhere. It is related to the number of countries “*c*” that a product “*p*” is connected to. It calculates the number of links that product has in global market.

Figure 1 illustrates the graphical explanation of diversity and ubiquity.

Figure 1. The explanation of diversity and ubiquity



Source: (Hausmann *et al.*, 2014, p. 21)

4. RESULTS AND DISCUSSIONS

Our main hypothesis drawn from the literature review supposes that there is a relationship between economic complexity and entrepreneurship at national level. We introduced the concept of entrepreneuriality to characterize economies with high potential of entrepreneurial opportunities. Economic complexity means wealth creation based on bits of knowledge. Technically speaking, our goal is to explore how much entrepreneurship at country level, measured by GEI as a dependent variable, changes when diversity and ubiquity, measured by ECI as an independent variable, changes by one unit.

To test our hypothesis, we conducted a univariate regression analysis using a cross-sectional dataset with 110 country-level observations for the year 2017, the latest year for which data have been available for both our variables. The regression output, presented in Table 1, shows a strong R-square, which means that economic complexity explains about 60% of the variance in entrepreneurship around the world. Moreover, the adjusted R-square is very close to R-square. Consequently, the difference between variables (economic complexity and entrepreneurship) is small but the difference between countries is large. This first conclusion is very important from our point of view because it provides a more honest association between complexity and entrepreneurship at national level.

Table 1. The ANOVA table & the regression of entrepreneurship on economic complexity

| Source | SS | df | MS | Number of obs | = | 110 |
|----------|------------|-----------|------------|---------------|----------------------|----------|
| Model | 2.45188238 | 1 | 2.45188238 | F(1, 108) | = | 166.98 |
| Residual | 1.58579694 | 108 | .014683305 | Prob > F | = | 0.0000 |
| | | | | R-squared | = | 0.6073 |
| | | | | Adj R-squared | = | 0.6036 |
| Total | 4.03767932 | 109 | .03704293 | Root MSE | = | .12117 |
| GEI | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
| ECI | .1512398 | .0117038 | 12.92 | 0.000 | .1280408 | .1744388 |
| _cons | .3390487 | .0116294 | 29.15 | 0.000 | .3159972 | .3621002 |

Source: own processing using Stata

Table 2. The correlation matrix between Economic Complexity and opportunities

| | ECI | GEI | Opportunity perception | Opportunity start up |
|------------------------|-------------------|-------------------|------------------------|----------------------|
| ECI | 1.0000 | | | |
| GEI | 0.7793* 0.0000 | 1.0000 | | |
| Opportunity perception | 0.4585* 0.0000 | 0.7954* 0.0000 | 1.0000 | |
| Opportunity start up | 0.7141* 0.0000 | 0.9125* 0.0000 | 0.8081* 0.0000 | 1.0000 |

Source: own processing using Stata

This association is statistically significant because of the p-value. Economic complexity is statistically significant in explaining the entrepreneurial economy. Similarly, the T-test value shows the importance of ECI in the model. Finally, the suitability of this model is tested by the Root MSE score which is better because it is close to zero. It is also given by the ANOVA table – the Model Sum of squares (MSS) which is, on average, close to the Total Sum of Squares (TSS). Under these scores, the association between entrepreneurship and economic complexity is written by:

$$GEI = 0,339 + 0,151 ECI \quad (7)$$

This equation means that for each one point increase in economic complexity, entrepreneurship improves by 0,151 points. Increasing economic complexity means being connected, for each country, to more products. As we said earlier, it is related to diversity. In the same way, complexity means ubiquity, which is related to the number of countries that the product is connected to. According to this linear relationship, policy makers have to improve the diversity and the ubiquity of their countries in order to increase the “*entrepreneuriality*” [3] of their economies. By this neologism, we mean a mindset of policy makers, which consists in their desire to improve knowledge sharing through webs of interaction. Entrepreneuriality measures how an economy through its diversity and the ubiquity of its products could provide more opportunities for potential entrepreneurs. It might be measured by the number of seized opportunities (new ventures, new products, etc.) related to economic complexity.

Figure 2 more clearly shows the relationship between economic complexity and the global entrepreneurship index for the 110 countries studied in this paper. As mentioned earlier (see Table 1), economic complexity accounts for 60% ($R^2 = 0,6073$) of the variance in entrepreneurship. There is a clear association between complexity and entrepreneurship. The distance between the quadric line and each point is generally short. Countries with high economic complexity are

which form the second group, are not as knowledge-based as the first group; they have just started their pathway towards the innovation-driven economies. Known as emerging economies, these countries are Turkey, Portugal, Brazil, Slovenia, Latvia, etc. Moreover, two other developing countries groups could be shown. The first one includes economies which are at the basic step of development, such as Gabon, Ghana, Mauritania, Cameroun, etc. This situation means that they are not well embedded in the global web of interactions and their entrepreneuriality is very low. The second group of developing nations includes countries which have moved from this basic step to another one. Within it, we find Tunisia, Morocco, Egypt, Uganda, etc., which are achieving the final step of underdevelopment and might start their pathway to economic emergence.

To sum up, economic entrepreneuriality depends on the number of opportunities driven by diversity and ubiquity. Our findings show that the opportunity perception and the opportunity start-up are positively correlated to economic complexity, which is related to ubiquity and diversity (Table 2). Entrepreneuriality measures the opportunities driven by the web of interaction in each economy. Simpler economies have a weak level of entrepreneuriality. However, complex economies generate more opportunities to start up a business venture and innovate. They have a high level of entrepreneuriality.

5. CONCLUSIONS

In conclusion, this paper argued that the economic entrepreneuriality of each country is measured by its capacity to provide more opportunities. Our theoretical and empirical evidence discussed the relationship between the webs of interactions and entrepreneuriality. This means that complex economies provide more opportunities to innovate and to start businesses.

These findings are inception steps which need to be developed and analysed by scholars. Similarly, economists, entrepreneurs and policy makers might benefit from these findings and use them for further research based on panel data relying on several other variables. The impact of ubiquity and diversity on opportunities could also be analysed individually. With this perspective, we hope to understand the extent to which some economies with high level of ubiquity and diversity foster opportunities.

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NOTES

- [1] Examples of those initiatives are the New Approaches to Economic Challenges launched by OECD in 2012, and the Intitute for New Economic Thinking founded in 2009.
- [2] For more detailed explanations on how scores are calculated, please see the GEI 2018 technical annex available online at: https://thegedi.org/wp-content/uploads/dlm_uploads/2017/12/2018-GEI-Technical-Annex.pdf.
- [3] This neologism will be developed in our future papers.

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ENTREPRENEURS AND THE CHALLENGE OF THE OPPORTUNITY PROCESS

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Abstract

Entrepreneurship is one of the main debate topics nowadays, motivated by aspects such as economic growth and development, welfare and profit. Through their activity, entrepreneurs – the driving force in the market process – contribute to world progress. Literature view entrepreneurial opportunities as the foundation for entrepreneurial activities. In the free market context, the identification, discovery or creation of entrepreneurial opportunities is the basis of the entrepreneur's activity. The implications of opportunities in the global economy are evident. The starting point for entrepreneurship is opportunity, irrespective of its shape or type, whether identified, created or discovered. The opportunity process is influenced by aspects such as information asymmetry, level of knowledge, level of technology, etc.

Although the existing literature is far from developing a solid theory on entrepreneurial opportunities, the main aim of this paper is to make a review of the existing opinions on this topic. The different approaches were indicative of the complexity of the entrepreneurial opportunities process and the difficulty in understanding the concept. Methodologically, this paper is based on descriptive and exploratory literature review on the topic of entrepreneurial opportunities. The limitations of this paper result from the small number of the articles we analysed and lack of a quantitative approach, but these arguments also constitute a direction for future research.

Keywords: *entrepreneurship; opportunities; opportunity discovery; opportunity creation.*

JEL Classification: L26, F23, L20, M16

1. INTRODUCTION

Individuals perform manifold activities, but entrepreneurial activities are the most important. Entrepreneurs are a debate topic nowadays and this fact is related to strong motivations, such as growth and development, welfare and profit. Entrepreneurs are the main driving force in the free market process and contribute to economic progress through their activity. Entrepreneurial opportunities are, as the literature shows, the basis for entrepreneurial activities.

The identification, discovery or creation of entrepreneurial opportunities is the keystone for setting up an entrepreneurial action in the (free) market process. The implications of entrepreneurial opportunities on the level of development are evident, given the role of entrepreneurship in the economy. The starting point for entrepreneurship is opportunity, irrespective of its shape or type, and whether identified, discovered or created. Entrepreneurial opportunity is certainly influenced by the entrepreneur's knowledge and others aspects. The level of knowledge, information asymmetry and technological evolution are points of difference between the entrepreneur and the others actors in the market.

Although current literature is far from developing a solid theory on entrepreneurial opportunities, the main aim of this paper is to identify the main points of view on this topic. Different views highlight the complexity of this phenomenon, and understanding it is only possible by analysing as many opinions as possible.

The specific objectives focus on identifying the definitions of entrepreneurial specialties as provided in the specialty literature, and identifying the categories and elements that contribute to the emergence and/or discovery of such opportunities.

Entrepreneurial acts are based on entrepreneurial opportunities, and in this context, the actions of every individual should be focused on identifying or creating such opportunities. Knowledge and information enable a smoother adjustment to the market process. Thus, harnessing knowledge and information is one of the determinant factors in the discovery or creation process of entrepreneurial opportunities.

To achieve the aim and objectives, the paper will resort to a qualitative analysis of certain articles that have addressed the issue of entrepreneurial opportunities.

2. LITERATURE REVIEW

Entrepreneurs – the lead actor in the market process – are the ones that contribute to economic growth and development via the activity they conduct. The opinions on entrepreneurs and entrepreneurship were not at all homogeneous, and in this context, the activity they conduct faces various approaches. Starting from the aforementioned, identification of opinions regarding a vital element for the entrepreneurial act – *entrepreneurial opportunity* – is the subject of analysis of this scientific endeavour.

In recent years the topics of entrepreneurs and the skills/capacities the latter should possess have been increasingly discussed. As with any other topic of great importance in economy, opinions on entrepreneurship are anything but homogeneous. Starting from the premise of some heterogeneous visions – that are, however, guided by common elements – we can state that irrespective of approaches, the entrepreneur continues to play a central role.

Opinions on entrepreneurship have emerged as early as the *pre-Austrian* period. The views that elicited a significant impact on specialty literature are those of Richard Cantillon (1755), Anne Robert Jacques Turgot (1774), Jean Baptiste Say (1821), John Stuart Mill (1848), Alfred Marshall (1890) and Joseph Alois Schumpeter (1939, 1942). Until the emergence of the Austrian School of Economics, putting together a profile of entrepreneurs was not a major preoccupation for economists. However, there have been exceptions to the mainstream behaviour. The entrepreneurs' image, the skills they must possess and duties they must carry out are relatively homogeneous.

A first joint view of the aforementioned thinkers is related to the imperative condition of having a **free market economy**. The free market is the only place where entrepreneurs can carry out their activity. Any other type of market is not compatible with entrepreneurship (Cantillon, 1755; Turgot, 1774; Say, 1821; Mill, 1848; Marshall, 1890). The motivation of earning a profit is the one that drives the entrepreneur to take action (Cantillon, 1755; Turgot, 1774; Say, 1821; Mill, 1848; Marshall, 1890). Under monopoly conditions, the motivation of profit disappears, with market segments being seized by a single economic actor (Cantillon, 1755). Moreover, only in a market economy can we speak of an efficient resource allocation. Another aspect that brings together the views of *pre-Austrian* economists is the existence of **risk** (Cantillon, 1755; Turgot, 1774; Say, 1821; Mill, 1848; Marshall, 1890; Schumpeter, 1942). Risk-taking is what sets entrepreneurs apart from the other participants in the free market. Uncertainty and risk-taking give entrepreneurs the chance to earn a profit.

In general, the **opportunity cost** is the guiding force for the entrepreneur's decision-making. Whether it be the wish to invest or to set up a bank deposit to earn an interest, or the production of a good A or a good B, any choice is based on a comparative advantage: the willingness to give something up in favour of something else. Such decisions largely subjective, being influenced by the entrepreneur's knowledge and the forecasts that can be achieved, as well as by the costs it entails (Boutillier and Uzunidis, 2014).

Owning **capital** is a major hypothesis that needs to be validated (with the exception of Schumpeter's view). Thus, the entrepreneur must own capital that is set to be invested (Cantillon, 1755; Turgot, 1774; Say, 1821; Mill, 1848; Marshall, 1890). Taking the uncertainty upon oneself and the investment must generate a **profit** for the entrepreneur. The ability to anticipate consumer behaviour and the willingness to satisfy consumer's needs are elements that entrepreneurs must consider when directing their capital towards one field or another. One aspect worth reminding refers to Schumpeter's opinion, who believed that one of the entrepreneur's missions is to constantly connect the technological field to the economic environment by ushering in new technologies that ensure the pursuance of the main goal: generating **new opportunities** in view of earning a profit (Schumpeter, 1939).

Economists in the 17th and 18th century associated the image of entrepreneurs with the existence of free markets and availability of capital, the existence of innovation, taking risks and undertaking uncertainty in the present in hopes of obtaining future benefits that will reward the entrepreneur's effort and knowledge.

Society is a product of human action. Human action is guided by ideologies. Not one individual would advance their reasoning if they were subject to the necessity of starting all over again. Man can progress in thought only because his efforts are supported by those of past generations, who put together thinking instruments, concept and terminologies, and put forth the problems (Mises, 1921). Improvement of future conditions is only possible via actions carried out by individuals.

The contemporary economist that marked the 20th century called into question market transparency and changed the status of entrepreneurs, using Carl Menger's analysis in *Principles of Economics* (1876) as a point of reference. Their approach focused on various elements, either complementary, or different. The *Wieser – Hayek – Kirzner* group analysed knowledge, discovery and process, while the *Böhm-Bawerk – Mises – Rothbard* group focused on monetary calculation and the decision-making process under uncertainty conditions (Foss and Klein, 2012).

Entrepreneurship has a significant place in the literature of the Austrian School of Economics. This is the one that channels the inherent uncertainty of the market by identifying and creating opportunities. Mises (1921), Knight (1921), Hayek (1945) and Kirzner (1973) described the entrepreneur as a person holding a major place between large company strategies and aspects of public policy, whether it is in reference to supporting the activity of groups or promoting new companies that help reduce unemployment or encourage innovation (Boutillier and Uzunidis, 2014).

In the theory of entrepreneurship developed by Knight and Mises, the entrepreneur's primary role is exercising *judgment* on the use of productive resources under uncertain conditions (Knight, 1921; Mises, 1921). Their vision was not shared by Kirzner (1973), who believed the entrepreneur does not need resources or capital in order to carry out their activity (Kirzner, 1973; Rothbard, 1985). The *Austrian* entrepreneur is analysed in a free market context, where the principle directing individuals' activity is minimum resource use in hopes of achieving maximum benefits.

The vision of the followers of the Austrian School of Economics is not entirely homogeneous, yet the original ideas thereof are essentially common. The entrepreneur, the central figure within the market process, is the one providing the necessary framework for progress. The entrepreneurial activities they conduct under risk and uncertainty conditions can generate a profit (Mises, 1921; Knight, 1921; Hayek, 1945; Kirzner, 1973; Rothbard, 1985). The

identification and exploitation of opportunities are what makes the difference between entrepreneurs and the other individuals in a society (Foss and Klein, 2012).

The problem regarding the entrepreneur's ownership of capital has been approached from different directions. On the one hand, Kirzner asserts that entrepreneurs do not require capital to conduct their activities, as they are the ones who **identify opportunities** that already existed on the marketplace, but were ignored by other individuals (Kirzner, 1973; Klein, 2008; Foss and Klein, 2012). On the other hand, Mises and Rothbard argue that any entrepreneurial act is conditional upon the existence of resources and capital (Mises, 1921; Rothbard, 1974, 1985, 2001). If the economic actors do not own capital, they cannot invest and cannot make a profit. It is the market economy that galvanises and stimulates economic actors to invest/to find **untapped opportunities** in hopes of obtaining revenues (Kirzner, 1973; Rothbard, 1985, 1995, 2001; Klein, 2008; Foss and Klein, 2012).

Capitalism is defined by **risk** and **uncertainty**. The two elements incentivise the individuals acting on the market. The skills of an economic actor willing to invest or act on the market must include a capacity to anticipate and forecast, as well as risk-taking (Mises, 1921; Knight, 1921; Rothbard, 1985; Kirzner, 1973).

The view advanced by the Austrian School of Economics shows the entrepreneur as the main factor giving rise to evolution in the marketplace (Foss and Klein, 2012; Boutillier and Uzunidis, 2014). By means of their predisposition to risk, possession of **knowledge** and identification of **opportunities** to be exploited, entrepreneurs and the activities they conduct are set in a favourable light, the former being characters worthy of admiration for the visions they have.

The post-war period was marked by new trends in terms of economy and politics. This evolution has undoubtedly influenced individuals' perception of entrepreneurship and the role it plays in the contemporary society. The opinions adopted by economists after the 1970s – 1980s period were even more heterogeneous, yet they converge towards the same idea. Small and medium-sized enterprises have a central position in the analyses of modern theories of entrepreneurship (Rumelt, 2011; Foss and Klein, 2012; Boettke and Coyne, 2003; Hitt, Ireland and Hoskisson, 2005; Shane and Venkataraman, 2000). The management literature and *small business management* literature shaped several opinions worth subsequent study considering the current context.

A great part of the economic literature on entrepreneurship treats this topic as being the defining feature of a company and the implications of entrepreneurial activities that end after the *start-up phase* (Foss and Klein, 2012). The management literature has put equal sign between *entrepreneurship* and *creation of companies* or, generically speaking, of organisations. Although setting up a company is not necessarily connected to an entrepreneurial attitude,

the current strategic management labels this act as a *highly entrepreneurial way*, starting from the **premise of identifying new opportunities**, exercising judgement in the use of already existing resources and by introducing new products and processes. According to Coase's theory, the identification of new **opportunities** via purchases, transfer, diversification or reorientation constitutes a change of company limitations (Coase, 1974). The research in the field of management regarding entrepreneurship focused on identifying the features and skills of individuals or discovering profit opportunities. At the same time, these have neglected the manners in which such opportunities can be exploited by focusing on the cognitive and behavioural characteristics of individuals operating in companies. A parallel approach, i.e. *the entrepreneurial orientation literature*, states that identifying or discovering resources can only be achieved at the company level.

Management specialists concluded that entrepreneurship is tightly connected to the fundamental aspects of company strategy and organisation, not only to particular management problems within *small businesses*.

Starting from a review of the specialty literature on entrepreneurship, it is necessary to have a detailed analysis of the *causes* at the base of the activity conducted by entrepreneurs, namely **entrepreneurial opportunities**.

3. METHODOLOGY

3.1. Data collection

Mediated data collection techniques were employed in order to carry out the documentation process on the topic of **entrepreneurial opportunities**. Ten articles that were relevant to the addressed topic have been chosen from the specialty literature. The articles were obtained following a selection process applied to articles published in the international database *Web of Science – Clarivate Analytics*. The selection was carried out based on these keywords: *opportunity* (32,683 articles) and *entrepreneurial opportunity* (4,128 articles). As the search returned a very large number of results, we carried out a new sorting of the articles based on the number of citations (*highly cited*). The subsequent step in the article selection process entailed reading their abstract sections. In sorting the ten articles, we considered the author's/authors' expertise in the field, even if this criterion returned articles that were not exactly recent.

In order to analyse the articles resulting from the selection process, we employed documentary research and resorted to qualitative analysis.

3.2. Qualitative data analysis

In order to obtain results, the data was processed using the NVivo 12 Plus software. After inputting the 10 articles into the database, we determined a series of categories, themes and subthemes regarding entrepreneurial opportunities.

The final results were analysed, detailed and interpreted. For the purpose of organising the ideas presented in the analysed articles, we put together a synthesis thereof.

4. RESULTS AND DISCUSSIONS

Opportunity is one of the fundamental starting points in understanding and conducting the entrepreneurial process. The followers of various currents and schools of thought evidently generated vocal debates on the analysed topic. The opinions on defining *opportunity*, the forms it can take and the influencing factors are heterogeneous. Ultimately, we tried to define *entrepreneurial opportunity*, the forms it can take and its influencing factors based on the analysis of ten articles indexed in the Web of Science – Clarivate Analytics, selected per the research methodology.

4.1. Defining entrepreneurial opportunities

The definition of *entrepreneurial opportunities* is certainly subject to doctrinal influences stemming from the various currents or schools of thought of the authors that have addressed this topic.

Starting from Schumpeter (1942) and Kirzner (1973), *entrepreneurial opportunity* is, in fact, the chance/probability of intersecting with the needs or wishes of consumers in the marketplace, by using some *creative combinations* of resources, capable of generating added value compared to that of products/services existing on the market (Ardichvili, Cardozo and Ray, 2003). Kirzner continues the analysis of opportunities, stating that, in fact, *opportunities are arbitrage opportunities and nothing more* (Klein, 2008). There is an overt assumption of marketplace imperfections, as no arbitration actions could exist in a context of perfect competition.

Eckhardt and Shane (2003) and Mark Casson (2003) state, along the same lines as Shane and Venkataraman (2000), that entrepreneurial opportunities can be defined *as situations in which new goods, services, raw materials, markets and organizing methods can be introduced through the formation of new means, ends, or means-ends relationships*.

Dutta and Crossan (2005) see the opportunities of entrepreneurs as *a set of environmental conditions that lead to the introduction of one or more new products or services in the marketplace by an entrepreneur or by an entrepreneurial team through either an existing venture or a newly created one*.

Foss, Klein, Kor and Mahoney (2008) argue that entrepreneurial opportunities are certainly dominated by subjectivism, being influenced by the entrepreneur and the latter's ideas. Otherwise said, opportunities exist *only in the minds of the decision makers* (Klein, 2008). Put under the sign of subjectivism, one could assert that these are, in fact, decisions and results of the entrepreneurs' activities. To be able to enjoy the advantage, entrepreneurs can choose one of the action

directions: on the one hand, by means of *entrepreneurial alertness*, they will be able to react to opportunities that exist on the market, while on the other hand, by means of *judgement*, they can create new opportunities.

Starting from knowledge and the asymmetry thereof among individuals, we can conclude that knowledge is, in fact, the keystone of entrepreneurial opportunities (Hayek, 1945). Hayek's opinion, which is representative of the Austrian School of Economics, highlighted the ever-growing importance of the individual in the market process. In the context of human action and by means of the knowledge they possess, entrepreneurs become discoverers of entrepreneurial opportunities and ultimately beneficiaries of the entrepreneurial profit.

After studying the specialty literature, we can state that defining the concept of *entrepreneurial opportunity* was a topic of debate, based, as mentioned, on the differences in the currents and schools of thoughts of their respective authors.

4.2. Types of entrepreneurial opportunities

The difficulty in making a classification of the types of entrepreneurial opportunities originates in the lack of homogeneity in their definition, as well as that of their fundamental elements. Starting from the information provided by the specialty literature, we can determine various entrepreneurial opportunities, as well as more processes that these include.

Two major approaches to entrepreneurial opportunities can be identified in the specialty literature, starting from the views of Schumpeter, Kirzner, Knight, Hayek, etc. (Alvarez and Barney, 2013; Dutta and Crossan, 2005; Klein, 2008):

- **Discovered entrepreneurial opportunities** (*discovery opportunities*)

The discovery of entrepreneurial opportunities is associated with critical realism. These are generated by the changes in the technological field, the modifications in consumer preferences or changes in terms of demographics (Alvarez and Barney, 2013). The discovery of opportunities is connected to *entrepreneurial alertness*: if entrepreneurs do not possess this skill/capacity, they cannot obtain a profit as they will not conduct the entrepreneurial activity. Hmielinski also shares this idea, stating that entrepreneurial opportunities do not exist independent of the entrepreneur, *in the external world*. The indicated conditions generate risk at the entrepreneurial activity level, as the entrepreneur has to collect information on a potentially profit-generating decision and, to this end, he should build a strategy for exploiting and developing the opportunity (Hmielinski and Baron, 2008). Unlike Alvarez, Ardichvili, Cardozo and Ray, (2003) consider that *opportunities are made, not found*. Moreover, these are subject to a development process, the latency status being incompatible with achieving a profit (Ardichvili, Cardozo and Ray, 2003). Oviatt and McDougall

(2005) believe that opportunities are discovered by entrepreneurs, and this process is influenced by a series of factors, including *knowledge* and *networking*.

- **Created entrepreneurial opportunities** (*creation opportunities*)

The creation of entrepreneurial opportunities is not based on exogenous exchanges at the level of industries/sectors. This is the result of the entrepreneurs' creation, who are acting on the market in uncertainty conditions. This approach is associated with *evolutionary realism*, and Joseph Schumpeter's opinion is consistent with this direction. The Schumpeterian entrepreneur (Schumpeter, 1942) is guided by a *creative destruction*. Capitalism is by nature a system that generates change and, implicitly, cannot have a static dimension. The emergence of new goods, new production and distribution methods, new markets and new types of industrial organisation constitute the guiding and motor impulse for the capitalist system. This unique evolution is particular of the capitalist economy and dubbed *creative destruction*. In the context of a capitalist world, every company and every entrepreneur must adapt and innovate if they want to survive.

Hmielinski also approaches the matter of creating entrepreneurial opportunities and, in this context, states that *entrepreneurial opportunities do not exist independent of entrepreneur*. If this approach is adopted, then the presence of *uncertainty* is apparent in the entrepreneurial process, which renders the entrepreneur unable to collect information about a potentially profit-generating decision. Adaptation to market conditions is what makes the difference between entrepreneurial success and failure (Hmielinski and Baron, 2008).

Miller (2007), building on the idea advanced by Venkataraman and Sarasvathy (2001), discusses the existence of three entrepreneurial processes, considering three types of market processes. In this context we can talk about:

- **Opportunity recognition.** The opportunity recognition process is associated with economic neo-classicism and entails the entrepreneur using their knowledge of products and demand to exploit an opportunity that was not recognized by the other actors on the market.
- **Opportunity discovery** occurs either from knowledge of the supply and, subsequently, resorting to identification of unknown demand, or from knowledge of the demand that motivates the seeking of an unknown (potential) supply. The market opportunity can be exploited after gaining awareness of the missing piece for completing the transaction. The discovery of entrepreneurial opportunity is associated with the Austrian School of Economics.
- In **opportunity creation**, the entrepreneur is the one creating the demand and supply by means of entrepreneurial action.

Both the creation and discovery of entrepreneurial opportunities are conditional upon an imperfect competitive market. The fundamental vision on the nature of entrepreneurial knowledge is most certainly the criterion for

differentiating between the categories. The entrepreneur acts as arbitrator in both the opportunity recognition and creation process.

4.3. Factors influencing entrepreneurial opportunities

The literature studying entrepreneurship also touched on the factors influencing the emergence of entrepreneurial opportunities. In addition to the aforementioned types of opportunities, Eckhardt and Shane (2003) also propose another approach to identifying opportunities and determinant factors, considering three criteria:

- **Place of the change generating the opportunity.** The following categories of opportunities can be discerned based on this criterion:

- ✓ Opportunities emerging from the creation of new goods or services;
- ✓ Opportunities emerging from the discovery of new markets (*new geographical markets*);
- ✓ Opportunities developing from the creation or discovery of new raw materials;
- ✓ Opportunities developing from new production methods;
- ✓ Opportunities that are based on new organisation methods.

- **The source of opportunities** can be:

- ✓ Asymmetry of information existing on the market between operating actors;
- ✓ Difference between market demand and supply;
- ✓ Difference between increasing productivity and opportunity seeking (*rent-seeking*);
- ✓ Identification of change catalysts that lead to opportunities.

- **The initiators of change** can be:

- ✓ Entities specializing in knowledge *creation* (universities, research laboratories);
- ✓ Companies in the industrial sector (including suppliers and clients).

Even though the typology proposed by Eckhardt and Shane (2003) does not provide specific names for the types of opportunities thus identified, one must note the importance of this vision starting from the idea of trying to outline a background in theorising entrepreneurial opportunities, as well as their determinant factors: information asymmetry, differences between demand and supply, or differences in productivity.

Ardichvili, Cardozo and Ray (2003) identify five factors with a major impact on the process of recognising and developing entrepreneurial opportunities:

- *entrepreneurial alertness*;
- *information asymmetry and prior knowledge*;
- *the social network*;
- *the entrepreneur's creativity and self-efficacy*;
- *opportunity type*.

Entrepreneurial opportunities are undoubtedly influenced by the level of asymmetry in individuals' knowledge (Ardichvili, Cardozo and Ray, 2003; Eckhardt and Shane, 2003). Asymmetry provides the optimal framework for identifying or creating entrepreneurial opportunities, and creativity contributes to the competitive advantage that entrepreneurs manage to construct at the competitive level of the market process.

5. CONCLUSIONS

To this date the problem of entrepreneurial opportunities remains unsolved in the specialty literature, and this is largely due to the heterogeneous views of authors interested in this topic. As per the specialty literature, defining entrepreneurial opportunities is a subject of analysis for many authors, and whether they approach one view or another depends entirely on the perspective of each individual interested in this matter. It is difficult to identify the factors contributing to the emergence or discovery of entrepreneurial opportunities or creation, but their importance is pivotal for the entrepreneur's activity for the purpose of enabling the achievement of positive entrepreneurial results. Of the most important factors that impact entrepreneurial opportunities, a central part goes to the information asymmetry pertaining to each individual. They use their knowledge to gain easier access on the market, in their attempt to satisfy consumers' needs or wishes.

After conducting this research on entrepreneurial opportunities, we can conclude that the initially set objectives have been met: defining the concept, identifying the typology of entrepreneurial opportunities, as well as their influencing factors.

The limitations to this research reside in the volume of the analysed sample, and one of the future research directions entails a new and more complex analysis on entrepreneurial opportunities, using a larger number of articles subject to analysis as starting point.

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THE ATTRACTIVENESS OF THE REPUBLIC OF MOLDOVA FOR INTERNATIONAL FDI FLOWS IN A REGIONAL CONTEXT

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Abstract

Foreign direct investments are an important component contributing to the country's economic development and growth and the launch of its economy on the international market. The Republic of Moldova is the poorest country from the Eastern Europe and the less attractive country for foreign direct investment because of the slow process of opening the economy towards international market and international economy.

The purpose of the article is to outline the attractiveness of the Moldovan economy to the dynamics of foreign direct investment flows in the regional context. Therefore, this article represents a descriptive analysis of the factors that influence the attractiveness of the Republic of Moldova towards foreign direct investment flows relating to the dynamics of foreign direct investment flows during the period 1992-2017.

Against this background, it is important to mention the tax benefits that free economic zones offer to foreign investors and whether they contribute to a natural, fair and coherent economic development.

Keywords: *foreign direct investment; attractiveness; multinationals; factors.*

JEL Classification: F21, R10

1. INTRODUCTION

Foreign direct investments are an important way of linking the national economy to the international economy by encouraging opportunities for integrating local businesses into global chains. Thus, competition for foreign direct investments is steadily increasing across countries, which means that host countries need to implement the most effective strategies to attract and retain foreign direct investments, while also maximizing its contribution to development goals of the country.

The purpose of this article is to outline the attractiveness of the Republic of Moldova taking into consideration that is the poorest country in Eastern Europe

(Nag, 2017) and is attracting the fewest foreign direct investments (World Bank Group, 2019a).

At the moment, many foreign direct investments migrate from developed countries to developing or transition countries, which have the big potential to develop a favorable investment climate. Taking into consideration the factors that attract multinationals to invest outside of the mother country, not only the big market and the possibility of cost reduction are the determinants factors. In addition, there are a number of complementary factors that influence the final decision of the multinationals, especially since the countries' profile is very different from one region to another and offers different advantages to foreign investors. Making a retrospective of FDI theories, we can find the factors mentioned above in various forms. According to eclectic theory (Dunning, 2001), the factors that motivate multinationals to invest are found in the local advantages (L) offered by the host country. On the other hand, the factors that motivate foreign investors to implant abroad can be found in both the "provision of factors" and the "internal competition environment", but especially in the "links between branches" and the "governmental policies" (Porter, 1985). Thus, the starting point to create an overview of a country's FDI attractiveness is to identify the local factors that motivate multinationals to invest abroad.

Pentagiotis Pegkas (2015) realized a study analyzing the relationship between economic growth and FDI on the example of EU countries. The result was a positive one, with FDI having a significant role in economic growth in the euro area due to macroeconomic stability.

Thus, we can deduce that a country's attractiveness for foreign direct investment is also measured by an analysis of macroeconomic factors affecting the investment climate. In order to determine the investment climate in the Republic of Moldova, we should make a rigid analysis of the most important factors that directly or indirectly influence the economy of the country.

The PESTEL analysis, in its current form, mainly provides a general idea of the macroeconomic conditions of a country (Yüksel, 2012). According to Yüksel, the macroeconomic environment consists of 6 main dimensions: the political environment, the economic environment, the social environment, the technological environment, the environment and the legal framework.

On the other hand, according to (Kreutzer, 2006), multinationals focus on the first four segments in the analysis of the country in which they are going to invest following the PEST analysis: the political environment, the economic environment, the social environment and the technological environment.

2. RESEARCH METODOLOGY AND DATA COLLECTION

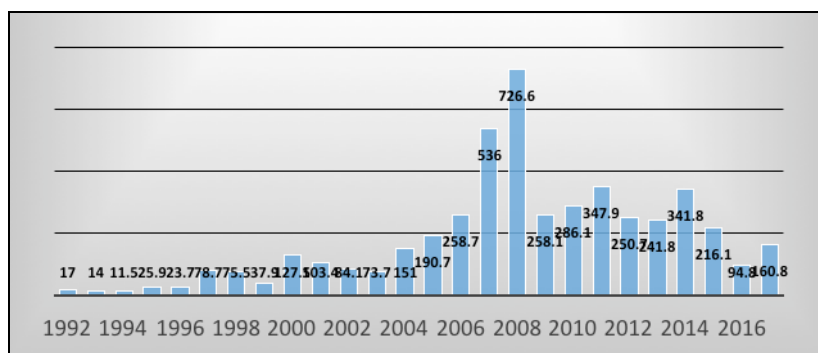
This article is a descriptive analysis of the investment climate in the Republic of Moldova which creates an overview of the country's attractiveness for foreign direct investment.

In the first phase, we will collect the statistical data on the foreign direct investment flows since the independence of the Republic of Moldova from 1992 to present, in order to observe the dynamics of the FDI flows. Then, we will collect the data on the political, economic, social and technological factors which are influencing the investment climate in the Republic of Moldova in order to make a PEST analysis.

After interpreting the data, we will formulate the final conclusions to determine the degree of attractiveness of the Moldovan economy and the factors that are influencing the most the investment climate in the Republic of Moldova.

In Figure 1, can be observed the dynamics of the inflows of foreign direct investment flows in the Republic of Moldova from 1992 to 2017, data collected from the World Bank Group databases, Foreign direct investment. We chose to collect these data from the specialized World Bank Group website because the statistics of the National Institute of Statistics, the databases of the National Bank of Moldova and the Ministry of Economy and Infrastructure of the Republic of Moldova do not correspond to certain years.

Figure 1. FDI flows 1992-2017 (mln. USD)



Source: the authors, data collected from World Bank Group (2019a)

Referring to analysis of the investment climate in the Republic of Moldova, we will use the PEST analysis, analyzing in this way 4 factors from the political, economic, social and technological environment of the Republic of Moldova, which can affect the attractiveness of the Republic of Moldova for the foreign direct investments (Table 1 and Table 2).

Table 1. List of PEST analysis factors

| Politic factors | Economic factors |
|-----------------------|------------------------|
| Quality of government | Ease of doing business |
| Corruption index | Inflation rata |
| Judicial independence | Unemployment rate |

| Politic factors | Economic factors |
|------------------------|--------------------------------|
| Property rights | Fiscal system |
| Social factors | Technological factors |
| Demographic situation | R&D expenditure |
| Qualified workforce | Quality of research institutes |
| Educational system | Innovation capacity |
| Medical system | Internet users |

Source: the authors, data collected from World Economic Forum (2018)

Table 2. PEST analysis for Republic of Moldova

| Politic Environment | | | | |
|--------------------------------|---|-------|-------|----------|
| Nr. | FACTORS | Value | Score | Rank/140 |
| 1 | Quality of government (1-7 p.) | 3.1 | 34.8 | 98 |
| 2 | Corruption index (1-100 p.) | 31 | 31 | 102 |
| 3 | Judicial independence (1-7 p.) | 2.3 | 21.2 | 130 |
| 4 | Property rights (1-7 p.) | 3.6 | 43.8 | 116 |
| Economic Environment | | | | |
| 1 | Ease of doing business (1-100 p.) | 73.54 | 73.54 | 44 |
| 2 | Inflation rate (%) | 3.2 | - | - |
| 3 | Unemployment rate (%) | 4.1 | - | - |
| 4 | Fiscal system | 3.1 | 45.6 | 128 |
| Social Environment | | | | |
| 1 | Demographic situation (1-100 p.) | 23.7 | 59.1 | 71 |
| 2 | Qualified workforce (1-7 p.) | 3.2 | 35.9 | 135 |
| 3 | Educational system (1-100 p.) | 11.6 | 64.6 | 107 |
| 4 | Medical system (1-100 p.) | 63.3 | 72.7 | 91 |
| Technologic Environment | | | | |
| 1 | R&D expenditure (1-7 p.) | 0.4 | 12.3 | 77 |
| 2 | Quality of research institutes (1-7 p.) | 0 | 0.4 | 106 |
| 3 | Innovation capacity | 2.6 | 30.2 | 105 |
| 4 | Internet users (% population) | 71.0 | 71.0 | 52 |

Source: the authors, data collected from World Economic Forum (2018)

3. DATA INTERPRETATION

Figure 1 shows the evolution of foreign direct investment flows from 1992 to 2017. Until 2000, there was a slight increase in foreign direct investment, however quite insignificant for 8 years, moreover the process of opening the country's economy to the the foreign was rather slow. For eight years, the volume of foreign direct investment increased from 17 million USD in 1992 to 127 million USD in 2000. Over the next eight years, the situation has changed altogether, the Republic of Moldova managing to attract more foreign investors

and the volume of foreign direct investment increased 8 times in 2008 compared to 2008, reaching more than 700 million USD.

However, due to the financial crisis in 2009, foreign direct investment fell about 3 times in 2009 compared to 2008. However, the Republic of Moldova registered a positive development of FDI flows in the coming years, but due to the political problems, foreign investor trust has fallen, and FDI flows have not kept steady growth so far. Basically, the level of FDI inflows reached about the level of 2000, which shows a low trust of foreign investors.

In the Figure 1, as we can observe, the inflows of FDI to Moldovans economy was rather unstable than uniform from 1992 until present. This is due to several political and economic events that have destabilized or recovered the country's economy and attractiveness. First of all, is the global economic crisis which affected negatively the inflows of FDI in 2009. Nevertheless, the fall of communism, was a positive influence on country's economy and allowed the possibility to maintain some foreign investors. In 2014, Republic of Moldova have signed the association agreement with the EU which increased the country attractiveness for foreign investors. However, the theft of the billion from the National Bank decreased the country attractiveness for foreign investors in 2015 and later.

Due to the very low level of foreign direct investments attracted by 2000, several Free Economic Zones (The Ministry of Economy and Infrastructure of the Republic of Moldova, 2019) were created on the territory of the Republic of Moldova and they were created with the purpose of accelerating the socio-economic development of certain territories of the country with a greater potential to attract foreign direct investment. These Free Economic Zones aim to attract, in addition to foreign direct investment, domestic investments, by offering tax incentives, export facilities for goods produced on the territory of the Republic of Moldova, and tax incentives at the start of the business as well as during its operation.

Thus, in order to create an overview of the attractiveness of the Republic of Moldova and the functionality of the free economic zones on its territory, we will analyze a series of macroeconomic factors to identify the strengths and weaknesses of the Republic of Moldova.

Political factors are quite important in attracting foreign direct investment. Low trust in public institutions has always been the biggest constraint for attracting FDI to the Republic of Moldova. According to the Global Competitiveness Report 2017-2018, the most important factor for doing business is directly related to public governance and institutions, namely the quality of governance. Moldova ranks 98th out of 140 countries and scores 3.1 points out of a maximum of 7 points in terms of quality of governance. The main causes of this bottom-up score are: instability and political crisis, inefficient government bureaucracy, very low processing speeds combined with high corruption.

Corruption is a critical issue that significantly reduces the investment attractiveness of any country. The Republic of Moldova recorded a score of 31 points in terms of the corruption perception index in 2017 and ranked 102 out of 140 countries in the world according to the registered scores. According to Transparency International, the level of corruption in the Republic of Moldova is as high as in poorly developed countries in Asia such as Azerbaijan, Tajikistan and so on and recorded a much lower score than European countries such as Macedonia, Serbia, Bulgaria and so on which registered a score of over 40 points in the global competitiveness report by the world economic forum.

Legal framework is a very important factor in the field of institutional transparency and FDI attraction. The Republic of Moldova regrettably scores 2.3 points, ranking 130 out of 140 countries according to the global competitiveness report 2018. Legal framework includes several indices such as: judicial independence, property rights, and government involvement. The Republic of Moldova has laws that protect all property rights, even there is a system of registration of property titles and mortgages. However, the judiciary remains weak and does not always guarantee the rights of citizens and foreign investors.

Respect for property rights is another very important indicator, which unfortunately scores a fairly low score of 3.6 from 7, so that Moldova ranks 116th out of 140 countries analyzed in 2018 by the world economy forum in the global competitiveness report.

Ease of doing business is a factor that positively influences the image of the investment climate of the Republic of Moldova, which occupies the 44th place in 140 countries, according to the global competitiveness report of the world economic forum. Ease of doing business is a fairly comprehensive factor that is divided into a series of sub-factors such as property registration time, access to utilities, rental of premises, building permits and so on, all procedures being fairly easy and does not require a long time.

The inflation rate is quite good, at 2.9% in 2017, which means that the purchasing power of the national currency has increased. On the other hand, the unemployment rate is 4.1% in 2017, a good enough score, which means that most of the population is in the labor market, irrespective of the level of salary.

Regarding the tax system, the government has created a series of tax incentives for potential investors to attract investment in the country's free economic zones. Tax incentives are limited to corporation tax, VAT, and low social security contributions compared to countries in the region.

From a demographic point of view, the resident population of the Republic of Moldova is currently about 3.55 million people. However, according to the 2017 census, the population of the Republic of Moldova is about 2.5 million people, which shows us a very high emigration rate. And at this chapter, the Republic of Moldova is bad enough, registering a score of 23 points in 100 and

thus, ranking 71 out of 140 countries in the world according to the global competitiveness report of the world economic forum in 2018.

Regarding the qualification of the labor force, the Republic of Moldova is doing quite bad, ranking 135th out of 140 countries, registering a score of 3.2 from 7 according to the global economic competitiveness report in 2018. Most of the population of the Republic of Moldova is qualified in certain industries that functioned during Soviet Union such as the automotive industry, the textile industry, the agrarian field and, but on the other hand is doing quite well in the IT industry.

The lack of skilled labor is due to the poor educational system. Most high school or college graduates migrate to neighboring countries such as Romania, Ukraine or Russia to pursue higher education at one of the universities outside the country. Moreover, many high school graduates choose to engage directly after graduating high school without attending higher education.

Even though the Republic of Moldova ranks 91th out of the 140 countries surveyed in the global competitiveness study by the world economic forum, the medical system is underdeveloped due to the lack of modern technology and devices in hospitals and state medicine universities. The only advantage is the presence of private medical institutions.

The technology environment is very important for attracting foreign direct investment. A big disadvantage is low spending on R&D, with a very low score in the Republic of Moldova being 0.4 points out of 7 compared to the other 140 countries. Also, the quality of research institutions is a drawback, with the Republic of Moldova ranked the 106th out of 140 countries. Innovation capacity also has a very low score of 2.6 points out of 7, with the Republic of Moldova ranked 105 out of 140 countries. The very low innovation capacity is due to a lack of skilled labor migrating outside the country.

A very important aspect is the effect of globalization, which requires increasing the transfer of knowledge. Thus, in 2013, the government launched the “Moldova Digital 2020” Development Strategy, which provides for the Internet provision of all localities. Currently, 71% of the country’s population uses the Internet. Moreover, Moldova is ranked 6th in the world after the speed of access to Internet resources, which has an advantage in attracting and developing new technologies.

4. CONCLUSIONS

A potential host country for foreign direct investments will be more attractive if the resulting goods may be exported to a regional dynamic market. An ideal country for multinational companies’ investments is that country, which at the same time offers a sufficient large local market and a launch bridge on the regional market. This means that the ideal location for investments must

meet both needs to the horizontal strategies of the multinational companies, as well as vertical strategies.

Republic of Moldova is a country that has attracted a small volume of foreign direct investments since 1992 and until now. This is due to the transition period it goes through, but also to the lack of a strategy regarding the field of foreign direct investments.

Moreover, multinationals choose to invest in countries where they can find political and economic stability, a favorable social environment and a high level of technology to develop a long-term business.

Political factors have always been decisive in determining the attractiveness of a country for foreign direct investment. The lack of attractiveness of the investment climate in the Republic of Moldova is due to low government transparency, high corruption and bureaucracy, and low judicial independence.

There are also a number of economic sub-factors that influence the decision of multinationals to invest outside. According to the PEST analysis of the Republic of Moldova, the tax advantages in the free economic zones and the high level of ease of doing business represent the main advantages offered by the Republic of Moldova to foreign investors.

The social environment is not an advantage for foreign investors because the level of education and the medical system of the country are poorly developed. The country's population is not evenly distributed but is concentrated in the large urban centers, and the most part of qualified workforce from Republic of Moldova are migrating to developed countries around the world.

In conclusion, we can affirm that the Republic of Moldova is one of the less attractive country in Europe because it doesn't have a strategy in terms of attracting FDI. In addition, the most important factors to be considered are the political factors that negatively influence the image of the investment climate in the Republic of Moldova.

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THE VALUE RELEVANCE OF CASHFLOWS AND EARNINGS IN THE CONTEXT OF GLOBAL FINANCIAL CRISIS

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Abstract

Financial crises represent an important economic phenomenon which can be determined by a major panic in the financial market as a result by the existence of some differences between fundamental value, obtained from the financial statements and the market value. In the current economic context, investors are interested to find an efficient solution to assess corporate financial stability, in order to cover the risk of losses during the financial crises. The present study aims to determine the impact of the operational cash flow, net cash flow and earnings over the stock prices before and after the global financial crisis which occurred in 2008. The period took into consideration is divided in different phases of financial crisis. Starting from these phases, the present study tested the value relevance of cash flows and earnings on investors' decision. The phases were divided in: Pre-Crisis Phase (2006-2008) and Post-Crisis Phase (2009-2011). The main results of this study reveals that operational cash flow and net cash flow can be used as an alternative instrument in order to help investors in the decision-making process. Moreover, starting from the premise that financial results are manipulated during the global financial crisis, the study concluded that cash flows are more superior in explaining the variation of the stock price than earnings. Taking into consideration the external factors that can influence the effects of the global financial crisis, the study concluded that cash flows are statistically significant in both Phases of the financial crisis.

Keywords: *value relevance; global financial crisis; cash flows; earnings.*

JEL Classification: C58, G14, M41

1. INTRODUCTION

Financial markets represent for many companies an important source of external financing, due to its capacity to facilitate the link between the listed companies and potential investors. On the basis of supply and demand of

securities, the price level that corresponds to a company may vary, becoming overvalued or undervalued depending on two main factors: the way in which the markets behave and the fundamental value presented through the financial statements. With the aim of diversification of the investment portfolio, investors are looking for long-term investments materialized in a portfolio of shares or debt securities with the purpose of increasing the potential return. The market, being influenced by the behavior of the participants, it can record temporary decreases, which can be recovered by investors using specific financial instruments in order to recover the losses related to the long term portfolio.

IASB (2018) is regulating the activity of the financial reporting of listed companies and not only, and specifies that financial statements represents a set of financial documents which must meet two fundamental characteristics: value-relevance and exact representation. The relevance of financial information can be analyzed by the correlations established between the stock market price and the company's financial performance and position. This correlation presents interest for investors, because on this basis they can establish their investment decisions. Also, the relevance of the financial information can play a decisive role in the time at which the market is in a financial crisis. Earnings are an element which can be easily influenced by the management of the company by the recognition of some revenues, which may result in a net profit being increased, while the cash flows show the difference between the receipts and payments made by the company, being an indicator of the solvency of the company.

The financial crisis means for investors a subject of interest on the basis of which they wish to reduce the exposure on certain assets of risk. The financial crisis can be presented in different forms such as: currency crisis, speculative bubbles, etc. Spyrou (2011) started from the premise that the high volatility of stock prices related to the listed companies is influenced by the emergence of unexpected news with significant degree. The results of the study have concluded that the predictability of these events can be analyzed by the abnormal movements manifested through the national indices of the market. Bepari, Rahman and Mollik (2012) analyzed the operational cash flow' influence over the stock market price during the financial crisis. Their analysis was focused on the determination of the existence or absence of a further explanations on the changes which occur in the stock market prices on the basis of the cash flow' influence on the market in Australia. The results of the study have concluded that earnings and operational cash flow affect the stock market price, but the superiority in terms of explanation for the changes in the price structure is represented by the earnings.

Starting from the model applied by Bepari, Rahman and Mollik (2012) in the analysis of the operational cash flow' influence, the study proposes the analysis of listed companies on the Bucharest Stock Exchange in the period

2006-2008 (Phase I) and 2009-2011 (Phase II). The variables used are represented by the earnings per share, operational cash flow per share and net cash flow per share, return on equity, return on assets and total assets turnover, taken from the annual statements of the listed companies. The stock market prices used in this study is represented by the close stock market prices at the end of the fiscal year. The purpose of this study is to analyze the influence of the operational cash flow and net cash flow on the stock market price, in order to determine its value relevance as an alternative decision instrument during the pre-crisis and post-crisis phases. Moreover, the study will analyze the influence of both cash flows and earnings over the stock price using elements from the financial statements, in order to present the differences between companies in terms of financial crisis' effects.

This study is divided in five main chapters: The first chapter presents the research problematic, the second chapter wants to introduce the reader in the value-relevance concepts and how a financial crisis can be identify and how it can affect the market. The third chapter presents the research methodology, including data about population and the presentation about the econometric models built in order to validate the study hypotheses. The last two chapters presents the results of the study and the conclusion.

2. LITERATURE REVIEW

The present chapter of the study wants to present the literature review of the value relevance concept and how it can be measured. The financial crisis presented as an important economic event will be presented in the second part of this chapter. The last part is reserved to the development of the main hypothesis of the study.

2.1. The Value Relevance Concept

In the current economic context, characterized by instability and exposure to the risk, investors are searching for financial instruments which can measure the relevance of financial information. The analysis of the investors start by defining the two values: the market value and the fundamental value of the securities. The market value of an instrument represents the value determined by market forces through the supply and demand, while the fundamental value is the value established on the basis of reliable information. The investors with the aim of raising their capital, invest their capital in securities such as: shares and bonds. Devika and Poornima (2015) define the fundamental value of a stock as a value of the present cash flows generated by the company adjusted according to the risk concerned interest rate. In the case of the share and bonds, the fundamental value can be determined at the time of publication of the annual financial statements.

The financial statements reported by the companies represents a set of documents showing the situation of the assets, liabilities, equity, earnings and cash flows. IASB (2018) presents the characteristics of the financial statements which a listed company must satisfy them: fundamental characteristics and amplification characteristics. The fundamental characteristics of the financial statements are represented by: value-relevance and exact representation (Toma, 2018).

With the aim of taking decisions as more favorable to the investor, financial information must be relevant. Barth, Beaver and Landsman (2001) and Barth, Li and McClure (2017) define the term “value-relevance” as the character of a financial information to influence the decision-making process of investors. Financial information is relevant through its capacity to influence the price of an instrument. Therefore, for the measurement of the value-relevance, Hellstrom (2006) reduces its valuation in two perspectives. The first perspective is represented by the stage of presentation, in which the information is evaluated by their ability to create an impact in the market at the time of publication of specific information. The relation between the financial information and stock market price can be explained and supported by the theory of efficient markets. Therefore, the theory of efficient markets presents the way the financial assets reacts to the various news which appears in the market. Starting from this assumption, Basu (1997) has examined the impact of the news on the stock market price and divided them in good news and bad news. The results of the study have concluded that the negative news have a higher impact with two to six times compared to the positive news. Therefore, it can be concluded that the investors are more hesitating in investing in an asset which received a negative news than an asset which presented a positive news.

Robu and Dănilă (2018) have analyzed the behavior of investors in the moment of publication of the financial statements and the manner in which the cryptocurrency Bitcoin could be used as a tool for “hedging” in order the cover the losses of the long-term portfolio. The variables used in order to determine the influence over the stock price were represented by the return on equity, return on assets and financial leverage. The results of the study have confirmed the hypothesis according to which the financial instrument Bitcoin can be used as a hedging instrument to cover the losses, when the new information appearing in the market are negative from the point of view of the investors. The second perspective referred to the stage of measurement, which is assessed by the correlation between the analyzed element and stock market price.

For the assessment of the performance of a company, investors are interested in the earnings obtained by a company in a financial year. But, due to his manipulation character, through the employment of a larger expenses with the purpose of diminishing corporate tax or to the increase of revenues to provide a better view of the company, the study believes that earnings can be

influenced by the management of the company. On the other hand, another tool of interest to shareholders is represented by net cash flow generated as the difference between the total receipts and total payments made by the company.

2.2. Delimitation between cash flow and earnings

The companies shall report the cash flow statement through the annual financial statements. Preparation thereof shall be carried out in accordance with the regulations in force (IASB, 2018). The literature divides the cash flows into three major categories: operational cash flow, investment cash flow and financing cash flow (Toma, 2018). Cash flow generated from operating activity is the difference between the receipts and payments made by the company in order to support their main activity and it is also presented in literature as the operational cash flow. Cash flow from investment represents the difference between the receipts and payments relating to the investment policy of the company which affects the purchase of new technologies to increase production or with the aim of making certain processes more efficient, while the cash flow from financing offers a view of the receipts from the credits contracted by the company and the level of payments arising from them. Also, Nour (2012) mentions that the cash flow analysis provides to the investors a view on the cycle of the inputs and outputs of cash. This analysis presents the company's ability to generate enough cash in order to continue its main activity and to pay the investors for their capital through dividends. Net cash flow that shows the difference between the total amount of receipts and payments represents the liquidity of the company at a specific moment. Also, the surplus resulted can be used in various investments, while the value of negative net cash flow indicates that a company should aim of seizing the activity or to contract short-term loans in order to cover the deficit. Using cash flow statements in conjunction with other components' of the financial statements, the investor can identify the changes which occurred in the net assets of an enterprise, the changes in the financial structure, its liquidity and solvency character and must important its timing of cash flow in order to adapt to the new circumstances which appear in the market at a specific moment (Nour, 2012). The earnings generated by a company represents the difference between the level of overall revenue and the total expenditure, which will be deducted from the corporate tax.

Akbar, Shah and Stark (2011) presents the importance of cash flow in relation to the earnings obtained by a company in two main aspects. The first aspect refers to the superiority of cash flow with the aim to forecast the future cash flow. As a result of a study on the companies in the United States, Barth, Beaver and Landsman (2001) have demonstrated the superiority of operational cash flow in relation to the earnings obtained by the companies with the aim of forecasting the cash flow. On the other hand, Subramanyam and Venkatachalam (2007), support the hypothesis according to which the temporary horizon of

forecasting the future cash flow from operating activity is relatively short and, therefore, we cannot determine exactly the superiority of cash flow in relation to the earnings obtained by companies in order to express a valuation base. The second aspect refers to the correlation established between the cash flows and other specific variables, analyzed directly on the stock market price, seen as a dependent variable Akbar, Shah and Stark (2011). The superiority of each variable analyzed being determined using the R-Square, the statistical indicator which explains the variation of each independent variable over the dependent variable.

The earnings obtained by the companies reflected through the net profit is an indicator of their performance, but this indicator represents a basis for the calculation of the managerial incentives. Therefore, earnings obtained by the company may be the subject of managerial manipulations with the aim of providing a better image for investors. Healy and Wahlen (1999) defines the concept of “earnings management” as a situation in which the managers influence the financial information deliberately with the purpose to provide misleading information to the investors and creditors of the company.

The difference between cash flows and earnings is represented by the effective cash-in of actual income. Bepari, Rahman and Mollik (2012) present as a major difference between these two elements the opportunity to determine the changes in the field of financial performance in case of earnings, while the cash flows present a limitation through the failure of presenting the total usefulness of expenditure and revenues.

2.3. The concept of financial crisis and their implication over the financial information

The financial crisis of 2008 had numerous effects on the global economy, in particular through the impact over the listed companies (Belesis, Sorros and Karagiorgos, 2016). The first “symptoms” of the financial crisis occurred in 2007, when the price of real estates have reached a historical record, followed by a sudden drop in price. The effects produced by the fall in the price of real estate were expanded on economy, generating panic at the global level. The most affected by these effects have been insurance companies and investment banks. Also, the automotive sector has been affected, the companies being in the situation to ask the US Government different fiscal and political actions in order to avoid the bankruptcy. Romania has been affected by the financial crisis through the reduction of the gross domestic product by 2.6% in the first quarter of the year 2009. Therefore, the crisis severely affected the industrial sector, in which big companies with subsidiaries in Romania have recorded significant losses and were forced to reduce their activity. The national currency has recorded a fall against the main major foreign currencies such as: Euro and

USD, having an impact over the companies and population with loans expressed in foreign currencies.

Robu and Istrate (2014) have examined the influence of the specific elements of the financial position and performance over stock market price. The time period analyzed was bounded as follows: the pre-crisis period (2005-2007), Phase I of the crisis (2008-2009) and Phase II of the crisis (2010-2011). The results of the study have shown that in the pre-crisis period the correlation between the stock market price and net book value has fallen due to the losses reported by the capital market, compared to the Phases I and II. Also, the cash flow recorded during the post-crisis phase a fall in its value.

The overall situation affected by the financial crisis also refers to the quotations of the main currency pairs. The source of the financial crisis of 2008 has its origin in the United States and which has continued in the following year at the European level. In this case, the main currencies such as: USD, EURO, GBP, NOK, SEK, CZK, etc. have recorded extreme volatility with effects over the European economies, but also on the companies and the population with loans in foreign currencies. Also, the investors in the pre-crisis period have undertaken positions of purchase and/or sale of certain securities (and derivative products) with the aim of reducing the risk. Taking advantage of the major difference between the fundamental value of different shares and their market value, they generated a higher level of the income. But, after the liquidation of such securities, investors have sought new opportunities in the market, having in the same time a high level of liquidity.

Chang, Benson and Faff (2016) have examined the impact of holdings excessive liquidity on the value of the companies. The companies have been analyzed in relation to the level of their financial restrains toward its creditors. The results of the study have validated the hypothesis according to which the high level of liquidity holding is beneficial to the indebted companies. Therefore, on the basis of this result we can say that the companies which have excessive liquidity, being dependent on the creditors will feel the effects of the crisis as low as they will not be interested in foreign financing. While the companies which have excessive liquidity, but is not dependent on the creditors, will need foreign financing that will be acquired during the crisis, thus increasing the cost of debt burden.

2.4. The development of research hypothesis

In the current economic context, characterized by uncertainty, a question raises in the context of developing of a financial instrument through which investors can make investment decisions. During the crisis, the financial results can be manipulated by the managers in order to attract new investors and to comply with the certain criteria established by the creditors. Therefore, starting

from the manipulation character of the earnings reported, this study aims to validate the following hypotheses:

H₁: Net cash flow and operational cash flow can be used as an alternative instrument of decision-making process;

H₂: Net cash flow and operational cash flow presents an additional explanatory power and it is superior than earning's explanatory power;

H₃: During the global financial crisis, taking into consideration the external factors of a company, both cash flow categories are statistically significant.

3. RESEARCH METHODOLOGY

The present study proposes to examine the value-relevance of financial information throughout the financial crisis since 2008, starting from the determination of the correlations between independent variables earnings, operational cash flow and net cash flow and the dependent variable represented by the stock market price. Starting from the econometrical model, the study aims to determine the superior variable that influence the stock market price, as well as the influence of earnings, operational cash flow and net cash flow under the control of specific variables to financial position and performance.

3.1. The estimation of financial information influence over the stock price

The relevance of the financial information represents for the academic environment a starting point in order to provide an answer in the analysis of the position and financial performance of the company. Therefore, among the most representative models for the analysis of the value-relevance, we can mention the Olhson Model (1995).

$$P_t = \beta_0 + \beta_1 ANCPSt + \beta_2 EPS_t + \varepsilon_t \quad (1)$$

The variables presented in the model are:

P_t – the stock price at the half of the fiscal year $t+1$;

$ANCPSt$ – book value per share at the end of the year t ;

EPS_t – earning per share at the end of the fiscal year t ;

$\beta_{i=0,...,2}$ – regression coefficients;

ε_t – error, random variable.

The value relevance is measured by using R square (R^2), where elements such as earnings per share and book value per share are measured in order to explain the changes in the stock price.

Bepari, Rahman and Mollik (2012) analyzed the superiority of the operational cash flow with the aim of explaining the changes occurring at the level of the stock price of listed companies on the stock market in Australia. The

results of the study have concluded that the relevance of earnings increases during the financial crisis towards the operational cash flow.

$$P_t = \alpha_{it} + \beta_1 BV_{it} + \beta_2 CFO_{it} + \beta_3 E_{it} + \beta_4 CF + \beta_5 CF * BV_{it} + \beta_6 CP * E_{it} + \beta_7 CP * CFO_{it} + \varepsilon_t \quad (2)$$

3.2. Population, sample and data source

This section wants to present details about the population selected, as well as the criteria that were taken as a basis for the formation of the sample. Also, this section presents the variables which will be analyzed and the econometrical models used for the validation of the hypotheses.

3.2.1. Data about sample

The selected population is represented by the companies listed on the Bucharest Stock Exchange, component companies of the national index BET at the level of the year 2008. From the total population of 10 companies were excluded those which activates in the banking system, as well as companies whose financial situation and the stock market price was not available. Therefore, from the total population a sample of 6 companies was selected. The financial data analyzed in the study were taken from the financial statements of the companies between 2006 and 2011. The elements which have shown interest for the study are: Turnover, The Total Assets, Net Cash flow, Operational Cash flow, Total Equity, Operational Income and the Net Income. The stock market prices of the companies have been taken from the site www.investing.com, more precisely, the closing price at 31.12. Data and the econometrical models have been processed within the Statistical Program SPSS 22.0.

3.2.2. The econometrical models used in the research

The present study proposes in order to validate the main hypotheses, a series of specific variables, which describes the financial position and performance of a company that can be affected by the global financial crisis. Therefore, starting from Bepari, Rahman and Mollik (2012), the study has conducted a test over four econometric models. The variables which were taken into consideration are: the stock market price at the end of the fiscal year (31.12), net income per share, operational cash flow per share, net cash flow per share, total assets turnover in order to present the difference between the two periods in terms of assets use which maximize the total turnover, return on equity, return on assets and book value per share. In order to determine the usefulness of cash flow in the decision making-process, the study presents the model (3), which analyzes the influence of book value, operational cash flow and net cash flow over the stock market price. If the coefficient β_2 and β_3 are

statistically significant, the cashflows are relevant and can be used as an alternative instrument for investment decisions.

Moreover, the influence of cash flow as an additional explanatory variable is tested using model nr. 3 and model nr. 4. Therefore, operational cash flow and net cash flow are excluded from model nr. 4. In this case, if model nr. 3 will have a higher explanatory power towards model nr. 4, the study will conclude that cash flow create for investors an additional explanation for price movement. The conclusion will be made based on *R-square* results. Another test conducted by the study is represented by the superiority of cash flow over the earnings obtained by the company. Model nr. 4 and model nr. 5 presents the how much of variation in the price structure is explained by the book value per share, net income per share, net cash flow per share and operational cash flow per share. The variable book value per share is present in both models and any difference in terms of variation represents the relative explanatory power. Model nr. 6 is analyzed in order to determine the impact of the global financial crisis in the pre-crisis Phase and post-crisis Phase.

Model 3:

$$P_t = \beta_0 + \beta_1 BV_t + \beta_2 CFO_t + \beta_3 NCF_t + \beta_4 NI_t + \varepsilon_t \quad (3)$$

Model 4:

$$P_t = \beta_0 + \beta_1 BV_t + \beta_2 NI_t + \varepsilon_t \quad (4)$$

Model 5:

$$P_t = \beta_0 + \beta_1 BV_t + \beta_2 CFO_t + \beta_3 NCF_t + \varepsilon_t \quad (5)$$

Model 6:

$$P_t = \beta_0 + \beta_1 BV_t + \beta_2 CFO_t + \beta_3 NCF_t + \beta_4 ROE + \beta_5 ROA + \beta_6 ATT_t + \varepsilon_t \quad (6)$$

Where:

P_t – represents the stock market price at the end of the fiscal year;

BV_t – represents the book value per share at the moment T;

CFO_t – represents the operational cashflow at the moment T;

NCF_t – represents the net cashflow at the moment T;

NI_t – represents the net income at the moment T;

ATT_t – represents the total assets turnover at the moment T;

ROE – return on equity;

ROA – return on assets;

$\beta_{i=0,...,3}$ – represents the regression coefficients;

ε_t – error random variable.

4. RESULTS AND DISCUSSIONS

Starting from the main hypotheses, the present study aims to demonstrate the usefulness of cash flows as an alternative instrument for helping investors in

the decision-making processes during global financial crisis. Also, the study starts from the premise that earnings could be manipulated during such global events in order to attract new investors or to become eligible for an investment loan. Moreover, the superiority between cash flows and earnings would be tested using regression methods. In the last part, we will discuss the influence of global financial markets over the cash flows and earnings, using simultaneously specific variables in order to control the external factors.

4.1. Descriptive statistics

The results of descriptive statistics are presented in Table 1, where the study presents the mean of each variable used in the econometrical models. Based on the results presented in the table, the differences between these two periods are significant. The closing price drop in Phase II with 44.32%. Return of equity, a financial indicator which presents the ability of a company to distribute dividends to its shareholders is recording negative values, caused by a decrease in net income structure. The efficient use of total assets decreases in Phase II, compared to Phase I due to the decrease in the operating income results.

Table 1. Descriptive statistics

| 2006-2008 (Phase I) | | | | 2009-2011 (Phase II) | | | |
|---------------------|------|----------------|----|----------------------|-------|----------------|----|
| | Mean | Std. Deviation | N | | Mean | Std. Deviation | N |
| P 31.12 | 5.46 | 11.68 | 18 | P 31.12 | 3.04 | 6.43 | 18 |
| ROE | 0.09 | 0.10 | 18 | ROE | -0.17 | 1.35 | 18 |
| ROA | 0.07 | 0.05 | 18 | ROA | 0.04 | 0.05 | 18 |
| NI/ Share | 0.30 | 0.89 | 18 | NI/ Share | 0.09 | 0.29 | 18 |
| NCF/ Share | 0.12 | 1.08 | 18 | NCF/ Share | 0.05 | 0.60 | 18 |
| ATT | 0.70 | 0.45 | 18 | ATT | 0.59 | 0.38 | 18 |
| CFO/ Share | 0.50 | 1.51 | 18 | CFO/ Share | 0.90 | 2.12 | 18 |
| BV/ Share | 5.41 | 11.95 | 18 | BV/ Share | 5.86 | 12.33 | 18 |

Source: custom processing in the program SPSS 22.0.

A company in order to carry out its main activity, uses a large number of assets such as: buildings, lands, cash and so on. Their contribution to the activity is measured, also, using total assets turnover indicator. In the present case, we can see a decrease of their contribution in the turnover due to the lower of the demand of some products. The financial crisis is characterized as a period of decreases in the industrial sector, meaning that companies which activate in this

sector will need a greater period in order to come back in the market. Also, operational cash flow presents a greater value in Phase II, comparing to Phase I caused by the total receipts being superior to the total payments. It will lead to a lower net cash flow comparing to the operational cash flow.

Net cash flow presents a decrease in value in Phase II. A possible explanation could be the interest expenditure made by the companies. The global financial crisis doesn't affect just the companies, it affects the currencies in the same time. Based on this assumption, the increases of the interest expenditure lead to a lower net cash flow comparing to the operational cash flow.

4.2. The results regarding the influence and explanatory power of the main variables over the stock market price

The results presented in Table 2 present the explanatory power of each model, where the operational cash flow and net cash flow is tested, divided as: before and after the global financial crisis. In the period 2006-2008 or Phase I, the inclusion of operational cash flow and net cash flow increases the explanatory power of the model. The same case in Phase II, where the inclusion of both cash flow explains the variation in the price structure. Also, in both models the link between variables is strong.

Table 2. Statistics regarding model no. 3 and model no. 4

| 2006-2008 (Phase I) | | | | | 2009-2011 (Phase II) | | | | |
|---|--------------------|----------|-------------------|----------------------------|---|--------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | 0.996 ^a | 0.99 | 0.99 | 1.21 | 1 | 0.999 ^a | 0.998 | 0.998 | 0.30 |
| a. Predictors: (Constant), NCF/share, BV/Share, CFO/share, NI/SHARE | | | | | a. Predictors: (Constant), CFO/Share, NCF/Share, NI/Share, BV/Share | | | | |
| 2006-2008 (Phase I) | | | | | 2009-2011 (Phase II) | | | | |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | 0.905 ^a | 0.82 | 0.79 | 5.30 | 1 | 0.987 ^a | 0.974 | 0.970 | 1.11 |
| a. Predictors: (Constant), NI/SHARE, BV/Share | | | | | a. Predictors: (Constant), BV/Share, NI/Share | | | | |

Source: custom processing in the program SPSS 22.0

Based on the results presented in Table 2, the hypothesis is validated, confirming that cash flow elements create an additional explanatory power.

Table 3 presents the parameters of the model no. 3. The study presents the results of table no. 3 in order to present the usefulness of both cash flow instruments. The study took into consideration the volatility of the stock price, which in case of Romania is relatively low. In this case, the study established the significant risk level at 10%, respectively 20%.

Table 3. Parameters assessment of model no. 3

| Parameters tabel 2006-2008 (Phase I) | | | | | | Parameters tables 2009-2011 (Phase II) | | | | | |
|---|-----------------------------|------------|---------------------------|-------|---------|---|---------------------------|-------|-------|--------|--|
| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Unstandardized Coefficients | Standardized Coefficients | t | | Sig. | |
| | B | Std. Error | Beta | | | B | Std. Error | Beta | | | |
| (Constant) | 0.81 | 0.33 | | 2.48 | 0.028* | 0.35 | 0.08 | | 4.25 | 0.001* | |
| BV/Share | 2.33 | 0.60 | 2.39 | 3.91 | 0.002* | -0.39 | 0.13 | -0.78 | -3.00 | 0.010* | |
| CFO/Share | -12.18 | 3.23 | -1.57 | -3.77 | 0.002* | 6.47 | 0.87 | 2.14 | 7.45 | 0.000* | |
| NI/SHARE | -11.92 | 8.28 | -0.91 | -1.44 | 0.173** | -7.19 | 0.77 | -0.33 | -9.38 | 0.000* | |
| NCF/share | 14.95 | 6.80 | 1.38 | 2.20 | 0.047* | -3.50 | 1.00 | -0.33 | -3.51 | 0.004* | |
| a. Dependent Variable: P 31.12 | | | | | | a. Dependent Variable: P 31.12 | | | | | |
| b. Source: Custom processing in the program SPSS 22.0. | | | | | | b. Source: Custom processing in the program SPSS 22.0. | | | | | |
| c. *** – significantly at a risk of 0.1, respectively 0.2 | | | | | | c. *** – significantly at a risk of 0.1, respectively 0.2 | | | | | |

Source: custom processing in the program SPSS 22.0.

In Phase I, the parameters are significant. The negative sign of operational cash flow and earnings can describe the reaction of investors in term of earnings and operational activity. Therefore, the economy being in the last phase of growth, an increase in the stock price lead to a decrease in operational activity and earnings. While the market value is increasing based on the stock price and the fundamental value is decreasing (based on the financial information), the difference can be a sign of a possible speculative bubble. Net cash flow, on the other hand, present a positive sign, which represents the interest of investors in order to understand if the companies can survive in case of a possible financial crisis.

Phase II of the same model presents the period after the crisis. The results presented in table no. 3 indicates that operational cashflow are directly correlated with the stock price. A possible explanation could be the recovering process made by the companies after the effects of the global financial crisis.

Moreover, net cashflow and earnings are recording negative values, which indicates that earnings losses its superiority in terms of decision-making process. The correlation between earnings and stock price is indirect. Based on the results

presented in table no. 3, the hypotheses is validated suggesting that cashflows can be used as an alternative instrument for decision-making process.

Concerning the superiority between cashflow elements and earnings, Table 4 presents the results which confirm the hypothesis.

Table 4. Statistics regarding model no. 4 and model no. 5

| 2006-2011 (Phase I) | | | | | 2009-2011 (Phase II) | | | | |
|---|--------------------|----------|-------------------|----------------------------|---|--------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | 0.905 ^a | 0.819 | 0.794 | 5.30 | 1 | 0.987 ^a | 0.974 | 0.970 | 1.11 |
| a. Predictors: (Constant), NI/SHARE, BV/Share | | | | | a. Predictors: (Constant), BV/Share, NI/Share | | | | |
| 2006-2011(Phase I) | | | | | 2009-2011 (Phase II) | | | | |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | 0.995 ^a | 0.990 | 0.988 | 1.26 | 1 | 0.994 ^a | 0.987 | 0.985 | 0.80 |
| a. Predictors: (Constant), NCF/share, BV/Share, CFO/share | | | | | a. Predictors: (Constant), CFO/Share, NCF/Share, BV/Share | | | | |
| b. Source: Custom processing in the program SPSS 22.0. | | | | | b. Source: Custom processing in the program SPSS 22.0. | | | | |

Source: custom processing in the program SPSS 22.0.

4.3 The estimation of cashflows and earnings' influence over the stock market price taking into consideration the external factors

The global financial crisis affects directly the companies, but the degree of the effects may vary depending on different company aspects. Starting from this premise, we include in model no. 6, variables which takes into consideration the efficiency of assets use, the contribution of total assets in the main activity and the capability of the companies to generate value for investors.

Table 5 presents the results of the parameters analyzed using model no. 6. In Phase I, taking into consideration the external factors, operational cash flow and net cash flow are statistically significant. Return on equity presents a positive link with the stock market price which indicates the interest of investors in order to maximize their portfolio returns. Another significant correlation is represented by total assets turnover, which indicates that an increase in the stock market price structure will lead to a decrease in the contribution of assets to the main activity. This result is obtained due to the importance of the turnover for the total income. Being in the growth phase, the turnover presents the total sales of the company, presenting the demand for the company product. Moreover, this

increase in the turnover structure lead the company into investment processes in order to adapt to the new market circumstances.

Table 5. Parameters assessment of model no. 6

| 2006-2008 (Phase I) | | | | | | 2009-2011 (Phase II) | | | | |
|--|---------------------------------|---------------|------------------------------|------------|--------|--|---------------|------------------------------|-------|---------|
| Model | Unstandardize d Coefficients | | Standardized Coefficients | t | Sig. | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | | B | Std. Error | Beta | | |
| (Constant) | 2.13 | 0.96 | | 2.216 | 0.051* | 0.10 | 0.26 | | 0.38 | 0.715 |
| CFO/ Share | -12.12 | 3.66 | -1.57 | - 3.312 | 0.008* | 5.67 | 1.25 | 1.87 | 4.53 | 0.001* |
| NI/ Share | -12.12 | 9.41 | -0.93 | - 1.288 | 0.227 | -7.73 | 0.95 | -0.35 | -8.13 | 0.000* |
| ROE | 7.20 | 3.85 | 0.06 | 1.869 | 0.091* | 0.07 | 0.07 | 0.02 | 1.10 | 0.295 |
| NCF/ Share | 14.93 | 7.69 | 1.38 | 1.943 | 0.081* | -2.47 | 1.50 | -0.23 | -1.64 | 0.131** |
| ROA | -7.64 | 7.32 | -0.03 | - 1.044 | 0.321 | 1.61 | 2.05 | 0.01 | 0.79 | 0.450 |
| BV/ Share | 2.34 | 0.68 | 2.39 | 3.424 | 0.006* | -0.27 | 0.19 | -0.51 | -1.39 | 0.195** |
| ATT | -2.03 | 0.90 | -0.08 | - 2.259 | 0.047* | 0.32 | 0.30 | 0.02 | 1.09 | 0.302 |
| a. Dependent Variable: P 31.12 b. Source: Custom processing in the program SPSS 22.0. c. **/* – significantly at a risk of 0.1, respectively 0.2 | | | | | | a. Dependent Variable: P 31.12 b. Source: Custom processing in the program SPSS 22.0. c. **/* – significantly at a risk of 0.1, respectively 0.2 | | | | |

Source: custom processing in the program SPSS 22.0.

In Phase II, both cash flow variables and earnings are significant, but the negative sign of net cash flow and earnings suggest that investors should base their decisions on the operational cash flow. Based on the result presented in table no. 5, the last hypothesis is validated.

5. CONCLUSIONS

In order to diversify their investment portfolio, investors are constantly in search of an instrument which can help them in the decision-making process. The capital market evolves in different ways and is influenced directly by it's participants. They are looking for opportunities in order to profit from the differences between the market value and the fundamental value of a security. The forces of demand and supply can make a security become overvalued or undervalued, which can cause different major events in the market. One of the most important event which can occur in a market is a financial crisis. The

present study started from the model of Bepari, Rahman and Mollik (2012) in order to study the influence of operational cash flow over the stock market price. The population selected for the present study is represented by the listed companies on the Bucharest Stock Exchange in the period of the global financial crisis in 2008. The analysis was divided in two periods: Phase I (2006-2008) and Phase II (2009-2011). The results of the study have shown that operational cash flow and net cash flow could be used by the investors as an alternative investment instrument and comparing to the earnings, both cash flow categories can add explanatory power to the models. Moreover, the study took into consideration the external factors which can influence the effects of the financial crisis over a certain company. The results have shown that operational cash flow and net cash flow are significant in both periods, and can be a variable that can make a difference between the profit and loss of an investment portfolio. The limits of the present study are represented by the relatively low sample of 6 companies and the availability of the financial statements and the stock market prices.

As a future research, taking into account the actual economic context, where the global market is concerned about a future global financial crisis, more powerful than the one which occurred in 2008, we propose to study using the time-series the presence or the absence of the speculative bubbles in the capital market.

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THE ECONOMIC POWER OF DATA PROFILING

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Abstract

Technological progress determines an area uncovered by the legislator that for a while can prove to be beneficial to certain parties and unnoticed by the others. The past decades have been relevant for the data protection domain as this area of interest has gained more and more attention in cases such as Schrems, Google Spain and so on. They all had in common one thing: the empowerment of the data subject. Personal data has become over time a financial source for the business actors. Not only is personal data processed for the proper workings of the controllers, but it can also offer more information about a certain category of people or activities, when processed for this purpose. In order to assess and prevent any negative impact of profiling on data subjects, the European legislator provided under the General Data Protection Regulation certain rules that cover this issue that has had a great influence not only in the Member States of the European Union, but also outside the EU border. In the following study, we shall try to determine the relevance of profiling and review the cases that were built around it. This paper will also cover issues such as the monetized privacy and business practices when processing the personal data and will seek to tackle the following issue: how does the data subject stand towards the economic usage of their personal data?

Keywords: *data protection; personal data; data profiling; GDPR.*

JEL Classification: K22, K24

1. GENERAL CONSIDERATIONS

During the past years, it has been obvious that privacy has become a valuable opportunity for businesses. Technological innovation and the power of data analytics determined a rethinking of the priorities of the legislators and the practices of the businesses (Hoffman, 2014).

Privacy has been not only the center of heated debates and the focus of international courts over the past decades, but also the main issue that has arisen in some of the biggest scandals of this century, the best examples being those where *Facebook* and *Cambridge Analytica* have been involved. Yet, before moving into the main issue of privacy, data protection, data profiling and what the data processing really means to businesses and trade in general, setting the context and defining the working concepts and notions are needed.

The empowerment of the data subject through the full recognition of the right to be forgotten after the outcome of the *Google Spain* case and later the inquiry made by Maximilian Schrems with regards to the transfer of personal data that later had the Safe Harbour arrangement invalidated by the Court of Justice of the European Union in Case C-362/14 had been one of the main reasons for reforming the data protection legislation. Directive 95/46/EC on the protection of individuals with regard to the processing of personal data and on the free movement of such data was no longer sufficient to secure the protection of the data subject, this being stressed and emphasized in the jurisprudence of the Court of Justice of the European Union; also, technology has improved so much over the past decades that it determined new issues to arise and it proved to be a challenge as the legislator couldn't actually anticipate when the law was made. Therefore, the gold standard of the EU's data protection legislation has been upgraded in 2016 when Regulation (EU) 2016/679 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, also known as the General Data Protection Regulation or the GDPR, has been adopted in 2016 and enforced ever since May 2018, becoming one of the greatest achievements of the European Union in recent years.

The new law is recognized not only across the EU, but it is also taken into consideration by data controllers across the world that have an interest in processing the personal data within the borders of the EU Member States. The novelty of this new Regulation covers, among others, the following: (i) a more inclusive and ample definition of *personal data* (Ungureanu, 2017), article 4(1) of GDPR specifying that it refers to *any information relating to an identified or identifiable natural person ('data subject')* and also defining the *identifiable natural person* as the *one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person*; (ii) an extended scope of the Regulation, according to articles 2 and 3 of the GDPR, covering non-European companies that act as data controllers, offering services and goods to the residents of the European Union, these having to name a representative within the European territory in accordance with article 27 of the same regulation; (iii) significant penalties and administrative fines resulting from data protection breaches, reaching to as much as 4% of the annual global turnover, in accordance with articles 83 and 84 of GDPR.

What the General Data Protection Regulation managed to do was to bring to the attention of the data subject that they have certain rights with regard to the processing of their data. When we refer to the concept of processing, we have to take into consideration any operation that can regard the personal data, including, but not limited to *collection, recording, organization, structuring,*

storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, restriction, erasure or destruction, according to article 4(2) of the Regulation. The said rights refer to the access to information (article 15), rectification (article 16), erasure of data (article 17), restriction of processing (article 18), data portability (article 20), the right to object (article 21) and the rights to address the competent authorities and courts if any dispute arises (articles 77-80).

One of the issues that received public coverage and interest regarded the use and relevance of the personal data to the companies. What exactly is a data controller doing with the personal information of a data subject and why is it needed? This study aims at researching the concept of data profiling, its importance and relevance on the market as well-publicized practices such as *Cambridge Analytica* case show that this notion is perceived highly among businesses and brings a certain monetary value and economic power to the practitioners that we shall try to determine in the following pages.

2. LEGAL PERSPECTIVE ON DATA PROFILING

The legal concept of *privacy* has been recognized by courts late in the 19th century, reflected mainly in legal battles against the media: for example, in 1891, in *MacKenzie v Soden Mineral Spring Company*, a doctor from New York has successfully sued a company that used his name to advertise its product without his consent, later in 1893, in *Marks v Jaffa*, a newspaper was ordered by the court to stop using the pictures of a person for a contest as it was done without the consent of the data subject and early in the 20th century, in the decision of the Supreme Court of Georgia, *Pavesich v New England Life Insurance Co.*, privacy has been referred to as a legal right, the court recognizing that *the publication of one's picture without his consent by another as an advertisement, for the mere purpose of increasing the profits and gains of the advertiser, is an invasion of this right* (Scott, 2008). Given this new attention, the most logical step would have been to legally recognize privacy as a right, fact that happened with the Universal Declaration of Human Rights in article 12 and its reiteration in the European Convention on Human Rights in article 8 and later in articles 7 and 8 of the Charter of Fundamental Rights of the European Union. It is obvious that ever since *privacy* has become a focus of the practitioners of law and legislators around the world, this concept was dealt with mainly through the acknowledgement of its relevance for the business practices and interests – making profit, marketing, advertising and so on.

The jurisprudence of the Court of Justice of the European Union also has shown that the notion of *personal data* is generous and it is advised against interpreting it in an inflexible manner, mostly as the information and their civil circuit is ever adapting and changing (Șerban, 2017). The case-law offered

answers to questions such as what exactly can be identified as personal data through the following examples: names, phone numbers, work or health conditions, ethnicity, birthplace, religion and many others – retrieved from cases such as *Lindqvist C-101/01* and *Minister voor Immigratie C-141/12 and C-372/12* of the Court of Justice of the European Union.

A picture is worth a thousand words – this English language adage is by far one of the most accurate statements that summarize the workings of nowadays online businesses. Bringing it into the data protection area, the synonym would regard the data subject that is identified by their personal data in a direct or indirect manner creating their profile. As privacy and data protection are often closely identified with Internet activity and given the fact that a significant part of the commercial activity is nowadays using the online platforms as methods of communication, advertising and marketing (Șerban, 2018), we are interested in determining how the personal data is processed by the controller for such interests and how ‘a thousand words’ can make the ‘picture’ through the method of profiling.

Over time, practices on the usage of personal data were given in different contexts and forms. For example, Internet platforms such as *Google* save the personal data of its users obtained from the search engine and the inquiries made by the data subject on various websites and *Facebook*, another social media online platform, can easily determine new information about the users based on the content that has been provided (Ungureanu, 2017).

The General Data Protection Regulation defines *profiling* in article 4(4) as *any form of automated processing of personal data consisting of the use of personal data to evaluate certain personal aspects relating to a natural person, in particular to analyze or predict aspects concerning that natural person’s performance at work, economic situation, health, personal preferences, interests, reliability, behaviour, location or movements*.

It was said that profiling is about knowledge, not about data, even though it feeds on data (Hildebrandt, 2006). It involves categorizing individuals according to personal traits; these characteristics can be either changeable such as habits, interests, preferences or other elements or unchangeable such as age or height. Individuals are categorized according to their observable traits in order to determine other characteristics that are not immediately observed or observable (Dinant *et al.* 2008).

A mere classification of natural persons on the basis of their characteristics such as age or height isn’t necessarily leading to profiling. It depends mostly on the purpose of the classification (Data Protection Working Party, 2018). The purposes of profiling regard either the generated knowledge following the analysis of the existing data in order to make assumptions about a natural person on the basis of past experiences, statistical information and to correlate possible outcomes or behaviours, either to support the decision-making process from the

usage of the said correlations by deciding and acting accordingly in certain situations (European Union Agency for Fundamental Rights, 2018). If a business is simply classifying its customers based on their physical traits for statistical purposes and for having an overview of their clients without intending to make predictions or draw conclusions about a certain individual, we cannot call it profiling as it is not an assessment of the individual characteristics. Profiling represents gathering information regarding a person or a group of persons, evaluating their characteristics and behaviour patterns and placing them into categories in order to analyze and determine results such as the possible interests, likely behaviour or abilities to perform a task (Data Protection Working Party, 2018).

According to the General Data Protection Regulation, profiling may involve *any form of automated processing*, yet human involvement is not taken out of the definition, as this type of data processing may also imply potential deductions.

Article 22(1) of the Regulation states that *the data subject shall have the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her*. Automated decision-making may partially overlap with or result from profiling; it can be based on data provided directly by the data subject, such as responses to surveys, or observed data such as the location data from an application – *e.g.* applications with maps, or derived or inferred data – *e.g.* a profile that has already been created such as a credit score (Data Protection Working Party, 2018).

Given the fact that profiling represents a type of the aforementioned data processing, the principles and provisions of the General Data Protection Regulation on the processing of personal data will apply. Therefore, profiling has to be fair and transparent. Profiling can often prove to be unfair and discriminating, for example, to limit the access to the individuals to opportunities such as credit or insurance or target them with expensive products.

Also, profiling can imply the processing of personal data originally collected for a different purpose. For example, a location application for smartphones can offer the user the possibility to find nearby food and beverages service providers – the data collected from the natural person's usage of the application can help the controller to identify the individual's lifestyle or food preferences; if the profile is used for sending ads for the products and services without the consent of the data subject, then the purpose of the processing is not the original one and might require obtaining the consent. Another aspect that needs to be tackled is data minimization – this meaning collecting only the necessary amount of data (Data Protection Working Party, 2018); businesses might be encouraged to collect more information than needed as the present technological advancements permit cheap storage and the processing of a very large amount of personal data that might be useful in future endeavours.

Another aspect that the General Data Protection Regulation deals with is the accuracy of the personal data. For ensuring the correctitude of profiling and the decisions or behaviours it might determine, it is a given that the data that is collected is to not be flawed, outdated or inaccurate. Otherwise, any prediction might prove to be either biased or far from reality and a possible decision might have a negative impact both on the controllers (possible businesses) and data subjects (e.g. in health-related situations).

Profiling can be noticed in the online presence of the businesses. The online platforms have proven to be profitable as the activity on the Internet of the users/data subjects can determine an important resource for controllers: strategies such as ‘pay-per-click’ can use the interests of the users to turn into their clicks on Internet pages this way becoming a source of profit based on the number of clicks received on that website (Şerban, 2018). Also, as the Internet is forever and once online information rarely gets erased, the history of the online activity can be processed in such way the interests of the user become a basis for targeted advertising. Therefore, it is no wonder that personal data has become a currency for the online trade or business activity and not only.

3. DATA PROFILING – A BUSINESS TOOL

Personal data is the 3rd millennium business tool. This has been shown in several situations that caught the attention of the European institutions, the citizens, the media and not only. One of the most prominent cases that involved data profiling and raised concerns over how personal data is used is *Cambridge Analytica* with the involvement of *Facebook*.

In the year of 2010, Facebook launched a platform, *Open Graph*, to third-party applications, allowing external developers to reach out the social media users, request permission to access their data and also to access the personal information on Facebook platform of their friends as well. The invoked personal data referred to the name, gender, location, education, political preferences, birthday, relationship status, religious views and with additional permissions, also information from private messages. In 2018, Facebook was caught in a data breach scandal in which Cambridge Analytica, a political consulting firm, used the personal data of 87 million Facebook users in the 2016 American presidential campaign and later, allegedly, in the Brexit referendum campaign, strongly influenced in favour of a certain candidate and for leaving the European Union campaign, respectively. This issue put Facebook under scrutiny of millions of its users, lawmakers and advertisers and it also determined the drop of the company’s share value. The company initiated some strategies to prevent data leaks in the future and to repair some of its damage ever since (ICMR, 2018).

The biggest question raised was how the personal data was actually used. Initially, using an application, the users paid to be subject to a detailed personality and political survey that required their Facebook account details.

Besides their personal data, this application also collected the raw Facebook information related to the connected friends. The personality survey results were paired with the data obtained from Facebook in order to make the necessary connections and set the psychological patterns. Cambridge Analytica processed the personal data of the users by determining the profiles of the American voters, classifying them according to their personality traits into OCEAN – Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism. The purpose was identifying the personality of the voters in order to influence their behaviours with psychographic techniques. With the use of the determined information about the users, the individuals could have been targeted with personalized advertising in accordance with their interests, online behaviour and personality. The obtained data – the psychological profiles of the voters – was forwarded to the campaign of one of the American presidential candidates in the elections of the year 2016 (Digital Watch Observatory, 2018).

In such situations, it is shown that profiling can be used as a business tool, not only for data transactions, but for also determining potential customers to acknowledge the provided product or service offered in the said business.

4. CONCLUSIONS

Data profiling is not a novelty in business. Yet, given the fact that the Internet is advancing, becoming more and more comprehensive and engulfing large amounts of information and personal data, also giving the society the opportunity to move part of its activity to the online platforms and social media, it is no wonder that businesses have a strong interest in ensuring their presence Online and benefit from all it offers.

Indeed, the General Data Protection Regulation is empowering the data subject with new, improved or adapted rights in regard to the processing of their data, yet it is still lacking in certain aspects. For example, the regulation proposes a series of administrative fines and sanctions for the controllers who do not comply with the legal provisions referring to the protection of personal data, yet, most of these sanctions occur only if the authorities become aware of such situations or, in more publicized cases, if the public opinion demands them. Yet, the breaches are already old news, the damage has been made and the data subject either is not made aware of the issue or is not compensated accordingly.

At the moment, the General Data Protection Regulation is still making steps into privacy protection. The initial impact has already been made, the controllers being more interested in the legal perspective of the protection of personal data and taking the measures to ensure compliance with the relevant legislation. Yet, data protection goes two ways: with the new rights, come also responsibilities and the data subject is responsible for sharing their personal data with the controllers. Cases such Cambridge Analytica show what could happen with the personal data and, mostly when concerning the Internet, the data subject has

control over what information they provide and what do they keep to themselves. After all, the Internet seems to be infinite and the access to information seems to be borderless.

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GLOBAL TRENDS AND KEY FACTORS FOR FINANCIAL STABILITY IN EUROPEAN UNION

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Abstract

Globalization is defined as the process of creating a single financial market, which requires the implementation of unique regulations across countries. It is also very well accepted the argument that, globalization is targeting the integration of national financial markets into a single global market. Recent research conducted across eight decades, indicated that Globalization is one of the main trends in the academic research. Moreover, countries' financial systems and the creation of Euromarkets are key components in the process of globalization. Following such rationale, this study undertakes a holistic analysis into globalization, and the global factors impeding on the financial stability in general, and European Union in particular. This is a theoretical study, which designs a theoretical framework with factors affecting the regional and global financial stability. The aim of the research is to provide a holistic perspective upon the impact of globalization and the factors impeding on the European Union's financial stability. The objectives of this study are: (1) To offer an evolving and holistic view on the globalization and Euro area; (2) To analyse theoretically possible factors affecting regional financial stability; (3) To design a Conceptual Research Framework which can be further developed, and to formulate hypotheses. This is a theoretical study based on systematic literature review conducted along eight decades on articles from high rank journals, and an unsystematic literature review into relevant journal articles. The findings suggest that globalization has a crucial role in the financial stability in Europe. However, there is a multiple factor impact determined by globalization and linked to globalization. Between these factors, the authors can enumerate the process of integration, inequalities, and crises. The research is a contribution to theory, through the creation of a theoretical framework. In addition, by raising an awareness of the key

factors that influence upon the financial stability in Europe and across the world, the study is a contribution to practice.

Keywords: *globalization; financial systems; stability; regulations.*

JEL Classification: F01, G10, G01, P1, G18

1. INTRODUCTION

Recent studies (Lassere, 2012) indicated the ongoing process of globalization and revealed a deep paradox of globalization process. The ongoing process of globalization is defined by the development of transnational business models and is reinforced by the global web comprising financial markets, international institutions (United Nations, European Union, World Bank), global firms, industry, Governments, public institutions (academia, television, press, churches) and non-governmental organisations working together for the achievement of Globalization (Lassere, 2012). However, the real paradox of globalization process consists in the antagonist battle, between global centralization versus local autonomy, and national cultures, and global integration versus local autonomy (Lassere, 2012). In addition to the above-mentioned paradox, globalization has to confront the increase in demography, risks, culture, ethics, and security, and to deal with inequalities, lack of resources, financial crisis and new emerging economies (Lassere, 2012; Tomos and Thurairaj, 2019).

According to Schaberg (1999, p. 105), globalization is “the process of creating a single market”, in other words “the process of integration of different national financial markets into a homogenous global market”. Research conducted lately, across eight decades (1940-2017), in high ranked journals such as Business Harvard Review, discovered the main trends in the academic research: global leadership and management, networking, information technology, business development and growth, entrepreneurship, community, connectivity, world economy and globalization (Tomos, 2017). Hence, it is clear that research is focused on *globalization*. Furthermore, the main research trends reveal the state and evolution of the essential phenomena of the society. The second phenomenon that attracted attention, is the integration process within the European Union and the efforts allocated by Governing bodies and institutions – European Central Bank (Taylor, 2000; Tondl, 2000) toward assuring financial stability in Europe, despite the perpetual challenges (Arrowsmith, Barrell and Taylor, 2000; Ferran, 2018; Moloney, 2018). The study emphasises that countries’ *financial systems* and the creation of *Euromarkets* are key components in the process of Globalization.

The purpose of this study is to explore from a holistic perspective, in the context of ongoing process of globalization, the impact of globalization and other factors on European Union’s financial stability. The objectives of the research are the following: (1) to provide a holistic view on globalization and its links to the Euro area and financial stability; (2) to analyse theoretically and find

factors affecting the regional financial stability in the European Union (EU); (3) to design a Conceptual Research Framework on the factors affecting financial stability, that can be further developed.

The structure of this academic paper contains the following sections: section one, literature review, regarding EU and monetary union, financial system and money, and globalization. Section two explains the methodology used by the study; section three describes the findings and presents the Conceptual Research Framework; section four introduces the conclusions and contributions to knowledge.

2. LITERATURE REVIEW

2.1. European Union and European Monetary Union

Laursen (1999) argued that EU is the biggest trading regional group, crucial actor, a global civic voice and the greatest humanitarian aid comes from the EU. However, Laursen (1999) stated that the EU does not equal the military power of the USA. All in all, the EU is a major regional contributor and as a result of Common External Tariffs and Custom Union, the EU represents a voice in international Forums such as World Trade Organisation (WTO) and General Agreement on Tariffs and Trade (GATT) (Laursen, 1999). However, there was no economic rationale for the EU creation, but, the reason for setting up the EU was in fact, political influence, through economic integration by 'single market' (Calingaert, 1999). The same author (Calingaert, 1999) argued that in order to achieve the 'single market' objective, it was required the market integration, through the realisation of common legislation, common currency, common agricultural policy, embedding other European countries, and asking obedience from all states towards the new created European institutions. Most important, there was accomplished a common legislation in multiple areas, such as: movements of goods, capital, financial services, transport, technical standards, intellectual and industrial property protection, public procurement, telecommunications and energy (Calingaert, 1999). However, despite all achievement, Calingaert (1999) claimed the raise of supranationalism, a phenomenon highlighted within the 'single market' legislation. Furthermore, Calingaert (1999) indicated that, by having a single currency, it was created an Economic Monetary Union (EMU). Thus, Featherstone (1999) emphasised that crucial roles in the formation of the EMU had politicians, central bank governors, the Franco-German Axis and major European leaders. It seems that the same actors were influential in the world economy and in the integration process. Moreover, these initiatives were started by the above-mentioned actors and historically developed and followed by others. In other words, the globalization and deregulations of the financial markets were started by some major actors and followed in the history by others who enhanced and developed

the work of their predecessors (Featherstone, 1999). Nevertheless, the new created financial environment and its mechanism did not prove to be stable and secure. Hence, following the multiple fluctuations and unstable inflation rate across the years, the authors raised the question, regarding the EMU stability and indicated that individuals felt trapped by following guidance created for them by other generations (Featherstone, 1999). It is therefore important to mention the history and evolution of the European Monetary Integration (1958 – 2002). This started in 1960 with the formation of the *European Free Trade Association* (EFTA), constituted by the United Kingdom, Sweden, Norway, Denmark, Austria, Switzerland and Portugal. EFTA is now composed of Norway, Switzerland, Iceland and Liechtenstein (Apel, 1998). EFTA evolved into *Custom Union*, similar to EFTA but with a common trade policy in respect to the third trade party. The third phase of the evolution was *Common Market*, which represented an in-depth integration of the EU, because it comprised common policies between the member states, in the following areas: agriculture, transport, tax laws, regional policies, competition (Treaty of Rome). The fourth phase of integration was the *Economic Union*, which represents a higher form of integration and embeds free movements of labour and capital, no cross-border restrictions on provision of services, and effective policies between the member states in regard to budgetary, monetary and exchange rate activities (Apel, 1998). Finally, the last phase of the EU was also the ultimate stage of the economic integration and was named the *Monetary Union*. According to Apel (1998) within this phase the following were achieved: a complete convertibility of currencies; full liberalization of capital flow between the state members; complete integration of financial markets and banking; irreversible fixing the exchange rates; a single monetary policy managed by a *single central bank*; *single currency*.

2.2. Financial Systems and Money

The world witnesses the integration of financial markets, and globalization is the process of creating a single financial market (Schaberg, 1999, p. 105). In other words, the national regulations are abolished and new homogenous global regulations are in place. As an aspect of globalization, the removal of national financial regulations is also part of liberalization of financial markets, in the EU (Cerny, 1994). Additional changes that permit globalization to be achieved, were the following: removal of capital control, national financial system reform in France, liberalization of direct investments, liberalization of banking and financial services, creation of Euromarkets, etc. (Schaberg, 1999). Euromarkets “are credit and capital markets that are dominated in currencies other than that of the country in which the market is located” (Schaberg, p. 107). The main aspect to be discussed in this section is the financial systems. Financial systems are defined by Gerschenkron (Schaberg, 1999, p.2) as “[the way different]

national institutional financial arrangement relate to their financing of investment". There are a few types of financial systems and it is essential that we enumerate them: (1) Bank-oriented system; (2) Market-oriented system (Rybczynsky, 1985) and (3) Industrial Financial System (Berglöff, 1990). Globalisation causes the dissolution of such national financial systems (Schaberg, 1999). Another aspect to be approached is 'money' and their relationship with the financial stability. The reason of discussing this aspect is because the European monetary union is in the last phase of the economic integration. Although, there are many monetarist views, the authors will mention the theory according with which "the price level as a whole is more important than the individual prices" (Mayer, 1978). This provides support for the argument that money by means of price level is linked to financial stability. In line with this statement, there is evidence from the history, that the price level in Germany, 1923 caused a hyperinflation, which created financial instability. The German Mark fell to a billion of its previous value and determined a high rise in prices. The consequences were multiple: wealth redistribution, fascism and World War II (Shiller, 2003; Tropeano, 2018; Poole, 1978).

According to Schaberg (1999) the United Kingdom does not wish to lose her sovereignty, and therefore has not interest in the integration. Although, there are contradictory discussions and authors (Alexander *et al.*, 2018) suggested that the United Kingdom would have 'a third country status', following Brexit, there is no assurance that Brexit won't create financial instability in the EU.

2.3. Globalization and Technology

Globalization is the process of creating a single financial market, by integration of national financial markets, deregulations and cross border financial flow (Schaberg, 1999). Between the consequences of globalization could be mentioned: Euromarkets, Eurocurrencies and Eurobonds (Schaberg, 1999). Authors (Tomos *et al.*, 2019) indicated that globalization is linked to inequalities. Moreover, Lassere (2012) emphasised the role of technologies in globalisation process and the new financial order, by promoting electronic money (Shiller, 2003; Tropeano, 2018; Lassere, 2012). The turbulences created by previous global crises and regional crises and their unfolding consequences (Ramirez, Selsky and Van Der Heijden, 2010), are additional challenges that impacts upon the global and regional financial stability.

3. METHOD

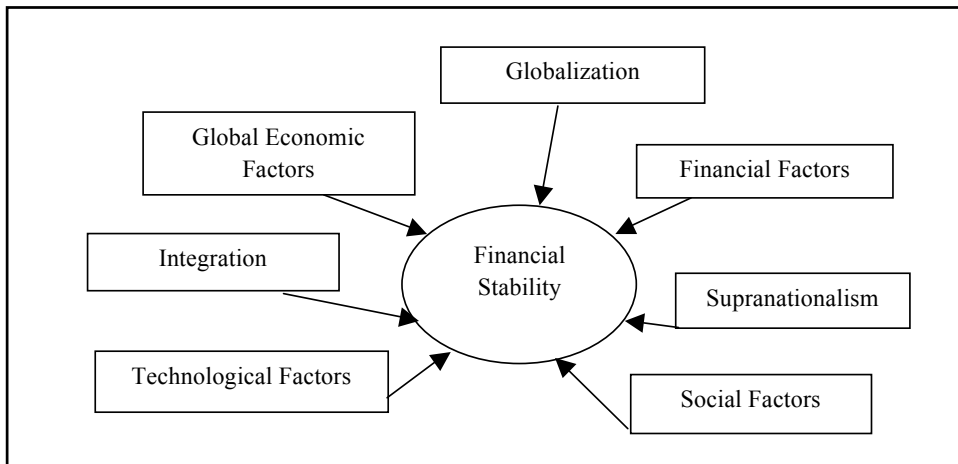
This is a theoretical study based on systematic literature review into high ranked journal, conducted by the authors (Tomos, 2017) and unsystematic literature review, including books and relevant journals to this research topic. The systematic literature review was conducted manually and electronically by one of the authors of this paper, into Harvard Business Review across a period of

eight decades (1940 – 2017). The second type of literature review was based on key words search and relevant journals to the title of this study. The keywords used for the electronic search into various databases were: Globalization, financial stability, systems, regulations and crises.

4. FINDINGS AND CONCEPTUAL FRAMEWORK

This study suggests that Globalization has a crucial role in the financial stability in the EU, together other factors. Secondly, there is a '*financial fragility*' caused by previous crises. In addition, there are lessons to be learned from historical events and from the unfolding consequences of financial crises. Between the factors found to be essential for the financial stability in the EU, the authors highlight: globalization, national financial systems, national financial markets, integration, inequalities, Money, inflation, Euro, Risks, international institutions, public institutions, Governments, crises, historical inheritance, fragility, state actors, regulations, deregulations, technology. The authors grouped these factors into five categories and proposed the following Conceptual Research Framework presented in Figure1.

Figure 1. Factors Affecting Financial Stability in EU



Source: computed by the authors

5. CONCLUSIONS

The study is a contribution to theory, by adding new literature on this important topic. Secondly, the research is a contribution to practice because raises awareness on the possible factors and their possible effects upon the EU financial stability. Thirdly, the study contributes to theory development through its holistic approach and the interpretation of the findings. The authors

recommend further research to be conducted on this topic and an enhanced development of the conceptual research framework should be considered.

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Section II

EU FINANCIAL AND BANKING REGULATION

NON-BANK FINANCIAL INTERMEDIATION IN CENTRAL AND EASTERN EUROPE: SHADOW BANKING ASSESSMENT

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Abstract

There is great interest expressed by academics and practitioners for analysing and understanding the actors that develop non-bank financial intermediation and form the shadow banking system (as the bulk of literature clearly emphasizes). Nonetheless, most studies are conducted for the more developed countries. Only few of these investigations look into the developments of non-banking financial institutions in emerging markets and developing economies (as those in Central and Eastern Europe, CEEs). Some possible reasons reside in the fact that the processes and relationships that these institutions undergo are not so complex and diverse and there is a lack of data in some cases (compared to the abundance of data and granular data for the most advanced countries). Having shared a socialist central planning system in the past, CEE countries are still making significant efforts towards establishing a well-functioning financial system, in the process depriving the non-banking financial institutions of a context that could allow them to flourish. Our paper contributes to enhancing knowledge on shadow banking (institutions involved in non-bank financial intermediation) by providing a perspective on this sector's structure and development in eleven new European Union member states from CEE, out of which five are belonging to the Eurozone (Estonia, Latvia, Lithuania, Slovenia, and Slovak Republic), and the other six are in the process of adopting the euro (Bulgaria, Croatia, Czech Republic, Hungary, Poland, and Romania). We used (annual and quarterly) data provided mainly by Eurostat, over the period 1995-2018. The paper adopted the term 'non-bank financial intermediation' in the title, to be in line with the "forward-looking aspect of the FSB's work".

Keywords: *non-bank financial intermediation; shadow banking; other financial institutions; Central and Eastern Europe; European Union.*

JEL Classification: G21, G23

1. INTRODUCTION

In periods of fast economic growth, *traditional banking* and *market-based finance* may not be able to cope with the unmet needs and preferences of willing borrower and lenders (due to various reasons, among which inherent rigidity such as legal constraints, high costs, etc.). Therefore, non-bank financial intermediation (NBFI), also known as ‘shadow banking’, comes into play to provide a valuable and viable alternative to the other two above-mentioned forms of credit-based intermediation and to help support the real economic activity. Michael (2014) also states that shadow banking serves as a complement to traditional banking in some situations, in countries like South Africa or China, and even as a substitute in other circumstances, in countries like Russia or Chile. This is backed up by Randal Quarles, FSB Chair, who said that: “Non-bank financing is a valuable alternative to bank financing for many firms and households” (FSB, 2018, p. 4). According to the International Monetary Fund, shadow banking can play a beneficial role as “a complement to traditional banking by expanding access to credit or by supporting market liquidity, maturity transformation, and risk sharing” (IMF, 2014a). Adrian (2018, pp. 14-15) argues that shadow banks aid to complete markets, for instance, “by giving issuers new outlets for capital raising when bank lending is unavailable, and providing lenders more avenues for portfolio diversification”.

Aside from the advantages derived from the complementarities with other forms of credit-based intermediation, shadow banking may provide other benefits or gains for an economy (at a micro or macroeconomic level) or the financial system. By broadening the availability of investment options, shadow banks succeed in channelling credit more efficiently towards long-term needs, thus enabling risk diversification and the development of financial innovation (Schwarcz, 2012). The European Commission also highlights the ‘usefulness’ of shadow banking activities by referring to their functions. These particular activities are either an alternative for investors (those who are willing and able to invest their financial surpluses) or for borrowers (those who need financial liquidity and are searching for additional financing sources) to what the traditional banking sector or financial markets have to offer. Moreover, given the increased specialization, the shadow banking system seems to be more efficient in channelling financial resources towards specific (long-term) needs (Apostoaie, 2017b). Above all, this specific sector may represent a “possible source of risk diversification away from the banking system” (EC, 2012, p. 5). Another feature of the shadow banking system is that the offer adjusts itself quite rapidly to the customer needs and expectations, making the shadow banking services and products “tailored, flexible and efficient” (Markiewicz, 2015). Claessens *et al.* (2012a) also point towards the beneficial role of shadow banks for the financial system, highlighting its effectiveness in terms of risk sharing, maturity transformation, and market liquidity.

What is interesting about all these researches on shadow banking (and much more), is that economists usually prefer to focus on the more advanced economies, either because there is more data on these countries, or because the shadow banking system is more complex and presumes a peculiar and sophisticated relationship with the traditional banking system. In the shadow banking systems of emerging market economies (as those in Central and Eastern Europe) the processes and relationships are much simpler and, in general, there is a lack of data for long-term series or some countries (only in the more recent years granular data has started to be collected). Previous studies that refer to these particular countries usually dedicate to them only a minor section in their whole research.

To fill this gap, the current study aims to analyse the financial structure, and in particular the shadow banking systems (the sector referring to non-bank financial intermediation) of eleven new European Union (EU) member states from Central and Eastern Europe (hereinafter, CEE), out of which five are belonging to the Eurozone (Estonia, Latvia, Lithuania, Slovenia, and Slovak Republic), and the other six are in the process of adopting the euro (Bulgaria, Croatia, Czech Republic, Hungary, Poland, and Romania). Our paper contributes to enhancing knowledge on shadow banks by providing a perspective on this sector's structure and development in the eleven CEE countries. We preferred to use the term 'non-bank financial intermediation' in the title instead of 'shadow banking' to be in line with the "forward-looking aspect of the FSB's work".

The paper continues as follows: Section 2 provides a brief analysis of the existing theoretical research on the topic (focusing on common features and measurement options); Section 3 brings forward the main common characteristics of CEE countries and particularities of their financial systems, in this way providing a rationale for a deeper analysis of shadow banking in this regional group in Section 4 (including comparisons with some EU countries, including from CEE); Section 5 outlines the conclusions of the paper.

2. SHORT LITERATURE REVIEW

The aftermath of the 2007/2009 financial crisis brought out into the spotlight the emergence of what is known today as 'shadow banking'. The phenomenon has been tackled since then by various members of the academia as well as many international policy institutions, among which we include: the Federal Reserve System or the Fed, the International Monetary Fund (IMF), the Financial Stability Board (FSB), and the European Systemic Risk Board (ESRB). In addition, the topic is still being tackled in various scientific events, either in panels (as a theme within a wider topic) or as full international conferences. The most recent event fully focusing on the topic was the 33rd SUERF Colloquium on 'Shadow Banking: Financial Intermediation beyond Banks', jointly organized by SUERF and the Bank of Finland in the House of

the Estates in Helsinki, on 14-15 September 2017. The idea at hand here is that ‘shadow banking’ is an ardent and systemically important topic that financiers must not overlook when discussing about financial stability.

When investigating the concept, one must go back more than a decade ago and see when it was first used in this form, in a speech held by the economist Paul McCulley (2007) at the annual financial symposium hosted by the Kansas City Federal Reserve Bank in Jackson Hole (Wyoming). Afterwards, the most influential works on providing definitions for the concept were the ones of Pozsar (2008), Adrian and Shin (2009), Adrian and Shin (2011), Tucker (2010), and Pozsar *et al.* (2010). Some of the current reviews that might help us understand the concept include the ones of: Claessens *et al.* (2015); Claessens and Ratnovski (2014); Claessens *et al.* (2012b); IMF (2014b); Adrian (2018); and Rubio (2018). This pallet of papers (and many others more) brings to our attention two aspects when defining the concept:

a) the task at hand is complex and ongoing, to an extent that the concept has acquired various and sometimes different definitions and interpretations making it almost impossible to pin it down. In fact, the ‘shadow economy’ term is not a firmly fixed concept in the literature, but subject to change and varying criteria (Bejaković, 2015). The difficulty of defining the concept originates in the amorphous character of the shadow banking itself, resulting from its high complexity, small transparency, interconnectedness with other financial as well as non-financial institutions, and heterogeneity across systems and countries.

b) the task in question is very important; Kabelik (2012, p. 4) also emphasized the necessity of having a clear, precise and commonly agreed-upon definition: ‘if regulation is to be effective, it needs to be applied on accurately defined entities otherwise a potential for regulatory arbitrage emerges. Therefore, the discussion about the definition matters’.

After surveying the existing literature and analysing the multitude of definitions and specific approaches, the following four common features can be agreed upon when ‘unpacking’ the concept (Apostoaie and Bilan, 2018):

i) there is clearly a process of *credit intermediation*, associated with some forms of *maturity and liquidity transformation*, as well as *leverage*;

ii) *there are no public safety nets* (investors are not offered public guarantees if their funds are mismanaged by shadow banking institutions) *and no access to central bank liquidity* (shadow banks cannot request financial aid if they confront themselves with funding problems);

iii) the entities and activities in the ‘shadows’ are *fragile and less regulated* as opposite to traditional banking institutions;

iv) the absence or trivial regulation associated with the lack or weak regulatory arbitrageurs in the shadow banking sector may drive the financial system towards a point of *systemic fragility*, associated with some levels of risks

(referring to: run risk, agency problems, opacity and complexity, leverage and procyclicality, or spillover effects).

We will not get into details with regard to the specific definitions of the concept and their analysis, as this is not the focus of this paper, and it has already been tackled in the literature review section of an earlier manuscript (see Apostoaie, 2017a, pp. 142-146 and Apostoaie, 2017b, pp. 141-164).

One viewpoint worth mentioning is the first official institutional definition of the concept provided by the Financial Stability Board (FSB) in 2011, stating that shadow banking is ‘the system of credit intermediation that involves entities and activities outside the regular banking system’ (FSB, 2011). Afterwards, in the light that not all ‘entities and activities outside the regular banking system’ present the same level of risk to the traditional banking sector, the FSB narrowed the definition to those specific ‘entities and activities outside the regular banking system’ that ‘raise i) systemic risk concerns, in particular by maturity/liquidity transformation, leverage and flawed credit risk transfer, and/or ii) regulatory arbitrage concerns’ (FSB, 2012). Since it provided the first definition in 2011, and up to 2018, FSB has continuously monitored the global trends and risks that might emerge in the shadow banking system (FSB, 2018). Beginning with 2019, in the eight edition of its Report, the FSB moves away from the term “shadow banking” and adopts “non-bank financial intermediation” (hereafter NBFI), to emphasise “the forward-looking aspect of the FSB’s work” (FSB, 2019). In addition, FSB declares that the change is just of terminological nature and does not affect either the substance or the coverage of the monitoring exercise. The monitoring exercise is part of the FSB’s strategy to enhance the resilience of NBFI. The focus is on those parts of NBFI that perform economic functions which may give rise to bank-like financial stability risks, i.e. the narrow measure of non-bank financial intermediation.

While the FSB’s view on shadow banking offers a beacon at a global level, important efforts are also made at the European level, specifically by the European Systemic Risk Board (ESRB). ESRB has engaged in developing a monitoring framework to assess systemic risks in the EU shadow banking sector. ESRB proposes a dual approach when investigating the potential financial stability risks of shadow banking-type activities in the EU (ESRB, 2016). Hence, it looks for shadow banking threats that may rise either from financial institutions (‘entity-based approach’) or from their activities (‘activity-based approach’).

Another topic that is widely discussed in an abundance of papers refers to the measurement of shadow banking. Consistent efforts have been made by the international community to monitor and measure shadow banking but, unfortunately, there is not yet a ‘one-fit glove’.

FSB recommends that authorities should take a two-step approach when measuring the shadow banking system (for details, see FSB, 2011), thus ‘macro-

mapping’ the balance sheet data of national financial accounts (a *Flow of Funds measure*). Within this measure, there is also a distinction between a broader approach and a narrower one. The broad estimate is referred to as the Monitoring Universe of Non-Bank Financial Intermediation or MUNFI (FSB, 2019). This is a *broad measure of all NBFIs*, comprising ‘insurance corporations, pension funds, other financial intermediaries and financial auxiliaries’. This conservative estimate was afterwards refined to a narrower measure of NBFIs, one which includes ‘non-bank financial entity types that authorities have assessed as being involved in credit intermediation activities that may pose bank-like financial stability risks, based on the FSB’s methodology and classification guidance’, resulting in the FSB’s “*narrow measure*” of NBFIs. This is obtained by classifying a subset of entities that comprise MUNFI into five economic functions (EFs), each of which involving non-bank credit intermediation. The ‘economic-function-based’ narrow measure of shadow banking was proposed in 2015 (FSB, 2015). The newly proposed narrower measure of shadow banking based on the EFs (an *activity-based approach*) is set out in the FSB Policy Framework (FSB, 2013). Currently, the FSB classifies non-bank financial institutions in accordance with five EFs, each of which involves non-bank credit intermediation with some risks to financial stability (FSB, 2017, p. 42).

Another widely employed measure consists in using the aggregated financial assets of Other Financial Intermediaries (OFI) as an instrument to measure shadow banking (an *entity-based approach*). OFI include all non-bank financial corporations and quasi corporations that are engaged mainly in financial intermediation and provide primarily long-term funding, and are not central banks, banks, insurance corporations, pension funds, public financial institutions or financial auxiliaries. Given the shortcomings of this measure (it accounts for entities that are not engaged in shadow banking activities, therefore overstating the true dimensions of shadow banking), the FSB turned to the ‘economic-function-based’ narrow measure of shadow banking (which assumes an *activity-based approach*).

With regard to using the OFI as an instrument for measuring shadow banking, one must bear in mind that the OFI definition used by the FSB and the one used by the euro area accounts statistics are different, as the former includes money market funds (MMFs), whereas the latter excludes them. The OFI used by ESRB consists of all financial corporations and quasi-corporations that are principally engaged in financial intermediation by incurring liabilities in forms other than currency, deposits, or investment fund shares, or in relation to insurance, pension and standardised guarantee schemes from institutional units (see Note in ESRB, 2018, p. 71). OFI or “other financial intermediaries, except insurance corporations and pension funds” are classified in the European System of Accounts (ESA) SPEs under S.125. OFI is further subdivided into: i) financial

vehicle corporations engaged in securitisation transactions (i.e. securitisation vehicles) or FVCs; ii) security and derivative dealers (e.g. broker-dealers) or SDDs; iii) Financial corporations engaged in lending (e.g. leasing and factoring companies) or FCLs; iv) specialised financial corporations (e.g. venture capital, export/import financing, central counterparties) or SFCs; v) OFI residual calculated as the difference between total financial sector assets and the assets held by all known sub-sectors. The Other Financial Institutions (OFIs) category comprise: OFI (ESA S.126), Financial Auxiliaries (ESA S.126) and Captive Financial Institutions and Money Lenders (ESA S.127) – see Tables 3 and 4 in ESRB (2018, pp. 45, 71).

The shadow banking measure proposed by Bakk-Simon *et al.* (2012) for the euro area is made of the OFIs sector plus money market funds (MMFs) minus investment funds other than MMFs. OFIs, in general terms, exclude central banks, banks (all deposit-taking corporations), insurance corporations, pension funds, public financial institutions, and financial auxiliaries. OFIs can also be divided into ten core subsectors, as follows: MMFs, hedge funds, other investment funds, real estate investment trusts and real estate funds, trust companies, finance companies, broker-dealers, structured finance vehicles, central counterparties, and captive financial institutions and money lenders (FSB, 2017). This approach is very useful in obtaining an initial conservative proxy or broad measure for the size of the shadow banking system and its development. Nonetheless, it is not a reliable source since it accounts for entities that are not engaged in shadow banking activities, overstating thus shadow banking in many countries.

In general, *activity-based approaches* are preferred to *entity-based approaches* given that the former, if used alone, would be insufficient owing to ‘the limitations of balance sheet data for risk analysis, such as measuring off balance-sheet exposures and financial derivatives, and owing to the need to account for specific interactions between entities’ (ESRB, 2016). Nonetheless, it is not yet possible to use the latter measures of shadow banking for the New EU member states from Central and Eastern Europe, because of limited data availability. In fact, the most complete financial data source for this regional group is represented by Eurostat, which only reports data on the assets and liabilities of the financial sector, disaggregated by sub-sectors. Because of this limitation, the entity-based approach in measuring shadow banking was adopted in this paper (sectorial balance sheet data of OFIs as employed by ESRB). This specific measure will allow us to perform a broad assessment of the scale of the shadow banking sector in the Central and Eastern European countries, and will enable us to focus on more specific types of shadow banking entities insofar.

3. CHARACTERISTICS OF THE CENTRAL AND EASTERN EUROPEAN COUNTRIES

The study considers eleven Central and Eastern European (CEE) countries. Most of them joined the European Union more than a decade ago (in two waves, with the exception of Croatia which is the newly entered), with five of them also in the Eurozone. In this respect, World Bank considers that these countries have completed the transition process. With regard to the degree of economic development, according to the International Monetary Fund's World Economic Outlook Database released in October 2018 (IMF, 2018), five are considered emerging and developing economies (Bulgaria, Croatia, Hungary, Poland, and Romania) while six are advanced economies (Czech Republic, Estonia, Latvia, Lithuania, Slovenia, and Slovak Republic). But this discrete classification is, to some point, confusing, as the membership to a certain group of countries (in the same development stage) varies among institutions. For example, as Hampl (2018) also argues, the post-communist countries of Central Europe are typically classified as "developed" by most governmental or international institutions (IMF, World Bank and EBRD), but as "emerging" by most market institutions (FTSE, MSCI, S&P and J.P. Morgan, among others). Moreover, once a country enters the euro area, it is almost automatically treated as a developed country, as the case of the above-mentioned advanced economies (with the exception of the Czech Republic), a classification which is confusing and raises doubts, as also pointed out by Mojmir Hampl, Vice-Governor of the Czech National Bank. In conclusion, although the Czech Republic, Estonia, Latvia, Lithuania, Slovenia and the Slovak Republic are considered advanced economies (their entrance in this group does not surpass a decade, with Lithuania and Latvia being the youngest members), these countries present features that are more typical to emerging and developing economies from CEE than to advanced economies from Western and Northern Europe.

According to Jeffers and Plihon (2016), when looking into the CEE countries' overall evolution during the last decades, it seems that these reveal a similar pattern of development market by either a softer or a harder transition towards the market economy which culminated, for all of them, with their adaptation to the EU's integration requirements, and for some of them, with the adoption of the Euro single currency.

The CEE countries shared the socialist central planning system in the past, aside from some differences in the degree of economic development (that are more or less pronounced). Having overcome their common background, these economies enrolled in a process of market economy transformation with country specific features and in various speeds. Nonetheless, as also pointed out by Du, Li and Wang (2017, p. 536), some of the challenges still remain for these economies, which include "the challenging tasks of establishing a well-functioning financial system to promote economic growth".

One more similar feature that these countries still share is their comparable “conditions of the financial markets”, making it easier to generate cross-country comparisons (Du, Li and Wang, 2017, p. 538). Also, with reference to the CEE financial markets, before the onset of the crisis, these were unstable, underdeveloped and extremely risky compared to the Western European economies. Nonetheless, afterwards, modern regulations were introduced and new financial institutions were established, which have had an impact on maintaining the macroeconomic stability of the entire region (Mihajlović and Jović, 2017).

Once the transition process was completed, the CEE countries found themselves in similar stages of institutional development, financial and macroeconomic reform, as well as banking sector depth (IMF, 2010 as cited in Miklaszewska, Mikołajczyk and Pawłowska, 2012). As their inherent strengths were unleashed, these countries began to attract important volumes of capital and foreign direct investment that drove productivity improvements and GDP growth, an overall development that was propelled by unsustainable levels of consumption and borrowing (Bubbico *et al.*, 2017). Also with regard to the banking sectors in the CEE countries, their structure appears to be similar (Ramotowski, 2015). In fact, these economies are currently more closely integrated with the rest of the world, especially with the rest of Europe, albeit the risk of accumulation and slipovers of economic imbalances. For insights on the case of Poland and the effects of the EU integration on this country see Dahl (2015, pp. 277-280).

There are also other common characteristics that the CEE countries share, among which we include the fact that they:

a) are open economies with total exports contributing with 67% to 96% of GDP in 2017 (with an average around 80% and with the exceptions of Croatia, Romania and Poland, which have the largest domestic markets) – as can be noticed after analysing data from Eurostat.

b) have already well-established EU legal rules and standards; Toshkov (2012) highlights that the CEE countries “have been largely successful in transposing the body of EU legislation properly and on-time, and that the success has persisted after the moment of accession to the EU” (Toshkov, 2012, p. 109), albeit some shortcomings still exists with regard to civil service reforms, the abolition of corruption interference and interference with the work of independent regulatory agencies and boards (Toshkov, 2012, p. 108).

c) have low wages and educated workforce and relatively fast economic growth, particularly in the pre-crisis period – see Miklaszewska, Mikołajczyk and Pawłowska (2012) where the authors analysed five CEE countries.

d) have accepted shadow economy as a wide spread phenomenon (with its size being around 25%, compared to the 15-20% of EU’s shadow economy size)

and started to fight it – see Navickas, Juščius and Navickas (2019) where the authors focused on ten Eastern European countries.

e) have similar stock market characteristics – see Karanovic and Karanovic (2016) where the authors focused on the emerging markets of the Balkans.

f) have mostly bank based financial systems coupled with a marginal role played by the capital markets and other non-bank financial intermediaries, and heavy involvement of private foreign investors – De Felice and Tirri (2006) draw the observations from an investigation performed on 8 CEE countries.

The good news is that the differences between these countries and the more developed European economies tend to fade (as proven by the rising number of advanced economies in our panel of CEE countries).

The CEE countries have been engaged in complex processes of bank reforms, economic restructuring and privatization long before their ascension in the EU. After finally becoming member of the EU family and before the financial crisis, countries experienced a rapid economic development and a vigorous banking growth. In fact, the EU accession increased the competition in the banking sector, which then reflected in a growth of the average efficiency of banks in Central and East European countries as showed by Andries (2011).

Then came the global financial crisis, which hampered this dynamics and challenged the traditional business model of banking intermediation, resulting in damages that were not so great as compared to the leading industrialized nations that were more affected. The crisis also affected the European financial markets and generated various spillover effects, but the speed of contagion varied across countries (Ivanov, Kabaivanov and Bogdanova, 2016). The effects of the crisis are still transforming and constantly influencing the various sectors of the economy and of the society and are reflected in the conditions of life of the individuals (Komorowski, 2017).

Other common characteristics of the financial and banking sectors within the CEE countries that currently remain valid, after more than a decade from the outburst of the crisis, making them in the process a relatively homogeneous group, include (Miklaszewska, Mikołajczyk and Pawłowska, 2012): they have “a relatively liberal financial sector combined with large foreign”; compared to the highly developed countries, banks in CEE “remained small, following a traditional model of banking intermediation, and not presenting a significant systemic risk” (but profitable); “foreign currency borrowing constitutes a significant risk in all East European countries” (with different FX exposures across CEE countries).

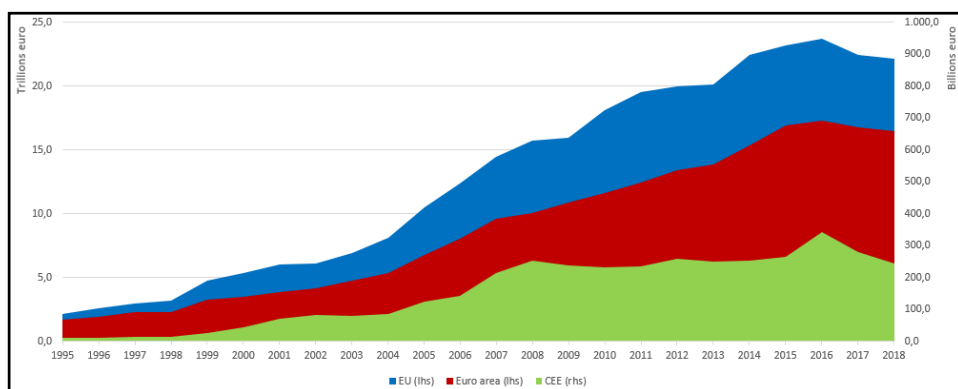
Looking forward, CEE banks are expected to remain engaged in the European regulatory and supervisory architecture (but rather as rule-takers than rule-makers). Moreover, CEE countries will remain host markets for banking institutions owned by large cross-border banking groups primarily from the countries of the euro zone. Currently, at least 70% of the banking market in

South and Eastern Europe is currently controlled by foreign banking groups – as noticed by Mihajlović and Jović (2017, p. 19).

4. ASSESSING SHADOW BANKING IN CENTRAL AND EASTERN EUROPE

Referring to the non-bank financial intermediation sector ('shadow banking'), the status quo of the CEE countries is different in many respects compared to the other, more developed EU countries and the United States. For example, with regard to the development of the shadow banking sector in the EU, euro area and CEE, Figure 1 clearly emphasizes an important expansion, in absolute terms, prior to the onset of the crisis proving that the sector fulfilled a very important role in lending within the financial system in particular, and the economy as a whole. The total volume of assets of the shadow banking institutions in the EU (euro area) grew from about 2.2 trillion (1.7 trillion) euro in 1995 to around 14.5 trillion (9.6 trillion) in 2007, while in the CEE countries it grew from about 9.6 billion euro to around 213.2 billion in 2007, within the same period.

Figure 1. Shadow banking size (measured by the total non-consolidated assets of OFIs in billion euros) in the EU, euro area and CEE



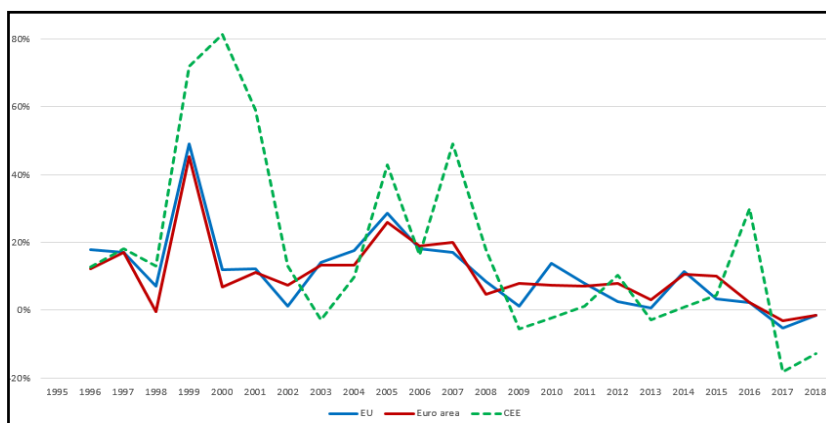
Note: annual data; data for 2018 were estimated data, while for 1995-2000 were computed by authors (using quarterly data provided by the same source)

Source: authors' elaboration based on data from Eurostat (2019a)

During the period 2000-2007, the total assets of shadow banking institutions grew on average by 15.1% per year in the EU and around 14.6% in the euro area (see Figure 2). Although sharing a similar trend, the CEE countries registered a higher expansion of this segment of the financial system, with an average increase per year of about 33.3%, clearly outpacing (in relative terms) the one in the EU and the euro area. The steady expansion stopped during the

crisis in CEE (the total assets of the shadow banking system ranging between 213.1 billion euro in 2007 and 244.6 billion euro in 2018, with a maximum value of 343.5 billion euro in 2016), but an upward and more sustainable trend was noticed in the EU overall (with an average increase of around 1 billion euro per year in the period 2008-2016, followed by two years of decline).

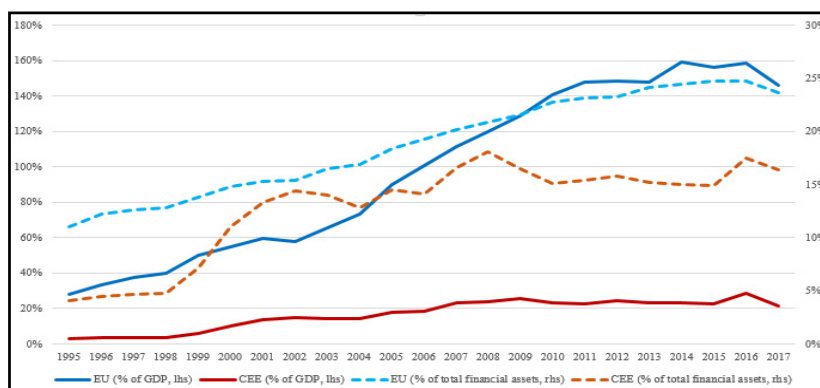
Figure 2. Shadow banking dynamics (as % change over the previous period of the total non-consolidated assets of OFIs) in the EU, euro area and CEE



Source: authors' elaboration based on data from Eurostat (2019a)

Figure 3 illustrates the growth of OFI financial assets from 1995 till 2017, as percentage points in the total assets of the financial system as well as share of GDP (financial intermediation).

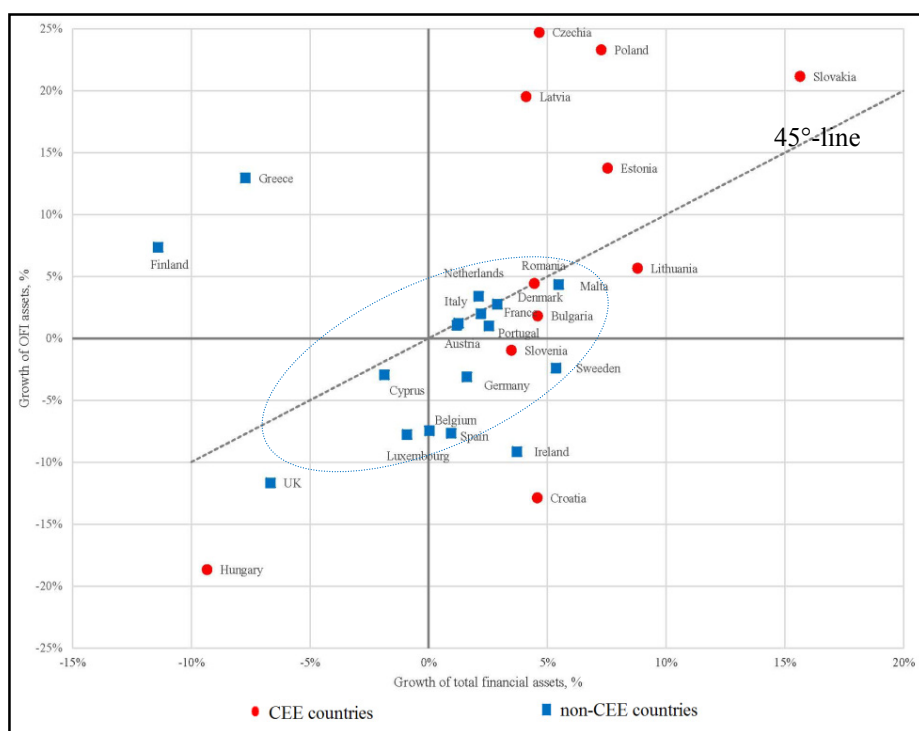
Figure 3. Financial assets of OFIs (as % in total financial assets and in GDP) in the EU and CEE



Source: authors' elaboration based on data from Eurostat (2019a)

The OFI sector in the EU has grown consistently over the past few years, increasing to around 24.8% of the total EU financial assets (in 2016), and to about 158% of GDP (for the same year). In CEE the shadow banking sector grew substantially from 1998 till 2008 (when it reached the maximum value of about 18.1% of the total CEE financial assets), after which it stabilized registering small movements from one year to another. In terms of percentage points in the GDP, the OFIs grew consistently in the analysed period, reaching a maximum value of around 28.9% in 2016.

Figure 4. The financial system' and OFIs' growth rates in 2017 (from 2016) in the EU countries (CEE and non-CEE countries)



Source: authors' elaboration based on data from Eurostat (2019a)

Figure 4 illustrates the growth rates of the assets of the financial system (X axis) and of OFIs (Y axis) in 2017 (from 2016) in the EU countries. Some of the non-CEE countries registered modest increases (at most) in terms of the total assets of the national financial system. With the exception of Malta and Sweden, the assets of the financial system of non-CEE countries grew by less than 5% in 2017, from a year earlier (with an average of around 0.05% computed for all the countries) and even decreased in Finland and Greece. Regarding the assets of

OFIs, in these countries the most important and among the few increases was registered in Greece (with 12.9%), while most other records reveal decreases in the OFIs total assets (with an average of around -1% computed for all the non-CEE countries). The dispersion, as one can see in the figure, is quite homogeneous.

The CEE countries, on the other hand, are rather dispersed in terms of growth rates. The overall financial system in these countries grew in terms of assets in 2017, as compared to 2016, with an average of about 5% (with the sole exception of Hungary, which decreased in terms of assets by about 9.3%), the record being registered by Slovakia (with 15.6%). But what is also interesting is that the total assets of OFIs also grew for most of the CEE countries (with the exception of Slovenia, Croatia, and Hungary, which revealed negative values and are positioned below the X axis), with an average of around 7.4%. Poland, Slovakia and the Czech Republic registered values above 20% (with Latvia and Estonia in the proximity). This reveals that the shadow banking sector in CEE countries is more dynamic, more vigorous, more unpredictable than the one in the non-CEE countries, which although bigger in absolute terms, has already reached its growth potential. Interesting is also the fact that for five CEE countries the growth in their shadow banking sector was the one that fueled the growth in their national financial systems (the countries positioned above the 45°-line).

When analysing the financial system's main structural components in Central and Eastern European countries – shadow banking (other financial institutions), monetary financial institutions, insurance corporations and pension funds (see Table 1) –, one can notice a relatively similar distribution among the analysed countries with regard to the total volume of assets (heterogeneous dispersion). The SB institutions in the CEE countries have assets ranging from 3.7% to 23.6% of the financial system's total volume of assets (with the exception of Hungary, where shadow banking institutions occupy an important part of the Hungarian financial system, 39.3%). Traditional banks own assets that exceed half of the financial system's total volume of assets, with figures between 66.2% and 84.0% (yet again, with the exception of Hungary with 55.7%). To sum up, Hungary excluded, all the other CEE countries have traditional banking systems that dominate the national financial systems in terms of total assets, and a rather small but increasing shadow banking system, followed by central banks and insurance corporations and pension funds. Similar conclusions result from Figure 5, which depicts the relative sizes of the traditional and shadow banking sectors at the end of 2018, expressed as % of GDP.

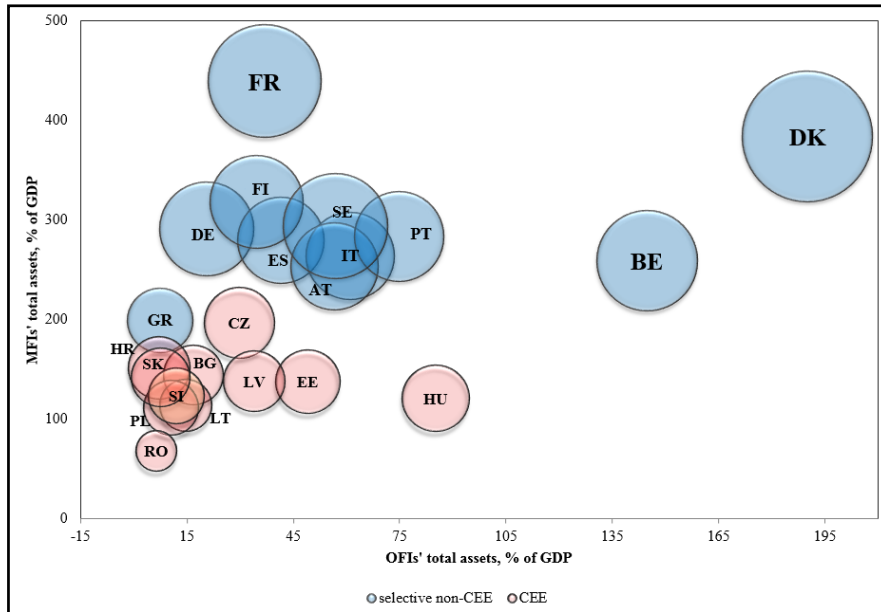
**Table 1. The EU financial system's main structural components
(as % of the total financial systems' assets), in 2018Q4 and 2007Q1**

| Countries | % of total assets, 2018Q4 | | | | % of total assets, 2007Q1 | | | |
|----------------|---------------------------|------|------|------|---------------------------|------|------|------|
| | MFI | OFls | IC | PF | MFI | OFls | IC | PF |
| CEE | | | | | | | | |
| Bulgaria | 80.3 | 9.3 | 3.7 | 6.7 | 85.5 | 10.4 | 1.9 | 2.2 |
| Czechia | 80.3 | 12.1 | 4.1 | 3.5 | 79.7 | 10.4 | 6.8 | 3.1 |
| Estonia | 66.2 | 23.6 | 2.8 | 7.4 | 77.2 | 18.3 | 2.0 | 2.4 |
| Croatia | 78.6 | 3.7 | 4.6 | 13.1 | na | na | na | na |
| Latvia | 73.0 | 18.0 | 1.9 | 7.2 | 87.0 | 10.5 | 1.4 | 1.1 |
| Lithuania | 81.1 | 10.4 | 3.3 | 5.2 | 82.5 | 13.3 | 2.7 | 1.5 |
| Hungary | 55.7 | 39.3 | 3.2 | 1.9 | 46.5 | 46.3 | 3.2 | 4.0 |
| Poland | 79.7 | 7.5 | 7.2 | 5.5 | 74.1 | 5.7 | 9.2 | 10.9 |
| Romania | 83.0 | 7.7 | 2.8 | 6.5 | 88.4 | 9.0 | 2.6 | na |
| Slovenia | 78.1 | 7.6 | 10.6 | 3.8 | 79.3 | 11.6 | 7.2 | 2.0 |
| Slovakia | 84.0 | 4.5 | 5.0 | 6.4 | 83.0 | 7.0 | 6.7 | 3.4 |
| non-CEE | | | | | | | | |
| Belgium | 53.9 | 30.1 | 14.3 | 1.7 | 59.7 | 29.4 | 10.2 | 0.6 |
| Denmark | 50.5 | 25.0 | 14.6 | 10.0 | na | na | na | na |
| Germany | 74.6 | 5.3 | 15.3 | 4.9 | 81.0 | 4.5 | 12.1 | 2.3 |
| Ireland | 39.6 | 47.0 | 9.3 | 4.1 | 62.9 | 27.6 | 6.9 | 2.7 |
| Greece | 92.1 | 3.4 | 4.1 | 0.3 | 93.5 | 3.4 | 3.1 | na |
| Spain | 77.9 | 11.5 | 7.4 | 3.2 | 73.5 | 18.7 | 5.4 | 2.4 |
| France | 74.4 | 6.2 | 19.4 | na | 74.1 | 9.3 | 16.7 | na |
| Italy | 69.8 | 16.2 | 12.7 | 1.4 | 70.6 | 17.5 | 11.4 | 0.5 |
| Cyprus | 27.5 | 70.2 | 1.2 | 1.1 | 40.3 | 56.7 | 1.5 | 1.5 |
| Luxembourg | 12.1 | 86.0 | 1.9 | 0.0 | 32.9 | 64.9 | 2.2 | 0.0 |
| Malta | 19.1 | 77.3 | 3.7 | 0.0 | 29.9 | 68.4 | 1.7 | na |
| Netherlands | 26.9 | 52.9 | 4.9 | 15.3 | 33.9 | 48.7 | 6.1 | 11.4 |
| Austria | 73.3 | 16.4 | 8.6 | 1.7 | 73.7 | 18.0 | 7.2 | 1.0 |
| Portugal | 71.2 | 18.8 | 7.7 | 2.3 | 60.6 | 29.1 | 7.5 | 2.8 |
| Finland | 82.6 | 9.0 | 8.1 | 0.4 | 82.0 | 5.3 | 11.7 | 1.0 |
| Sweden | 61.8 | 12.0 | 6.7 | 19.5 | 63.8 | 11.9 | 20.4 | 3.9 |
| United Kingdom | 72.4 | 27.6 | na | na | na | na | na | na |

Note: MFI: monetary financial institutions (central banks, deposit taking corporations and monetary market funds); OFIs: other financial institutions (other financial intermediaries, financial auxiliaries and captive financial institutions and money lenders); IC: insurance corporations; PF: pension funds.

Source: authors' elaboration based on data from Eurostat (2019b)

Figure 5. Relative sizes of traditional and shadow banking sectors as well as of the level of financial intermediation in most of the EU, 2018Q4



Note: Shadow banking total assets to GDP ratio is on the X axis, while traditional banking total assets to GDP ratio is on the Y axis | CY, UK, NL, IE, MT and LU were excluded given the very high levels of the indicators. The bubbles' sizes represent the volume of total assets of the national financial systems (share of GDP).

Source: authors' elaboration based on data from Eurostat (2019b)

The main entities that form the shadow banking system in CEE are very easy to identify, in most of the cases these being represented by finance companies (including micro-financing institutions), leasing and factoring companies, investment and equity funds, insurance companies, pawn shops, and underground entities (Ghosh, Gonzalez del Mazo and Ötöker-Robe, 2012). In Romania, for example, the other financial institutions that form the shadow banking system perform activities such as: provide consumer credits and mortgage / real estate loans, issuance of guarantees, factoring and financial leasing, financing of commercial transactions, provide microcredits, discounting activities (NBR, 2018).

Also referring to shadow banking in emerging market and developing economies (including those in CEE), Ghosh, Gonzalez del Mazo and Ötöker-Robe (2012) argue that it "is less about long, complex, opaque chains of intermediation and more about being weakly regulated or falling outside the regulatory sphere altogether" (pp. 3-4). Here, "finance, leasing, and factoring

companies; investment and equity funds; insurance companies; pawn shops; and underground entities” (Ghosh, Gonzalez del Mazo and Ötke-Robe, 2012, p. 2) comprise the main participants in the shadow banking system. What is particularly interesting about the CEE countries is that although the shadow banking system is relatively small in size, it has grown markedly in recent years, as also pointed out by Ghosh, Gonzalez del Mazo and Ötke-Robe (2012) and Du, Li and Wang (2017).

When looking into the other EU countries (non-CEE), the distribution among the national financial system’s main structural components (Table 1) is rather homogeneous. Shadow banks are somehow insignificant in terms of assets in Greece (these institutions cover only 3.4% of the financial system), and spread over almost all of the financial system in Luxembourg (with 86% coverage). In countries like Cyprus, Malta, and the Netherlands (and Ireland just a semester earlier), the shadow banking system covers more than half of the national financial system’s total assets, leaving far behind the size of the other remaining components. In other countries such as Greece, Spain, Germany and Finland, far more grater is the monetary financial institutions sector, represented by the deposit takers (mainly commercial banks).

From 2000 to 2008, shadow banking experienced a significant growth both in Europe and the United States, fulfilling a very important role in lending within the financial system in particular, and the economy as a whole. When referring to OFIs as a measure of shadow banking, this grew by 192% at a global level in 2014, compared to 2002 (the most significant increase being registered in the period prior to the international financial crisis). In the same year (2014) we witnessed a growth rate of the shadow banking global assets that significantly outpaced the growth rate of the aggregated assets of traditional banking institutions, insurance companies and pension funds, as well as other public financial intermediaries (actually, the entire financial system, excluding shadow banks). The data currently available at a global level reveal that OFIs’ total assets grew in 2015 by 4.3% (from 2014), by 8.0% in 2016 (from 2015) and by 7.6% to \$116.6 trillion globally in 2017, exceeding the growth in assets of banks, insurance corporations and pension funds. OFI assets represent 30.5% of total global financial assets, the largest share OFIs have had on record (FSB, 2019). The most accelerated growth was shown by central banks’ assets, which increased in assets in 2017 compared to 2016, by 8.8%, mostly reflecting the continuation of the asset purchase programmes (with an annual growth rate of 8.9% from 2011 till 2016). Of the major financial sectors, banks (defined as all deposit-taking corporations) grew the slowest (2.8%) in 2017, at less than half the rate of OFIs (7.6%). The largest shadow banking systems, in terms of total assets, remain those of the US, the euro area, and the UK (and soon, China).

Upon focusing the attention on the European Union’s shadow banking sector broad measure (comprising, in addition to the total assets of OFIs the total

assets of MMFs as well as non-MMF investment funds), one can notice that at the beginning of 2016 its size was estimated at almost 37 trillion Euro (ESRB, 2016), or 36% of the EU's financial sector (approximately 250% of 2015 EU GDP). Two years later, the size of the EU shadow banking system amounted to around 42.3 trillion Euro, this representing around 40% of the EU financial system (ESRB, 2018). Within the EU's shadow banking broad measure, OFI's amounted to around 63.1% in 2017 (about 26.7 trillion Euro in assets), while MMFs (1.2 trillion) and non-MMF investment funds (13.5 trillion) account for the remainder.

The EU's shadow banking system is currently around 82% of the size of the traditional banking sector. Comparing data from 2017 to 2016, we noticed that the shadow banking assets slightly fell in size by 0.1%, against the background of an increase of the EU financial system of about 0.9%. This clearly suggests a stronger expansion of the traditional banking sector in 2017, in contrast to the situation during the period 2012-2015 in which shadow banking institutions grew in size at an average annual rate of 8.6% (significantly outpacing the traditional banking institutions and the overall financial system).

Especially in the more recent years up to 2017, EU's shadow banking system has grown in size, leverage and complexity, as well as in terms of interconnectedness with the traditional banking sector (as also suggested by Portes, 2018; Girón and Matas-Mir, 2017; and others) to an extent that now it forms an integral part of the regular financial system. For more in-depth analysis on the shadow banking systems of EU and US one can look into the reports released by ERSB (2016, 2017, 2018).

5. CONCLUSIONS AND DISCUSSIONS

As this paper reveals, shadow banking is a real phenomenon, it has evolved considerably in complexity and interconnectivity with other components of the financial system (especially in the more advanced economies) and it is currently growing at a rate that in some countries (especially in emerging market economies, as those in Central and Eastern Europe) surpasses that of the traditional banking system (at least up to 2017). The on-going process of globalization, financial liberalization and innovation as well as the progresses in information and communication technologies are just some of the factors that fuel the dynamics of the phenomena all around the world. Additionally, specific factors like very rigorous banking regulation, sufficient financial liquidity and complementarities with the rest of the financial system drive the growth of different types shadow banks over time and across countries (Markiewicz, 2015). In many economies, shadow banking is an important provider of funds to the real economy and acts in a complementary way to traditional banking and market-based financing, to an extent that in some countries non-bank financial intermediation fully dominates the conventional channels of crediting. Whatever

the approach, one thing must be clear: shadow banking must not be treated separately from traditional banking! (Guttmann, 2016). Although entities pertaining to shadow banking operate *outside* the regulated sphere of commercial banking, they are “part and parcel of the growth of finance”, as they appear when banks run from the confines of strict and harsh regulation.

The paper discloses the existence of a small yet dynamic shadow banking sector in Central and Eastern Europe. We believe it to be small in size not only in absolute terms (compared to the remaining EU countries, as depicted in Figure 1), but also in relative values, given the low share of OFIs’ assets in GDP, as well as in the financial systems’ total assets (as depicted in Figure 3, over the period 1995-2017 for group level data, and in Figure 5, for the last quarter of 2018, for country level data). When analysing the data at a regional level, we noticed a more volatile evolution of the shadow banking system in CEE over a period of two decades (as reflected in Figure 2), compared to the more stable development of the EU’s shadow banking sector. At a country level, one may notice that the non-bank financial intermediation sector in CEE countries is more dynamic, more vigorous, and more unpredictable than the one in the selective non-CEE countries (see Figure 4). In fact, in the case of five CEE countries their expansion fueled the overall growth of their pertaining financial systems (although, in most of the cases, their size does not exceed $\frac{1}{4}$ of the financial system, as seen in Table 1). Hence, this highlights the high dynamics of OFIs in CEE.

Despite its increasing size and importance in the financial system, shadow banking in CEE countries continues to play a secondary role, next to the main character: the traditional banking sector. It is its recent developments that calls the attention of policymakers and requires a close monitoring of all non-bank financial intermediation activities. There are concerns at the EU level about the potential risks that might stem from this overall less regulated sector, especially given its more direct links to systemic risks. As also expressed by Jokivuolle (2018), these may arise from “the use of collateral chains, potentially hazardous levels of leverage, agency problems related “securitizing lemons”, and regulatory arbitrage which can contribute to shadow banks’ interconnectedness with banks”.

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NOMINAL CONVERGENCE OF EURO AREA MEMBER STATES

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Abstract

Nominal convergence is the main criteria for adherence to the Eurozone. The Maastricht Treaty sets out all the criteria a state must meet to join the Eurozone. There is no single fiscal policy at the level of the Eurozone, which leads to different fiscal policies within the monetary union. If at the time of accession the observance of the nominal criteria is mandatory, after the accession, the states are no longer pressed to strictly observe these criteria. National interests take the place of the economic convergence perspective of the European Monetary Union.

This paper aims to analyze the Member States of the European Monetary Union in the light of the indicators set out in the Maastricht Treaty. Once admitted to the Eurozone, states must aim for a convergence of the whole union. However, states tend to abandon all criteria, to the detriment of national interests, especially political ones. The main purpose of the paper is to see to what extent Member States comply with all the Maastricht criteria after the accession process is completed. To achieve this goal, we set out a series of objectives: to observe the fulfillment of the criteria at the time of accession, to analyze the evolution of the nominal convergence indicators and to identify the possible effects of the evolution of the indicators. As a research method, we will use both qualitative and quantitative analysis. Through statistics and scientific observation we will be able to identify to what extent the Maastricht criteria following the accession to the European Monetary Union are respected.

Keywords: Eurozone; nominal convergence; Maastricht; euro.

JEL Classification: E52, E63, F36, H62

1. THE TREATY OF MAASTRICHT

One of the most important treaties of the European Union is the Treaty of Maastricht, concluded in 1991. It states that the countries of the European Union have the obligation to renounce the national currency and to join the single European currency. Under the Treaty, the establishment of the European Monetary Union was to take place in 3 major stages (Treaty of Maastricht, 1992):

- Continue to implement the Single Market, with the free movement of goods and services, labor and especially capital, but also to deepen the convergence of the monetary policies of the Member States;
- Continue to strengthen budgetary discipline between member countries and economic policies, define the currency basket at which the single currency should stand and create the European Monetary Institute (later become the European Central Bank);
- The abolition of foreign exchange markets, the implementation of a common monetary policy, the renunciation of national currencies and the adoption by the states of the single currency – the euro.

Under the Maastricht Treaty it is stipulated that the process of monetary unification is definitive and irreversible.

The theory of optimal monetary areas expresses the idea that as long as the economic cycle of a member country of a monetary union is not synchronized with that of the partner states, negative economic effects may be created when the monetary policy is abandoned (Bojeșteanu and Manu, 2011, p. 31). One of the primary conditions for joining a monetary union is therefore the synchronization of business cycles between member countries (Mongelli, 2002, pp. 31-33). If there is no synergy of economic cycles within a monetary union, there is a risk that the common monetary policy will have differential effects at member state level (Artis, 2003, pp. 10-12). Under these conditions, the possibility of conflicts among the members of the monetary union increases, when each monetary union develops a common monetary policy, each member wishes to benefit as much as possible when implementing the act.

For a monetary area to work in an optimal way, Member States' economies need to resemble or move towards a common target. Normally, this adjustment of the economy takes place through the exchange rate. To join a monetary area, states have to decide how the national economy wants to align with the economies of member countries. Thus, states can choose a nominal or a real convergence.

Nominal convergence is the adjustment of cost and price variables and related indicators: interest rate, exchange rate, budget deficit, government debt. Nominal convergence is the convergence criteria in the euro area. Thus, under the Maastricht Treaty (1992) all the criteria a state has to comply with in order to join the euro area are regulated:

- The inflation rate must not exceed by more than 1.5% the inflation rate in the three lowest inflation countries, at least one year before accession;
- The budget deficit should not exceed 3% of GDP;
- Public debt should not exceed 60% of GDP;
- The nominal long-term interest rate should not exceed by more than 2 percentage points the average interest rate in three Member States with the most stable prices;

- Countries wishing to join the European Monetary Union must be part of the European Monetary System for at least two years, the exchange rate should be in line with the fluctuation margins of the system and the course has not experienced devaluations for two consecutive years.

Nominal convergence is a mandatory criterion for joining the European Monetary Union. However, the criteria followed are only a few of what should be considered. Over time, we have seen how some countries that have joined the euro area have chosen to abandon some convergence criteria, focusing more on just some of the criteria.

2. CONVERGENCE AT THE TIME OF ACCESSION

As we have seen before, the convergence criteria imposed by the Maastricht Treaty are binding on states wishing to join the Eurozone. In the following we will analyze the convergence criteria when each country joins the European Monetary Union. Of the 5 criteria imposed by the Maastricht Treaty, we excluded from the analysis the last point that refers to the need for countries to be part of the European Monetary System for at least two years. This mandatory criterion to be fulfilled during the pre-accession period. All states that are now members of the European Monetary Union have joined the European Monetary System for at least two years before, and the exchange rate of the national currency has fallen within the fluctuation margins of the system. At the same time, exchange rates have not experienced devaluations for two consecutive years.

So, in the following, we will analyze the other four convergence criteria: the inflation rate, the budget deficit, the public debt and the nominal long-term interest rate.

Table 1. Convergence criteria for the euro area at the time of accession

| Country | The year it joined | Reference year = year of accession – 1 | | | |
|------------|--------------------|--|--------------------------------|------------------------|---------------------------|
| | | Inflation rate (%) | Long-term nominal interest (%) | Public debt (% of GDP) | Budget deficit (% of GDP) |
| Belgium | 1999 | 0.9 | 4.75 | 118.2 | -0.9 |
| Germany | 1999 | 0.6 | 4.57 | 59.4 | -2.5 |
| Finland | 1999 | 1.3 | 4.79 | 46.9 | 1.6 |
| France | 1999 | 0.7 | 4.64 | 61.3 | -2.4 |
| Ireland | 1999 | 2.1 | 4.80 | 51.5 | 2.0 |
| Italy | 1999 | 1.9 | 4.88 | 110.8 | -3.0 |
| Luxembourg | 1999 | 1.0 | 4.73 | | 3.2 |

| Country | The year it joined | Reference year = year of accession – 1 | | | |
|-------------|--------------------|--|--------------------------------|------------------------|---------------------------|
| | | Inflation rate (%) | Long-term nominal interest (%) | Public debt (% of GDP) | Budget deficit (% of GDP) |
| Netherlands | 1999 | 1.8 | 4.63 | 62.7 | -1.4 |
| Austria | 1999 | 0.8 | 4.71 | 63.9 | -2.7 |
| Portugal | 1999 | 2.2 | 4.88 | 51.8 | -4.4 |
| Spain | 1999 | 1.8 | 4.83 | 62.5 | -2.9 |
| Greece | 2001 | 2.9 | 6.10 | 104.9 | -4.1 |
| Slovenia | 2007 | 2.5 | 3.85 | 26.0 | -1.2 |
| Cyprus | 2008 | 2.2 | 4.48 | 54.0 | 3.2 |
| Malta | 2008 | 0.7 | 4.72 | 62.3 | -2.1 |
| Slovakia | 2009 | 3.9 | 4.72 | 28.5 | -2.4 |
| Estonia | 2011 | 2.7 | | 6.6 | 0.2 |
| Latvia | 2014 | 0.0 | 3.34 | 39.4 | -1.2 |
| Lithuania | 2015 | 0.2 | 2.79 | 40.5 | -0.6 |

Source: own processing based on Eurostat data (Eurostat, 2019a, 2019b, 2019c, 2019d)

In Table 1, we can see the level of each criterion in the year before joining the European Monetary Union. For example, in the case of the founding countries of the euro area, we have taken reference in 1998, even if the year of accession is 1999. In this way, we can see the degree of fulfillment of the criteria in the last year before accession. If we chose the 1999 analysis, then the value of the four criteria would not reflect the accession criteria. The Union was set up on 1 January, and the 1999 indicators of each state are influenced by the euro area membership.

2.1. Inflation rate

The Maastricht Treaty (1992) stipulates that the inflation rate should not exceed by more than 1.5% the inflation rate in the three lowest inflation countries at least one year before accession. For the founding countries of the European Monetary Union, we can relate this criterion to the common monetary policy.

The main objective of optimal monetary policy is price stability. This objective has its origins in Article 127 (1) of the Treaty of Maastricht. The Treaty does not describe how the objective of maintaining price stability should be achieved. However, in 1998 the Governing Council of the European Central Bank established that price stability is defined as the year-on-year increase of the

Harmonized Index of Consumer Prices by a maximum of two percent (Eijffinger and de Haan, 2000, p. 64).

For the 11 founding states, we can not track the average of the three countries with the lowest inflation since there is no euro area member state in the 1998 reference year. This is precisely why we will resort to common monetary policy.

Thus, in 1998, the year before the establishment of the European Monetary Union, only two of the 11 founding states did not have an inflation rate below 2%. The two countries are: Ireland, with an inflation rate of 2.1% and Portugal with an inflation rate of 2.2%.

The rest of the countries, which joined after 1999, follow the Maastricht criterion. An exception is Estonia. This country adhered to the euro area in 2011, so we took reference to the inflation rate in 2010. In that year, the Member States with the lowest inflation rate were: Ireland (-1.6%), Slovakia (0.7 %) and the Netherlands (0.9). The average of the three lowest inflation rates is 0%. If we add the 1.5 percentage point margin to this value, we reach an inflation rate of maximum 1.5%. Criterion not met by Estonia, which in 2010 had an inflation rate of 2.7%.

2.2. Long-term nominal interest rate

The criterion imposed by the Maastricht Treaty (1992) is as follows: The nominal long-term interest rate should not exceed by more than 2 percentage points the average interest rate in three Member States with the most stable prices.

Again, due to the fact that there were no Member States in 1998 so as to be able to make the average interest rates of the countries with the most stable prices, we made the average interest rate for all the 11 acceding countries. Thus, in 1998, the average long-term nominal interest rate of euro area founding members was 4.75%. We compared this average to the interest rate in each state. We have noticed that in 5 of the 11 states the interest rate is higher than the average. However, the deviation from the average is very low, the largest difference being in Portugal and Italy, only 0.13 percentage points. Overall, we can observe a trend of convergence of this indicator within the founding states.

Regarding the states adhered to after 1999, they all met the criterion imposed by the Maastricht Treaty. In the year of pre-accession, the long-term nominal interest rate was lower than the two percentage points above the average interest rate of the three most-priced countries. In the case of Estonia, it did not declare the value of the long-term nominal interest rate in any of the intervals analyzed.

2.3. Public debt

Criterion of the Maastricht Treaty (1992): public debt should not exceed 60% of GDP.

This criterion appears to be the one most often dropped out. As we can see, 8 of the 19 European Monetary Union Member States did not meet this criterion. France, the Netherlands, Austria, Spain and Malta have surpassed the ceiling of 60% of GDP very little. The level of public debt in these countries exceeds this ceiling by a maximum of 3.9 percentage points (Austria).

Instead, we have Belgium, Italy and Greece, where public debt goes well above 60% of GDP. Belgium is the country with the highest level of public debt at the time of accession. In 1998, the year before accession, the level of public debt was 118.2% of GDP. The second place is Italy, another founding member of the euro area. For this country, in 1998, public debt accounted for 110.8% of GDP. Like the other two countries, Greece also recorded a much higher public debt than the 60% in the year before accession. In 2000, Greece's public debt was 104.9%.

2.4. The budget deficit (government deficit)

According to the Maastricht Treaty (1992): the budget deficit should not exceed 3% of GDP.

From Table 1, we can see that out of the 19 member states of the European Monetary Union 5 have managed to have a budgetary surplus in the year preceding the accession. The remaining 14 states registered a budget deficit one year before accession.

It should be noted Portugal and Greece, the only countries that did not meet the criterion imposed by the Maastricht Treaty at the time of accession.

Portugal, one of the founding countries of the euro area, joined with a budget deficit of 4.4%. The largest deficit registered by a state at the time of accession. Taking into account that the ceiling was up to 3%, Portugal's deficit in 1998 is high, almost 50% more.

Greece appears again to unfulfilled criteria. In 2000, the country's budget deficit was 4.1%. Which means a 1.1 percentage point overrun of the 3% target.

Making a summary of the Maastricht Treaty criteria and their observance at the time of joining the European Monetary Union, we should note some important issues. Firstly, the most notable criterion is public debt. Most countries have been given the derogation to abandon this criterion on their way to the Eurozone. Another interesting aspect is represented by the countries that violated most criteria at the time of accession. As we have seen, these are: Portugal, Italy, Ireland, Greece and Spain. Surprisingly or not, these are the countries that have had the most difficulties in joining, especially at the time of the global financial crisis. These countries are now recognized as PIIGS countries, the group of the most vulnerable countries in the euro area.

This proves that joining the European Monetary Union is simply a political decision, which is often not reflected in the economic reality (Aursulesei, 2018).

3. CONVERGENCE IN 2018

If we noticed the degree of compliance with the convergence criteria imposed by the Maastricht Treaty at the time of accession, it is interesting to note whether these criteria are still respected after accession and if they lead to a convergence of the whole union. As mentioned above, the aim of the European Monetary Union is to aim for a convergence of all indicators, which will allow a further deepening of integration, a shift towards a political union.

We have been able to see how states that did not meet those convergence criteria at the time of accession were also states that subsequently had the greatest economic problems. These Eurozone crises should have been a lesson for Member States, and they tend to focus on the convergence of economic indicators. In the following we will examine the convergence criteria, but this time from the perspective of the Member States already members of the European Monetary Union. As a reference, we took the latest Eurostat data on 2018.

Table 2. The convergence criteria for the euro area of the Member States in 2018

| Country | Inflation rate (%) | Long-term nominal interest (%) | Public debt (% of GDP) | Budget deficit (% of GDP) |
|-------------|--------------------|--------------------------------|------------------------|---------------------------|
| Belgium | 2.3 | 0.79 | 102.0 | -0.7 |
| Germany | 1.9 | 0.40 | 60.9 | 1.7 |
| Finland | 1.2 | 0.66 | 58.9 | -0.7 |
| France | 2.1 | 0.78 | 98.4 | -2.5 |
| Ireland | 0.7 | 0.95 | 64.8 | 0.0 |
| Italy | 1.2 | 2.61 | 132.2 | -2.1 |
| Luxembourg | 2.0 | 0.56 | 21.4 | 2.4 |
| Netherlands | 1.6 | 0.58 | 52.4 | 1.5 |
| Austria | 2.1 | 0.69 | 73.8 | 0.1 |
| Portugal | 1.2 | 1.84 | 121.5 | -0.5 |
| Spain | 1.7 | 1.42 | 97.1 | -2.5 |
| Greece | 0.8 | 4.19 | 181.1 | 1.1 |
| Slovenia | 1.9 | 0.93 | 70.1 | 0.7 |
| Cyprus | 0.8 | 2.18 | 102.5 | -4.8 |
| Malta | 1.7 | 1.39 | 46.0 | 2.0 |
| Slovakia | 2.5 | 0.89 | 48.9 | -0.7 |
| Estonia | 3.4 | : | 8.4 | -0.6 |
| Latvia | 2.6 | 0.90 | 35.9 | -1.0 |
| Lithuania | 2.5 | 0.31 | 34.2 | 0.7 |

Source: own processing based on Eurostat data (Eurostat, 2019a, 2019b, 2019c, 2019d)

3.1. Inflation rate

In the case of the inflation rate, we considered it appropriate to take into account both the Maastricht Treaty criterion and the 2% ceiling imposed by the common monetary policy.

If we follow the Maastricht Treaty criterion, the three countries with the lowest inflation rate are: Ireland (0.7%), Greece (0.8%) and Cyprus (0.8%). Their average is 0.76%. Adding the 1.5 percentage point margin, we reach an inflation threshold of 2.26%.

So, according to the Maastricht Treaty criterion in 2018, we have five countries that have exceeded the inflation rate ceiling of 2.26%. Thus, Belgium, Slovakia, Estonia, Latvia and Lithuania have an inflation rate that does not correspond to the convergence criterion. If Belgium, Slovakia, Latvia and Lithuania do not deviate very much from the reference rate, Estonia has an inflation rate of 3.4%. The difference between the Estonia and the reference inflation rate is about 50%.

On the other hand, if we take into account the common monetary policy, we notice that in addition to the five states, there are two that have an inflation rate higher than 2%: France and Austria.

3.2. Long-term nominal interest rate

According to the Maastricht Treaty, we must first identify the three states with the most stable prices. In our case, these are: Lithuania (0.31%), Germany (0.4%) and Luxembourg (0.56%). The average of the three states is 0.42%. If we add the two percentage point margin, we reach a long-term nominal interest rate of 2.42%. Again, Estonia does not have data for the period under review.

As we can see, the majority of states maintain their interest below that calculated under the Maastricht Treaty. The only countries that have exceeded that interest rate are Italy and Greece.

For Italy, the nominal long-term interest rate is 2.61%. The deviation is not very high, only 0.19 percentage points. In comparison, Greece has an interest rate of 4.19%, thus by 1.79 percentage points higher. This high interest rate in Greece is mainly due to the numerous external credits contracted to avoid the economic collapse in 2011. It is the price paid by the Greek population for the populist policies of its own government.

3.3. Public debt

As at the time of accession, in 2018 public debt is the Maastricht criterion with the most slippages. It seems that states have abandoned this criterion following their accession to the European Monetary Union. This is also apparent from a simple parallel between the two tables. We can see that rather than shrinking the public debt of states with a debt of over 60% of GDP and moving

towards that value, the facts are totally opposed. Public debt does not tend to 60%, but tends to grow in the vast majority of Member States.

In 11 of the 19 Member States, public debt is higher than the benchmark. Of all 11 states with a public debt of more than 60% of GDP: Belgium, Italy, Portugal, Greece and Cyprus have particularly attracted our attention.

Belgium has a public debt of 102% of GDP in 2018. Italy has the two largest public debt in the euro area: 132.2% of GDP. Portugal has one of the biggest surprises, with a negative record. In just 19 years it doubles its public debt from 51.8% of GDP (in 1998) to 121.5% in 2018. Similarly, Cyprus, which had a public debt of 54% of GDP in 1998, reached 2018 to a public debt of 102.5% of GDP. The most worrying is the case of Greece, which in 2018 has a debt of 181.1% of GDP. Greece's public debt is three times higher than the convergence criterion. Again, this increase in public debt for Greece is explained by lending to international markets following the Greek financial crisis, known as the 'Eurozone crisis'.

3.4. The budget deficit (government deficit)

Of all the convergence criteria, in 2018, the budget deficit is the only one that is respected by the vast majority of states.

As we can see in Table 2, we have 8 states that are in the budget surplus in 2018, and Ireland is facing a budgetary equilibrium situation (deficit of 0%). It is noteworthy that the Member States of the European Monetary Union tend not to exceed the 3% deficit imposed under the Maastricht Treaty.

The only state that exceeded the 3% deficit in 2018 is Cyprus, which had a deficit of 4.8% of GDP.

4. EFFECTS OF CONVERGENCE EVOLUTION

As we have seen in Table 1, countries that have neglected most of the convergence criteria are currently the most vulnerable countries economically. Portugal, Italy, Ireland and Spain have experienced the financial crisis, and Greece was one step away from Grexit, with the entire European Monetary Union being forced to sacrifice to save a possible bankruptcy of the country.

The evolution of convergence indicators reveals that states tend to abandon in particular the inflation rate and public debt. While the nominal long-term interest rate and the budget deficit tend to go towards convergence.

However, abandoning the two criteria only disadvantages the Member States. To begin with, the entire Monetary Union becomes more vulnerable to economic or financial shocks. States with a larger public debt will be more affected by possible shocks. And because of the single currency the other Member States will also feel the negative effects of the shock, plus they will have to intervene to help the affected state.

Another disadvantage is the level of price differentials between Member States due to the differing inflation rates. Price transparency in all Member States will not be achieved. In this case, discrepancies will develop.

Foreign lending is a purely political decision at national level to attract voters around the election. If all increases in public debt were to be based on countries' willingness to invest that money, it would not be a bad thing, on the contrary would lead to the disappearance of development disparities between the regions of the European Monetary Union. Unfortunately, much of the funds raised in the foreign markets are directed to the social system: pension increases, unsustainable wage increases, unemployment benefits, social aid or allowances. Instead of being directed to investment, money is sent to consumption, which will inevitably lead to rising prices and inflation.

Failure to meet the convergence criteria can lead to a deep crisis within the euro area. States should focus on deepening convergence to also urge non-member states to join the single currency and to pursue the integration process. Only a United Europe can become an important global player and a leader in the global economy.

5. CONCLUSIONS

Following the analysis, we can draw a series of conclusions on the nominal convergence of the Member States of the European Monetary Union:

There are very few countries that have met all the convergence criteria. Failure by current members to meet all convergence criteria at the time of accession also discourages acceding states from focusing on adherence.

The countries most affected by the crisis and the most economically vulnerable are those that did not meet all the convergence criteria at the time of accession. PIIGS countries have proven to be the weak link in European construction, and they still need the support of other Member States.

Currently, there is a tendency for Member States to abandon the criterion of the inflation rate and the debt ratio. This trend comes amid the emergence of many populist parties in the Member States. Parties that put national well above the good of the euro area.

The convergence of the states of the European Monetary Union is the only option that can derail this political construction. Only when the economies of the Member States will be synchronized will the risk of crises such as Grexit be reduced.

The present paper is just the beginning of a deepening of the convergence criteria that the states take on both entry into the euro area and after becoming full members. In the future, besides real convergence, we also want to look at real convergence indicators. They can better reflect where the Member States are on their way to synchronizing economies and why not deepen integration into a political union.

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JURISPRUDENTIAL ASPECTS CONCERNING UNFAIR TERMS IN CREDIT CONTRACTS

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Abstract

Present paper aims to examine to what extent Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts is applicable to contracts concluded by lawyers.

This analysis addresses the lawyer's contractual position from two perspectives. The first aspect is to qualify the legal assistance contract as a contract that falls within the scope of regulating abusive clauses and implicitly qualifying lawyer as a "seller or supplier" within the meaning of the Directive. The second direction of the research concerns, on the one hand, the applicability of the European Union law and the national transposing law regarding the abusive clauses in the credit agreements concluded by a lawyer with a banking institution, and on the other hand, to what extent a lawyer's office, a legal person, can be considered a "consumer" from the point of view of the Directive.

The present study focuses mainly on addressing the issues raised by the jurisprudence of the Court of Justice of the European Union which, although it has not changed its optics, has qualified the lawyer both as a "seller or supplier" and as a "consumer".

The academic and practical interest of the work derives from the fact that it addresses both law theorists and lawyers from all EU Member States or even the other liberal legal professions, notary, judicial executor, etc.

Keywords: *EU Law; unfair terms; abusive clause; consumer contracts; lawyer.*

JEL Classification: K12, K42

1. PROCEDURAL ASPECTS OF CASES RELATING TO ABUSIVE CLAUSES

1.1. Regarding the material competence of the courts

Consumers injured by contracts concluded in violation of the provisions of this law have the right to appeal to the judicial bodies in accordance with the provisions of the Civil Code and the Civil Procedure Code, aspect provided by art. 14 of the Law no. 193/2000 (r) (Mihali-Viorescu, 2017).

According to art. 94 par. 1 let. k of the Civil Procedure Code, the court of first instance judges any other pecuniary claims worth up to 200,000 lei, irrespective of the quality of the parties, professionals or non-professionals.

Thus, depending on the amount of credit granted to the claimant, material jurisdiction will, if appropriate, belong to the Court of first instance or to the Tribunal.

1.2. Regarding the territorial jurisdiction of the courts

The general rule is given by the provisions of art. 107 par. 1 of the Civil Procedure Code according to which “The request for legal action shall be filed with the court in whose jurisdiction the defendant is domiciled or has its headquarters, unless the law provides otherwise”.

Also, art. 109 of the Civil Procedure Code provides that: “The request to sue against a private legal person may also be made to the court of the place where it has a subsidiary without legal personality, for the obligations to be performed in that place or arising from acts concluded by the representative of the subsidiary or of the acts committed by it”.

Thus, in the situation of banks, which have subsidiaries or branches opened in several cities, the consumer also has the possibility to file a petition for the court in whose jurisdiction the subsidiary or the branch which issued the credit agreement is located.

However, the most important form of consumer protection in terms of territorial competence is given by the provisions of art. 113 par. 1 point 8 of the Civil Procedure Code according to which “besides the courts provided by art. 107-112, are also competent: the court of the consumer’s domicile in the applications for the purpose of finding the absolute nullity of the contract concluded with a professional” (Bleoanca *et al.*, 2016).

We therefore observe that, in accordance with the provisions of art. 116 of the Civil Procedure Code, the complainant has the choice between several competent courts, thus the consumer having the right to choose between at least three courts which are equally territorially competent.

1.3. Judicial taxes related to requests regarding abusive clauses

According to art. 29 par. 1 lit. f of Emergency Ordinance no. 80/2013 on judicial taxes, “the actions and applications, including ordinary and extraordinary appeal procedures, are exempt from the payment of judicial stamp duty on:

f) the protection of consumers’ rights, when individuals and consumer associations have the status of plaintiff against economic operators that have damaged the rights and legitimate interests of consumers.”

2. UNFAIR TERMS SPECIFIC FOR CREDIT CONTRACTS

In most cases, in credit agreements where, besides the principal debtor, there are also fiduciaries, there are specific clauses whereby the fiduciary is required to give up certain benefits provided by the law. Such clauses are: “The parties understand to clarify that the Beneficiaries have signed the Fiduciary contract in their own name and not as the legal representatives of the principal debtor, by this Additional Act, understanding and declaring that they agree with all the clauses of the fiduciary contract mentioned above.”

Fiduciary is defined by art. 2280 of the Civil Code as “the contract by which a party, the beneficial owner, undertakes to the other party, who has in another obligatory report the capacity of a creditor, to execute, free of charge or in exchange for a remuneration, the obligation of the debtor if the latter does not execute it”.

According to art. 4 par. 1 of the Law no. 193/2000, “a contractual clause that has not been negotiated directly with the consumer will be considered abusive if, by itself or with other provisions of the contract, it creates, to the detriment of the consumer and contrary to the requirements of good faith, a significant imbalance between rights and obligations of the parties”.

We therefore observe that the guarantee is an adhesion contract, having pre-established clauses by the Bank, the consumer being unable to oppose to the insertion of such a clause.

In this situation, the conditions of art. 4 par. 2 of the Law no. 193/2000 are met: “a contractual clause is considered not to be negotiated directly with the consumer if it has been written without giving the consumer the possibility to influence its content, such as standard pre-formulated contracts”.

In the same context, there are situations in the practice in which, by additional acts, besides the original guarantee, the principal debtor is also requested to bring other persons, who take over the fiduciary contract from the date of signing the additional act.

However, the fact that new guarantees have no real opportunity to oppose, giving up his benefits is contrary to the Bank’s obligation to negotiate the contractual clauses with all the parties involved.

The fact that the Bank has imposed on the new fiduciary the signing of the Additional Acts to the fiduciary contracts, stating that: “the parties understand to clarify that the guarantees (...) have signed the Fiduciary contract” (although the new fiduciary has never signed the Fiduciary Contract) denotes the abusive character of this clause.

Another proof of the unfair nature of the contract is the insertion by the Bank of the following phrase: “The Parties declare that they have negotiated the clauses of this Additional Act, fully understand the effects of the clauses they expressly accept, and these clauses reflect the will of the parties.”

The same clause, in a similar wording, is found in most credit agreements: “Through this Additional Act, the parties expressly declare that they understand and accept the terms of the Loan Agreement, as well as having negotiated in good faith the terms of the Loan Agreement.”

Also, they declare that they received the advice of their own legal advisors and fully understand the effects of the Credit Agreement which they accept expressly, and these clauses reflect the will of the parties.”

This clause, irrespective of the act in which it was inserted, is sanctioned with absolute nullity, being introduced by fraud to the law, in the Bank’s attempt to pre-constitute evidence of negotiating the clauses.

According to art. 4 par. 3 final sentence of Law no. 193/2000 “if a professional claims that a standard clause has been negotiated directly with the consumer, it is his duty to submit evidence in this respect.”

The High Court of Cassation and Justice, by Decision no. 992 / March 13, 2014 stated that: “As regards the notion of abusive clause, Article 3 of Directive 93/13 attributes that character to contractual clauses which have not been negotiated individually and, in contradiction with the requirement of good faith, causes a significant imbalance between the rights and the obligations of the parties to the contract, to the detriment of the consumer.

In this respect it is noted that in both regulations, national and European law, the same conditions can be found, which imply an abusive contractual clause.

Also, par. (3) of art. 4 of the law establishes a relative presumption of the abusive nature of the clauses in the case of predetermined contracts containing standard clauses.

This presumption can be removed only by written proof, made by the professional, of the negotiated nature of the contract or clauses, which is not the case in this file.

In this respect, it is found that the bank did not prove that it directly negotiated with the consumer the clauses whose nullity was requested.

Under these circumstances, it was right to note that this is a standard credit agreement with the bank, in which the consumer is not able to intervene, being able to sign it or not.

The consumer is deprived of correct and complete information on all loan conditions.

The same is the meaning of art. 3 point 2 of the Directive no. 93/13, which provides that “it is always considered that a clause was not negotiated individually when it was written in advance and that the consumer has therefore not been able to influence the substance of the case, particularly in the case of adhesion contracts as the credit agreement in question”.

2.1. Abusive clauses relating to interest

Usually, in credit agreements – General loan conditions, the interest clause has the following form: “Interest will accumulate daily and is calculated on the appropriate number of days for one year of 360 days”.

However, in the Special Credit Terms, the bank inserts specific clauses on interest rates: “Review Date: Monthly, on Interest Payment Date. Interest Calculation Period: Monthly, representing the period between interest payment dates, from effective grant to full pay of the entire credit. In the interest calculation period, the first day will be included and the last day will be excluded, the amount being due at the Interest Payment Date. Penalizing interest: Current interest rate + 10% year”.

These clauses, taken together, meet the conditions provided by art. 4 par. 1 of the Law no. 193/2000 cited before.

The normative text must be correlated with the list of terms considered unfair (Annex to Law no. 193/2000) according to which: “Abusive clauses are those contractual provisions which: g) give the exclusive right to the professional to interpret the contractual clauses”.

Although the special condition mentions that the period of interest calculation is one month, the general condition stipulates that the interest will accumulate daily.

Moreover, in terms of penalty interest, this is formed by the current interest rate (calculated monthly but accumulated daily) + 10%/year, but the year to which the interest is reported will have only 360 days.

Thus, exclusively the Bank can do the interpretation of the interest clauses, and the consumer cannot even anticipate the calculation algorithm.

In this respect, the jurisprudence of national courts has shown that: “The clause contained in art. 4.5 of the contract, which provides an interest calculation formula for 360 days instead of 365/366 days, is likely to create a significant imbalance between the rights and obligations of the parties, to the detriment of the consumer.

The bank did not act fairly towards the consumer since, even if the year is considered to have 360 days, it doesn’t determine the interest at one month’s level of 30 days, but related to the number the actual day of the month.

This determines an interest rate of 365 or 366 days, greater than the one stipulated in the contract of only 360 days” (Civil Sentence No. 12695/19.12.2017, issued by the Brasov District Court in File No. 16518/197/2017, final by Civil Decision No. 1760/06.07.2018, pronounced by Brasov Tribunal).

At the same time, it is relevant that the Bank juggles with various pre-formulated terms, and it is obvious the intention of deceiving the final consumer who does not have knowledge of the Bank’s internal meaning of these terms.

The importance of establishing the abusive nature of a component of the final contractual price is as obvious as it can be reached in the situation where

the consumer has to pay amounts that he does not know how they were calculated.

Another abusive clause on interest is derived from the wording:

“Interest rate = EURIBOR 1M + 3.5% p.a.

Interest Settlement / Review Date = Monthly on Interest Payment Date

Penalized interest rate = current interest rate + 10% /year”

The abusive nature of the interest clauses is based on the fact that the formula used by the bank does not indicate the amount to which the percentages of 3.5% and 10% respectively are reported.

According to the Credit Agreement, it has a predetermined amount of money, for example 100,000 Euros.

In the Special Credit Terms, the Credit Usage clause may provide that:

“Period of use = Credit may be used in multiple rates”.

Thus, the interest rate clause does not show whether the + 3.5% interest rate for the current interest and the + 10% percentage is a percentage of the total loan or represents the percentage share of the rates.

The difference is relevant because if the percentage is related to the full amount the consumer is in the situation in which the interest is also due for unused amounts at the moment of interest calculation.

For example, if the first rate is of € 10,000 and the interest is related to the entire amount of € 100,000, the Bank would deduct interest calculated at a + 3.5% percentage of the € 90,000 difference, the amount the consumer still did not benefit at that time.

However, since interest is payable for the use of money, the application of a maximum interest rate for only a part of the credit with a value under the full amount of the loan, represents a disproportion between the counterparts, which is essentially abusive.

Moreover, it does not result from the wording of the interest clause if it applies to the full amount of credit granted or is updated according to the payments made by the debtor.

For example, if the interest relates to the whole amount of 100,000 EUR, and in the first year the debtor gets to pay 50,000 EUR plus contractual interest, the interest rate on the 50,000 EUR difference should be calculated at this amount and not at full rate.

In order to reveal the Bank's bad faith in the drafting of interest-related clauses, we will compare other clauses inserted by banks into Additional Acts relating to commissions:

“Article” Commissions “shall be completed as follows:

a) Restructuring fee: 0.4% on the credit balance “.

In this situation, in which the Bank wanted to identify a commission, it stipulated expressly in the contractual clauses that the percentage applicable to

the restructuring fee is 0.4% of the credit balance, such a form lacking in the interest clauses.

Concerning the drafting of the clauses relating to interest, the High Court of Cassation and Justice, by Decision no. 3234 of October 23, 2014 showed that:

"The clauses of a bank contract that relate to the contract price must be drafted in a clear and easy to understand way so that the consumer can anticipate the economic consequences of the contract signed.

Such a clause is abusive if, as it is drafted, it cannot be clearly deduced what will be the evolution over time of the variable interest rate that consumers have to pay to the bank.

The wording gives the bank the opportunity to unilaterally determine the criteria by which it will determine this interest component, thus creating a clear imbalance between the rights and obligations of the parties, to the detriment of consumers."

The clause by which the Bank has imposed contractual interest is abusive, as it does not contain sufficient elements to predict it and to determine its amount for the entire contractual period, creating a disadvantage from the point of view of the consumer.

2.2. Abusive clauses relating to the cost of the credit agreement

In most cases, the Bank includes in the credit agreement a clause referring to the order in which the contract costs are paid, with the following form:

"All amounts received by the Bank from the Borrower shall be used to pay the amounts owed by the Borrower on the basis of the provisions of these General Credit Conditions and the Special Conditions of Credit in the following order: bank charges and other related costs, penalties, interest, credit."

A first and abusive aspect of the above-mentioned clause lies in the fact that these generally include "bank fees and other costs, registration, execution, other fees", without being quantified under the credit agreement.

Unilaterally introducing unpredictable costs for the consumer without being negotiated and without being known by the consumer creates a disproportion between the contractual obligations.

A second aspect of the unfairness of the contractual clause results from the provisions of Art. 1507 of the Civil Code according to which: "the debtor of several debts having the object of the same goods has the right to indicate, when he pays, the debt he understands to execute."

Considering that the Civil Code legislator gives the debtor the right to impute the payment, because the Bank, by inserting the aforementioned clause, violated this consumer right, it is obvious that we are dealing with an abusive clause.

2.3. Unfair term regarding the early maturity of the credit

In all credit agreements, we see clauses regarding the Bank's ability to declare early maturity of the credit in certain situations:

“(1) Should any of the following occur, at any time, the Bank shall have the right to declare in advance the Credit as due immediately with the related interest and all other expenses owed to the Bank. The Bank is authorized by the effect of this Agreement to take over all available funds in the Borrower's accounts for the settlement of the debit:

a. The occurrence of any of the situations mentioned in Chapter 8.1, paragraph (1);

b. Any court action, seizure decision, enforced execution or similar action against the Borrower

The situation in which the assets that were constituted as warranties for the purpose of obtaining the Loan are in any way seized, or if there are duties and, in the Bank's view, such circumstances are likely to affect the Borrower's ability to meet its obligations under the Credit Agreement;

c. The insolvency/ bankruptcy/ liquidation/ dissolution/ reorganization procedure has been initiated against the Borrower/Fiduciary or any entity representing a Single Debtor according to Chapter 1.1;

d. Not responding to the notification/payment requests submitted by the Borrower to the Contracting Authority as a result of non-observance of the financing conditions and the obligations mentioned in the Financing Agreement;

e. Suspension of the Financing Agreement;

f. Any non-fulfilment of the obligations, terms and conditions stipulated by the Borrower in the Financing Agreement”.

The disproportion between the contractual rights created by the early maturity clause results from the correlation of the specified clause with other specific clauses included in the Special Credit Terms:

“For a full repayment of the credit or for partial repayment, a fee of 1% of the repayment amount (if reimbursement is made from own resources) or 3% of the early repayment amount (if reimbursement is made by refinancing) is charged”.

In other words, if the borrower declares an early maturity credit, he has to pay a commission of 1% or 3% of the amount, while if the Bank declares the early maturity, the borrower does not receive a corresponding reduction or other consideration to balance contractual obligations.

At the same time, by inserting the clause on early maturity, the Bank reserves the right to denounce the agreement at any time without granting this possibility to the consumer.

This is contrary to point j) in the List of terms considered unfair (Annex to Law 193/2000) according to which: “abusive clauses are those contractual

provisions that: restrict or cancel the consumer's right to terminate or terminate the contract unilaterally.

In this respect, the High Court of Cassation and Justice noted in its jurisprudence that:

"In reality, these clauses give the bank the discretionary right to declare the maturity in advance, without the court having a criterion for checking such a measure.

In order not to be abusive, these clauses should also describe a good reason. The terms contained in the contract do not offer the real possibility for an independent observer to appreciate the merits of such a clause. These terms give the bank the discretionary right to declare the credit maturity in anticipation, without the court having at its disposal a criterion for verifying the legality of such a measure." (Decision no. 2665/2014)

2.4. Abusive clauses relating to possible litigation

Considering the increasing consumer protection in litigation against banks, they insert clauses, also abusive, by trying to anticipate certain procedural aspects:

"In any court proceeding, documents issued by the Bank (including documents issued by its computer system) about the amounts owed by the Borrower shall constitute proof of the debit to the Bank".

The abusive nature of this clause lies in the fact that it allows the Bank to use as evidence any unilaterally enrolled act, without the borrower or fiduciary being able to produce other evidence.

Given that this clause provides for exclusive rights for the bank, also motivated by the fact that this clause has not been negotiated with the consumer, under art. 4 of the Law no. 193/2000, it is necessary to abolish it as being abusive.

3. CONCLUSIONS

Contracts containing abusive clauses are common in practice and consumer rights are not effectively protected.

We believe that the Romanian legislation requires substantial changes in this area.

Although there is a list of clauses that can be considered abusive, this is not the most useful method of combating abusive practices in contracts.

Setting the unfairness of a contractual clause can be made only by a court decision.

Therefore, we consider that it is necessary to use legislative methods to prevent the future use of abusive clauses.

Another way to prevent and stop this phenomenon is the active involvement of state and non-governmental bodies.

This involvement can be materialized in negotiations between these bodies and the economic agents in order to establish the clauses that should be removed from the adhesion contracts.

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ANALYSIS OF RISK VARIABLES IN ONLINE BANKING

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Abstract

The complexity and diversity of banking risks has been on the rise in recent years due to increased competition between banks and the increasing number of financial products and services. Innovative banking financial services aimed at serving the population of the digitalized environment have caused major changes in online banking risks. The complex changes and regulations, as well as the increase in the volume of digital data, represent only a few of the factors that determine the change. As a result the associated risks are numerous.

Bank risks in the digital environment are generated by fraudulent actions made on data, failures of the online banking system, cybercrime, cyber-terrorism, cyber-activism etc. These cyber threats lead to a variety of risks affecting the online banking system, such as: financial risks (R11 – R13); operational risks (R14); security risks (R15); fraud risks (R16); money-laundering risks (R17); reputational risks (R18); technological risks (R19). All these risk categories will be the subject of this paper. The code (R11-R21) will be used for easier identification during the paper.

In this context, the purpose of this paper is to identify bank risks from another perspective for establishing a framework of risk variables for the machine-learning model that will be developed in future research. In this paper, the literature review was the central source to confirm our results.

Keywords: bank risk; Internet banking; risk variables; machine-learning.

JEL Classification: C19, G21, G32

1. INTRODUCTION

The digitization of society has generated an increase in money flows and capital, and this is now done in a fraction of a second. It is also the reason why it is almost impossible for man to control these flows both in terms of their content and their legality. The dominant role of information technology, as well as the new realities in the field of financial innovation, bring a new dimension to the

economy in which banking innovations are the key to success. These must include product innovations, process innovations and system innovations, so that the bank meets the majority requirements with minimal costs, low risks, and maximum returns.

Changes in financial markets have led to major changes in risk in banking institutions. Their role in the financial sector, economic growth and financial stability is extremely important, so the analysis of bank financial risks has become more important than ever. In this context, in this paper we want to develop a banking risk analysis along with their risk variables (seen as causes for the occurrence of risks) existing in online banking transactions through literature review.

The rapid adoption of digital technologies, such as cloud computing, data analysis and big data, blockchain, machine-learning, has led to a change in the way the customer is involved in the banking sector. Moreover, in this transition of the traditional banking system to the technology, customer interactions are no longer based on the execution of traditional banking transactions. The sale of digital products place customers on a higher level than the traditional one. This need to develop a risk management system that can be seamlessly integrated into the new digital banking transactions.

Bank risks in the digital context are generated by fraudulent actions made on data, failures of the online banking system, cybercrime, cyber-terrorism, cyber-activism etc. Cybercriminals and cyber-spy organizations will be looking to be the first to explore new emerging technologies. Technological advances give rise to new forms of attack and therefore new risks.

The present paper wants to highlight the banking systems are increasingly exposed to cyber-attacks as a result of technological innovations; technology and it use increase the pressure for banks in terms of security. In this context, the purpose of this paper is to identify bank risks in order to establishing the variables for the machine-learning model that will be developed in future papers, based on literature review. For this we will develop our typology of banking systems and online transactions. Also, we will create a framework of variables associated with the types of risks of online transactions which answer to the two questions of our research:

Q1: What are the risks to which online transactions are exposed and whose variables will be included in the framework?

Q2: What are the risks generated by online transactions and whose variables will be included in the framework?

The structure of the paper is divided as follows. The first part will analyse the context of the banking systems and the online transactions based on literature review. The second part will describe the methodology of the research that was based on literature review and limited to a number of 36 articles in the field of computer systems published between 2010 and 2019, with greater relevance for

the online banking risk classification to develop the system of variables specific to banking risks in the online environment. The third part will analyse the context of risk bank (financial risk, performance risk and some other risks) in the online environment based on literature review and create the risk variables framework. The paper will finalize with conclusions based on results of our research.

2. BACKGROUND OF BANKING SYSTEMS AND ONLINE TRANSACTIONS

New technologies, as well as digitization of basic banking services, reduce the dependence on traditional banking systems. To respond to customer needs and new technological innovations, banks have begun to place more emphasis on web-based, mobile and social media services. As digital capabilities are expanding and customer expectations continue to grow, banks expand their traditional payment systems to digitized ones. These changes result in the improvement of internal operations and the transformation of the banking value chain.

2.1. Online transactions

Antwi, Hamza and Bavoh (2015). characterised online transaction as an exchange of a financial claim by the payer on a party worthy to be useful. Likewise, Teoh *et al.* (2013) saw online transactions as any exchange of an electronic worth of payment from the buyer to the seller by means of an online payment channel that permits clients to remotely access and deal with their financial accounts and exchanges over an electronic system.

Banks offer different types of services through electronic banking platforms: *home banking*, *PC banking*, *Internet banking*, and *mobile banking*.

At these platforms, online transactions are: *based on the payed amount* (Turban, King and Viehland, 2004): *micro-payment*; *consumer payment*; and *business payment*. Furthermore, online payments systems by online payment methods (Khan *et al.*, 2017), can be: *electronic cash payment systems*; *electronic cheque systems*; *account-based systems*; and *electronic systems based on debit / credit cards* where we have generic systems, mobile systems, and specialized systems.

In order to develop our typology of online banking systems we need to consider the actors involved in the transactions (Baldimtsi *et al.*, 2015; Tyagi and Shukla, 2016; Asmah, Ofoeda and Gyapong, 2018; Expert System, 2018):

- Customers (C) – users initiating the electronic transaction;
- Business (B) – companies to deliver the product or provide the service requested by the consumer;

- Providers (Pr) – represent the intermediary parts between the trader and the banking institutions, facilitate the transfer of information between the application (web, mobile, desktop) and bank (Iepure, 2011);
- Banking institution (BI) – have the bank accounts of clients / business
- Trust Centres (TCs) – responsible for the control of digital signatures as well as the integrity of transmitted data and the authenticity of contractors; provides a final validation of the information received from the banking institution;
- Third party cards (TP) – Visa, MasterCard, Discover and American Express.

The types of transactions (Turban, King and Viehland, 2004; Botta, Digiacoimo and Ritter, 2016) that can be encountered within online banking systems are: *withdrawal* – withdrawal of funds from a bank account, savings plan, pension; *payment* – payment of goods or services purchased from accepting traders; payment of utility bills; payments made by scanning the QR code; payments made through Contactless Near Field Communication; mobile payments, etc.; *deposit* – clients can deposit money obtained from different sources of income; *transfer* – from one bank account to another.

We will synthesize in the following table (Table 1) the online banking systems according to the actors involved and the types of transactions performed:

Table 1. Typology of online banking systems

| Electronic systems | Actors involved | | | | | | Transactions performed | | | |
|--|-----------------|---|----|----|-----|----|------------------------|---|---|---|
| | C | B | Pr | BI | TCs | TP | W | P | D | T |
| Electronic cash payment systems | x | x | x | x | x | | | x | | |
| Electronic cheque systems | x | x | | x | x | | | x | | |
| Account-based systems | x | x | x | x | | x | x | | x | x |
| Electronic systems based on debit / credit cards | x | | x | x | | x | | x | | |

Source: elaborated by the authors

Based on this typology we will identify the main risks and variables of risk to be included in our framework. In the context of general theory of bank risks our paper are focused only on those which help to find the answer of two questions:

Q1: What are the risks to which online transactions are exposed and whose variables will be included in the framework?

Q2: What are the risks generated by online transactions and whose variables will be included in the framework?

2.2. Banking risks

Risk is considered to be the probability of occurrence of events with negative effects on a business, activities (Bessis, 2011; Froot, Scharfstein and Stein, 1994; Chorafas, 2002). Banking risk is a phenomenon with negative effects that results in profits diminishing or even losses that can affect the entire functionality of banks. It accompanies every activity carried out at the banking level, producing or not losses, depending on the conditions in which it manifests itself.

Depending on the bank's characteristics (Bătrâncea *et al.*, 2010), online banking risks can be grouped in three categories:

- *Financial risks*: **credit risk** (R11), liquidity risk (R12), market risk (R13)
- *Performance risks*: **operational risk** (R14), **security risk** (R15), **money laundering risk** (R17), reputational risk (R18), **technological risk** (R19)
- *Other risks*: **fraud risk** (R16), legal risk (R20).

Starting from this classification, our paper will focus on the analysis of those banking risks with large implication for the online environment. We will assign a number to these risks from R11 to R21 for easily identification and we will focus on those with greater influence to the online banking by describing the risk variables that will be the object of the model, as can be seen in section 4.

3. RESEARCH METHODOLOGY

As far as the research methodology is concerned, within this paper the research methodological principles have been followed by ensuring the unity between the theoretical and the empirical analysis, focusing on the analysis of online banking risks. The scientific approach is based on a research methodology that has included the following steps:

- Bibliographic study of general and specialized materials (scientific papers, books, articles, etc. from the foreign and national literature, mentioned in the bibliography of this paper);
- Analysis of specific concepts from the field of this paper research;
- Presenting and carrying out a scientific research of a selective documentary type on the information, knowledge and dissemination of information regarding the bank frauds and the investigation activity.

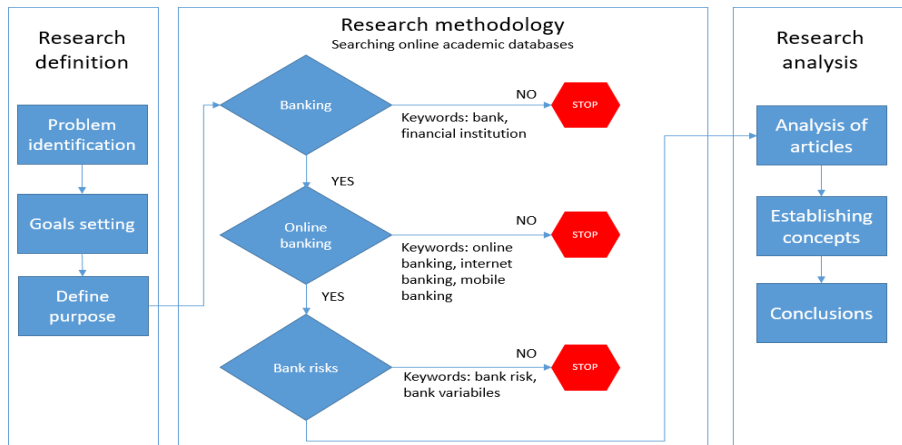
The study was based on literature review, having as a first step the selection of the most relevant bibliographic sources that could help in accomplishing the established purpose. These bibliographic sources included scientific articles in the field of banking information systems and papers published in conference proceedings volumes. To this end, we looked into the following databases:

- ScienceDirect IEEE Xplore;
- ACM Digital Library AIS eLibrary;

- Google Scholar.

The search was done in the title or abstract of the paper and was based on the use of the following keywords: “internet banking”, “online banking”, “risk”, and “bank variables”. The search results were limited to 36 articles in the field of computer systems published between 2010 and 2019, with greater relevance for the online banking risk classification to develop the system of variables specific to banking risks in the online environment.

Figure 1. Research methodology



Source: elaborated by the authors

Figure 1 illustrates the steps followed in this research paper, highlighting the keywords used, as well as the criteria used to classify a research article as relevant for the purpose of the paper: banking, online environment and banking risks. The keywords and criteria used have determined the selected bibliographic sources to be such diverse.

Our literature review was made to find answers to the two questions to build the risk variables framework for the machine-learning model. The results of this analysis are depicted in the section 4.

4. RISK VARIABLES FRAMEWORK

The rapid development of online banking has led to the emergence of various risks that have devastating consequences on the entire banking financial system. Considering all these risks we will build our framework of risk variables that present greater relevance for the online banking and that can be used in our machine-learning algorithm to detect online bank fraud. In order to easily identify all these risk variables we will assign a number to them from V1 to V18 as can be seen in table 2. From the enumerated variables we only extracted the

ones specific to fraud risks that can represent input data for the machine-learning algorithm, taking into consideration that in our previous work “Machine learning algorithms for fraud detection in Internet banking” we only used as input data the following variables: authentication data, geographical dispersion of access points, and the amount of money.

As a result, we will continue to present the results used to build our framework from the point of view of online transaction risks and risk variables. Related to first category of risks, **financial risks** we identified the following categories of interest for our framework:

Credit risk (R11) – incapacity or refusal of the debtor to perform the contractual obligations. The **risk variables** refer to the likelihood of default, the correlation between it and the degree of money recovery once the failure to pay has occurred. To these two we can add the features of the online environment (V1) to be public, shared and easily “broken”, which is why there is some uncertainty from the clients to participate in these types of activities when it comes to share personal information (Radojevic and Radovanovic, 2010; Yuanyuan and Ying, 2013). Referring to the type of participants mentioned above, this type of risk has effects on the banking institution, being a risk generated by online banking transactions.

Liquidity risk (R12) – is the risk that arises from the inability of the bank’s clients to meet their obligations when maturities are due. The **risk variables** refer to the volume and nature of the activities of the Internet banking account (V3) (Sarma and Singh, 2010). Tavana *et al.* (2018) have studied the likelihood of online liquidity risk by applying machine-learning algorithms (Artificial Neural Networks and Bayesian Networks), which have the ability of distinguishing risk variables measuring the risk by a functional approximation and a distributional estimation. Referring to the type of participants mentioned above, this type of risk has effects on the banking institution, and is not a typical risk for online banking transactions.

Market risk (R13) – arise from changes in financial market conditions and affect negatively the value of financial products, and, therefore, the net income and net worth of banking institutions. The **risk variables** within it refer to the characteristics of the trading of sensitive instruments (V4) (Ha and Nguyen, 2016). Taking into consideration the type of participants mentioned above, this type of risk has effects on the banking institution, and is not a typical risk for online banking transactions.

Concerning the second category of risks, we identify the following variables in relation with the **performance risks**:

Operational risk (R14) – is the risk of loss, being determined by internal factors or external factors. The **risk variables** refer to the authentication data (V7), advanced computers (V8), diversity of services (V2), internal control, technical infrastructure (V5), access to online systems seen as a greater influence

from the perspective of employees rather than customers (Akbari, 2012; Zade, 2010; Embrechts, 2006). Taking into account the type of participants mentioned above, this type of risk has effects on customers, business and providers, being a risk to which online banking transactions are exposed.

Security risk (R15) (Safeena, Date and Kammani, 2011; Salari and Salajegheh, 2011; Nasri, 2011; Karimi, 2006) – the level of banking system access control has become increasingly complex due to the information technologies, geographical dispersion of access points (V9) and the use of various ways of communication. Within this risk, we identify **three variables** that can affect online transactions and banking services, like: unauthorized access to the network – leads to direct losses as well as a variety of authentication and specific access issues (Ganesan and Vivekanandan, 2009; Sokolov, 2008), employee fraud – could get login data to access customer accounts, e-money fraud (V10) – this risk may be high if banks fails to take appropriate measures to detect and prevent these counterfeits, when they become owed with the amount of counterfeit electronic money. Khrestina *et al.* (2017) have proposed a prototype that allows reports to be generated in order to detect suspicious transactions. Also, another study (Proofpoint, 2010) proposes an algorithm that can detect spam, malware, and data theft losses. Taking into account the type of participants mentioned above, this type of risk has effects on the customers, business and trusted centres, being a risk to which online banking transactions are exposed seen from the perspective of data interception, money laundering and theft.

Fraud risk (R16) (Hadrian, 2007) – refers to losses due to fraud, intellectual property theft, law or policy; a **risk variable** that may occur within this category is the lack of appropriate transaction verification measures (V11). Taking into account the type of participants mentioned above, this type of risk has effects on the banking institution, the costumer, business, the trusted centres, being a risk that can be generated by online banking transactions but also one to which the transactions are exposed.

Money laundering risk (R17) – a cause to this risk is given by online transactions, which makes it difficult for banks to apply traditional methods of detecting and preventing criminal activities. In the literature (Somasundaram and Somasundaram, 2017) it is stated that online systems need to be able to filter transactions based on the level of suspicion. J.FO. Marques (2015) states that **variables** that can increase or reduce this type of risk relates to the amount deposited in the account (V13), the level of regulation (V14) of the country in which the account is opened, the client-bank relationship (V15). Referring to the type of participants mentioned above, this type of risk has effects on the banking institution, trust centres, providers, and is a risk generated by online banking transactions.

Reputational risk (R18) – is due to a negative public opinion that generates a significant loss of bank funds and / or customers. Reputational risk may arise when the bank's actions lead to the loss of public trust (**variable risk**) in the ability to perform its functions and to continue its activity (Liu, Guo and Lee, 2011). Taking into account the type of participants mentioned above, this type of risk has effects on banking institutions, and is not a specific risk for online banking.

Technological risk (R19) (Pilawski, 2003; Venus and Maman, 2004) – refers to the risk that banking institutions have in keeping the confidentiality of personal information. The **risk variables** encountered in this category relate to: password-setting policies (V16), fraudulent access control (V18), complexity of processes and information technology (V6), and bank control over transactions. Referring to the type of participants mentioned above, this type of risk has a negative impact on the banking institution, customer, business, providers, trust centres, and is a risk to which online banking transactions are exposed.

Related to the **third category of risks, other risks**, we search for the variables that are specific to legal and strategy risks.

Legal risk (R20) – arises from non-compliance with banking laws, rules, regulations or practices. The literature (Solanki, 2012; The MasterCard Foundation, 2016) states that these types of risks arise due to the rapid development in the use of online services and the differences between electronic and traditional processes. A risk variable that can be mentioned here refers to violation of data privacy regulations (V14) (Aghaunor and Fothoh, 2006). Referring to the type of participants mentioned above, this type of risk has effects on the banking institution, not being a specific risk for online banking transactions.

Strategy risk (R21) – arises as a result of lack of management understanding of their implications in the bank's activity (V17), and their technological knowledge (V12). Banks must respond to risk prevention by developing a clear strategy that starts from the top and takes into account all the relevant effects of online banking. Taking into account the type of participants mentioned above, this type of risk has effects on the banking institution, not being a specific risk for online banking transactions.

In the following table (Table 2), we summarize the bank risks described above and the associated risk variables.

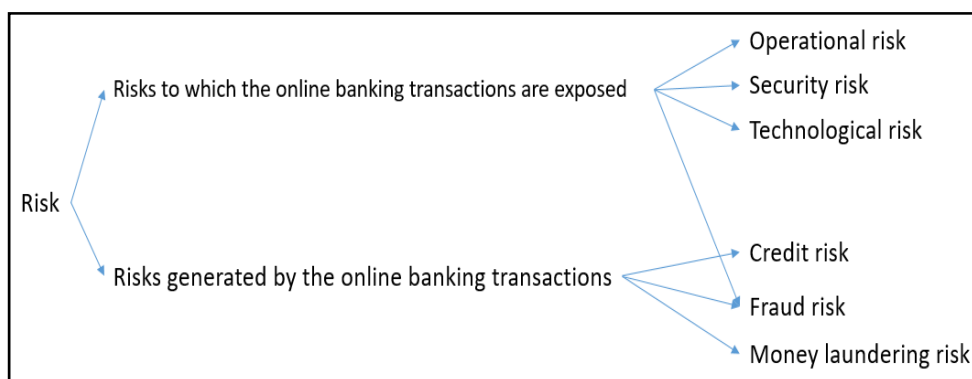
Table 2. Risk and bank risk variables

| Risk variables | Banking risks | | | | | | | | | | |
|---|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | R11 | R12 | R13 | R14 | R15 | R16 | R17 | R18 | R19 | R20 | R21 |
| Features of the online environment (V1) | x | | | | x | | x | x | | | |
| Diversity of services (V2) | x | | x | x | | x | | | | | |
| Volume and nature of Internet Banking account activities (V3) | x | x | | | | x | | | x | | |
| Characteristics of the trading of sensitive instruments (V4) | | | x | x | x | | x | | | | |
| Technical infrastructure (V5) | | | | x | x | | | | x | | |
| Complexity of processes and information technology (V6) | | | | x | | | | | x | | x |
| Authentication data (V7) | x | | | x | x | x | x | | x | x | |
| Advanced computers (V8) | | | | | x | | | | x | | |
| Geographical dispersion of access points (V9) | x | | | | x | x | | | | x | |
| E-money fraud (V10) | | | | | x | x | | | | | |
| Lack of appropriate transaction verification measures (V11) | | | | x | | x | x | | x | x | |
| Technological knowledge (V12) | | | | | | x | | | x | | |
| Amount of money (V13) | | | | | | x | x | | | | |
| Level of national regulation on banking field (V14) | x | | | | x | x | x | | | x | |
| Client-bank relationship (V15) | x | | | | | | x | x | | | |
| Inappropriate password policies (V16) | | | | x | x | x | | | | | |
| Inadquate technological investment decisions (V17) | | | | | | | | | | | x |
| Internal technological control (V18) | | | | x | | x | | | x | | x |

Source: elaborated by the authors

Risks in the banking system are an integral part of banking activity regardless of the deployment environment – offline or online. The online environment, in addition to the benefits offered (validity, speed, convenience, etc.), also brings a number of risks, each with its own characteristics. In addition to the general risks encountered in the offline / traditional environment (financial risks – credit risk, liquidity, market risk, risk of fraud, reputational risk, money laundering risk, legal risk, strategy risk) there are a number of online-specific risks. In order to find the answer of the two questions of our research, we have grouped these risks into two main categories: risks to which the online banking transactions are exposed and risks generated by the online banking transactions, as shown in Figure 2.

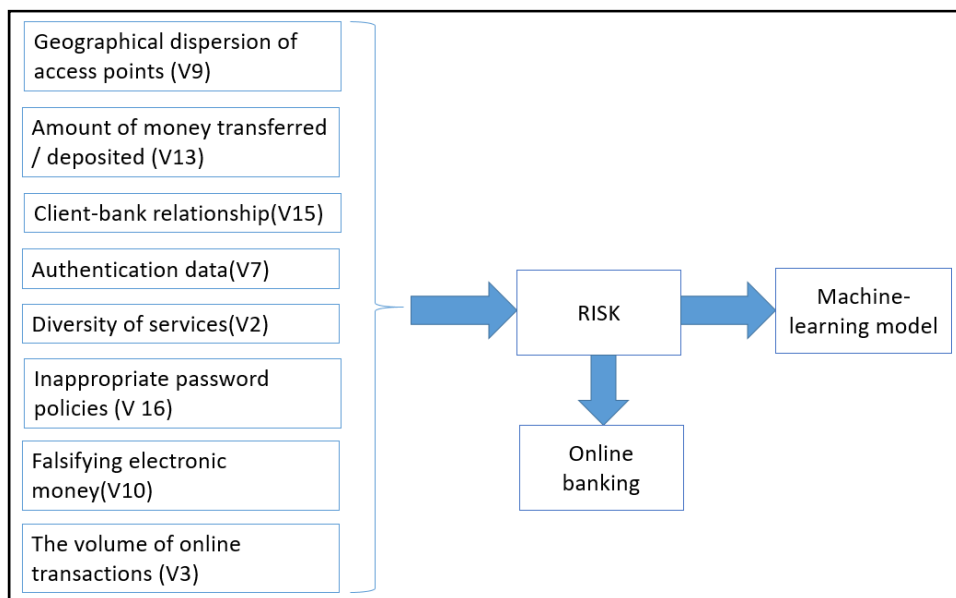
Figure 2. Online banking risks
(risks to which the online banking transactions are exposed,
risks generated by the online banking transactions)



Source: elaborated by the authors

Taking into account the information from Table 2 and the above figure (Figure 2), we can build the following system of variables specific to online banking risks (Figure 3).

As can be seen from this framework we limited our input data to those variables that are specific to the fraud risks as the machine-learning algorithm that we will develop in our future research paper will follow the issue of fraud detection in online banking systems.

Figure 3. Framework of risk variables in the online environment

Source: elaborated by the authors

Considering the two questions of our research we found out that there are four risk types to which the online banking transactions are exposed: operational risk, security risk, technological risk and fraud risk. The last type of risk – fraud risk – can also be found in the category of risks generated by the online transactions: credit risk, fraud risk and money laundering risk. Being also a reason to why we only kept the specific variables to this type of risk.

5. CONCLUSIONS

Analysing the definitions given by various authors, it was found that the risk is, in essence, “a phenomenon with negative effects that results in losses that can affect the entire functionality of banks. It accompanies every activity carried out at the banking level with or without losses, depending on the conditions in which it manifests.”

In this paper, could be seen that online banking systems present a number of risks due to its features of being public, shared and easily “broken”. The legal system is not very well defined globally, which is why the online environment is prone to criminal attacks and therefore bank risks are always there. The online banking client profile can greatly influence bank risk, which will require the identification of key features and impact on risks, being another problem that will be addressed in future papers.

By analysing the forms of the various categories of banking risks, several risk variables have been highlighted, which will be used in the development of the machine-learning model for detecting bank fraud, such as geographical dispersion of access points, amount of money transferred / deposited, client-bank relationship, authentication data, diversity of services, inappropriate password policies, e-money fraud, and the volume of online transactions.

As far as the research direction is concerned, it is desirable to include the risk variables identified in the machine-learning algorithm in order to extend its applicability by using different simple or complex data sets in the financial field. Research will also focus on the development of machine-learning model that can detect bank fraud in the online environment, with the limitation of using a public database of credit card transactions.

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COMPETITION-STABILITY IN THE BANKING SECTOR AND ECONOMIC GROWTH IN CENTRAL AND EASTERN EUROPEAN COUNTRIES

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Abstract

The stability of the financial system represents an important requirement for sustainable economic growth. The academic literature dedicates numerous studies to the pair-wise effects between banking competition, banking stability, and economic growth, the results being different for countries and regions. The purpose of our paper is to analyze the causal relationship among banking competition, banking stability, and economic growth for a panel of 11 Central and Eastern European (CEE) countries. The study deploys a Vector Error Correction modeling (VECM) and the panel Granger causality is used to examine the direction of causality between the variables. The analysis is based on different measures of banking competition and respectively several variables to represent the level and status of banking stability. The empirical results highlight that the variables are cointegrated, indicating the presence of long-run equilibrium relationship between banking competition, banking stability, and GDP per capita growth. Also, the results of our empirical study indicate both unidirectional and bidirectional causality between banking stability and economic growth and, respectively, non-uniform results for the relationship between banking competition and economic growth. The paper brings new insights on policy implications because, from the perspective of the dimension and interconnections between the institutional sectors, the banking sector is strongly interconnected with both the non-bank financial sector and the real sector, and the competition-stability trade-off is important in order to maintain the economic performance of CEE countries.

Keywords: banking competition; banking stability; economic growth; CEE countries; VECM.

JEL Classification: G21, F43

1. INTRODUCTION

The banking sector in Central and Eastern European (CEE) countries plays an important role in ensuring and maintaining long-run economic performance. The purpose of our paper is to analyze the causal relationship among banking competition, banking stability, and economic growth for a panel of 11 CEE countries, using annual time series data over the period 2000-2015. The study deploys a Vector Error Correction modeling (VECM) and the panel Granger causality is used to observe the direction of causality between the variables. The analysis is based on different measures of banking competition and respectively several variables to represent the level and status of banking stability. We find evidence of a long-run equilibrium relationship between competition-stability in banking and economic performance, respectively. Our results point out both unidirectional and bidirectional causality between banking stability and economic growth and, respectively, non-uniform results for the relationship between banking competition and economic growth.

From the perspective of the dimension and interconnections between the institutional sectors, the banking sector is strongly interconnected with both the non-bank financial sector and the real sector, and the competition-stability trade-off is important in order to maintain the economic performance of CEE countries. The importance of the proposed research relies on the analysis of inter-linkages between banking competition, banking stability, and economic growth. Additionally, we bring new evidence regarding policy implications.

The study presents the following sections: Section 2 presents a brief literature review; Section 3 describes the data and the methodology used in the study; Section 4 discusses the empirical results; while Section 5 summarizes the main findings.

2. A BRIEF REVIEW OF ACADEMIC LITERATURE

This section reviews the previous empirical studies on the following relationships: banking competition and economic growth; banking stability and economic growth and, respectively, banking competition and banking stability. An exhaustive review of the literature on the current thematic can be found in Jayakumar *et al.* (2018).

The first strand of academic literature investigates the nexus between banking competition and economic performance and the results can be summarized as follows: banking competition leads to economic performance (Petkovschi and Kjosevschi, 2014; De Guevara and Maudos, 2011); economic performance influence banking competition (Gaffeo and Mazzocchi, 2014); banking competition and economic performance reinforce one another-bidirectional link (Gaffeo and Mazzocchi, 2014); banking competition and economic performance are independent (Soedarmono, 2010). Using a GMM dynamic panel on a sample of 16 economies from Central and South Eastern

Europe, Petkovschi and Kjoshevski (2014) report that private sector and interest margin are negatively related to the economic growth. De Guevara and Maudos (2011) analyzed the effect of banking competition on industry economic growth for a sample of 53 sectors in 21 countries over the period 1993-2003 and found that financial development enhances economic growth. Gaffeo and Mazzocchi (2014) employed the GMM and Granger causality on a sample of OECD economies during 1997-2010 and found strong proofs of causality running from real growth to banking competitiveness and a bi-directional causality between them for lags higher than one. Soedarmono (2010) reports no significant nexus between banking market power and agricultural growth in countries with high economic freedom for a sample of Asian countries over the period 1999-2007.

The second strand of academic literature investigates the nexus between banking stability and economic performance and the results can be summarized as follows: banking stability leads to economic performance (Creel, Hubert and Labondance, 2015); economic performance influence banking stability (Dimitrios, Louri and Tsionas, 2016; Abid, Ouertani and Zouari-Ghorbel, 2014; Louzis *et al.*, 2012); banking competition and economic performance reinforce one another- bidirectional link (Dell'Ariccia, Detragiache and Rajan, 2008). Abid, Ouertani and Zouari-Ghorbel (2014) and Louzis *et al.* (2012) highlight that NPLs are influenced by macroeconomic variables and management quality, on the example of Turkish and, respectively, Greek banking sectors. Similar results are reported by Dimitrios, Louri and Tsionas (2016) on the example of Euro Area. Creel, Hubert and Labondance (2015) examined the nexus between economic performance and financial stability in the European Union and found that financial instability has a negative effect on economic growth, based on a panel GMM.

Finally, there are a lot of studies dedicated to the relationship between banking competition and banking stability and similarly, the results can be summarized as follows: banking competition enhances banking stability (Clark, Radic and Sharipova, 2018; Leroy and Lucotte, 2017; Kasman and Kasman, 2015; Fu, Lin and Molyneux, 2014); banking stability promotes banking competition (Fernandez, González and Suarez, 2016); banking competition and banking stability support each other (Liu *et al.*, 2013) and, respectively, no bearing between competition and stability in banking, depending on the indicators considered (Jayakumar *et al.*, 2018). Based on a sample of countries from the Commonwealth of Independent States (CIS), Clark, Radic and Sharipova (2018) show that competition contributes to financial stability. Kasman and Kasman (2015) examined the impact of competition and concentration on bank stability, on the example of Turkey, during 2002-2012, and found that competition is negatively related with NPL ratio but positively linked to the Z-score. Fu, Lin and Molyneux (2014) analyzed competition and

stability in 14 Asia–Pacific countries, over 2003–2010 and found that excessive concentration and lower pricing power lead to bank fragility.

3. DATA AND METHODOLOGY

3.1. Data

The research is based on annual data, retrieved from the databases of the World Bank, covering the period 2000–2015, for 11 Central and Eastern European countries, namely Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia. The time period is driven by the data availability, the final sample comprising 176 observations. To gauge the relationship between banking competition, banking stability, and economic growth, we employ proxy variables for each dimension. Banking stability is expressed via four indicators: Z-index, non-performing loans, private credit by deposit money banks and bank capitalization. Banking competition is represented by three indicators: Lerner index, Boone indicator, and 5-bank asset concentration. GDP per capita growth expresses the economic performance. All indicators are country level and have the same unit of measurement, being expressed in percentage, except Lerner and Boone indicators, expressed in numbers. The measures of banking stability and, respectively, banking competition are selected based on relevant literature in the field (Fernandez, González and Suarez, 2016; Creel, Hubert and Labondance, 2015; Kasman and Kasman, 2015; Kasman and Carvallo, 2014; Carretta *et al.*, 2015; Berger, Klapper and Turk-Ariss, 2009; Chang *et al.*, 2008). Table 1 provides a summary of the variables used in the empirical analysis.

Table 1. Definition of the variables

| Variables | Notation | Description |
|--|----------|---|
| <i>Banking stability indicators</i> | | |
| Bank Z-score | ZIN | Z-score represents the probability of default and compares the capitalization and returns of the banking system with the volatility of those returns. The indicator represents one of the most popular indicators to assess the financial stability of the banking system. A large value of Z-score indicates a high level of financial soundness (Mirzaei, Moore and Liu, 2013). |

| Variables | Notation | Description |
|--|----------|--|
| Non-performing loans | NPL | Nonperforming loans are loans for which the contractual payments are unpaid and NPL ratio is overdue for more than a certain number of days (i.e. more than 90 days). It represents a proxy variable for credit risk and also a measure of the quality of banking assets and of credit portfolio health. However, this indicator does not fully illustrate bank stability, since it highlights only credit risk (Cihak and Schaeck, 2010). |
| Private credit by deposit money banks to GDP (%) | PCD | Represent the financial assistance provided to the private sector by domestic money banks, as a percent of GDP. It is a measure of financial depth. |
| Bank capitalization (%) | BCA | It represents the ratio between bank capital and reserves and, respectively, total assets. |
| Banking competition indicators | | |
| Lerner index | LEI | An indicator of market power in the banking system and it is defined as the difference between output prices and marginal costs divided to marginal price. There is an inverse nexus between the values of the Lerner index and bank competition. |
| Boone indicator | BOI | It represents the degree of competition, by analyzing the nexus between bank performance and efficiency. The explanation behind the indicator is that higher profits are reached by more-efficient banks. The more negative values of the Boone indicator suggest the increased competition. |
| 5-bank asset concentration | BAC5 | Assets of the five largest banks as a share of total commercial banking assets. |
| Economic growth indicator | | |
| GDP per capita growth (annual %) | GDP | Annual percentage growth rate of GDP per capita based on constant local currency. Aggregates are based on constant 2010 U.S. dollars. |

Source: Global Financial Development Database (World Bank, 2019)

3.2. Econometric framework

We start our analysis by testing for panel stationarity and cointegration properties of our time series, using an augmented Dickey-Fuller test and, respectively, Pedroni's panel Cointegration Tests. In order to test the cointegration relationship, we consider three specifications and four cases. In each specification, economic growth and banking competition are the common variables, while the difference of each specification depends on the deployment

of different banking competition measures (Lerner index, Boone indicator, BAC5). Again, within each specification, we consider four cases depending on the indicator used as a proxy for financial stability (Z-score, NPL, PCD, BCA).

The cointegration properties means that if Z_t denotes an $n \times 1$ vector of series $Z_{1t}, Z_{2t}, Z_{3t}, \dots, Z_{nt}$ and (a) each Z_{it} is $I(d)$; and (b) there exists an $n \times 1$ vector β such that $Z_t' \beta \sim I(d-b)$, then $Z_t \sim CI(d, b)$.

In line with Jayakumar *et al.* (2018), we use the following vector error correction model to analyze the nexus between banking competition, banking stability, and economic growth:

$$\begin{bmatrix} \Delta Economic growth_{it} \\ \Delta Banking competition_{it} \\ \Delta Banking stability_{it} \end{bmatrix} = \begin{bmatrix} \eta_{1j} \\ \eta_{2j} \\ \eta_{3j} \end{bmatrix} + \sum_{k=1}^n \begin{bmatrix} \mu_{1ik}^1(L) & \mu_{2ik}^1(L) & \mu_{3ik}^1(L) \\ \mu_{2ik}^2(L) & \mu_{2ik}^2(L) & \mu_{3ik}^2(L) \\ \mu_{3ik}^3(L) & \mu_{2ik}^3(L) & \mu_{3ik}^3(L) \end{bmatrix} \begin{bmatrix} \Delta Economic growth_{it-k} \\ \Delta Banking competition_{it-k} \\ \Delta Banking stability_{it-k} \end{bmatrix} + \begin{bmatrix} \partial_{1i} ECT_{it-1} \\ \partial_{2i} ECT_{it-1} \\ \partial_{3i} ECT_{it-1} \end{bmatrix} + \begin{bmatrix} \varepsilon_{1it} \\ \varepsilon_{1it} \\ \varepsilon_{1it} \end{bmatrix}$$

Where Δ is the first difference, i is the country specification in the panel; t is the time period; ε is the error term. Banking competition is represented by Lerner index, Boone indicator or BAC5, while banking stability is represented by Z-score, NPL, PCD or BCA, depending on the case and specification. The ECT-1's are the lagged error-correction terms. We use AIC to establish the lag length.

Finally, the panel Granger causality test is used to assess the direction of causality between banking competition, banking stability, and economic growth, by assuming the following hypotheses:

- H_0 : Banking competition does not Granger-cause economic growth
Economic growth does not Granger-cause banking competition
- H_1 : Banking stability does not Granger-cause economic growth
Economic growth does not Granger-cause banking stability
- H_2 : Banking competition does not Granger-cause banking stability
Banking stability does not Granger-cause banking competition

4. EMPIRICAL RESULTS

Table 2 reports the mean, median, maximum, minimum, standard deviation, skewness and kurtosis of the variables used in the study. Z-score exhibits a mean value of 6.30%, while the minimum and maximum values were -0.34% (Slovenia, in 2013) and 14.39% (Bulgaria, in 2000), respectively. The NPL shows a maximum of 29.3% in the Czech Republic in 2000, while Estonia has the healthiest credit portfolio from the sample. Lerner index ranges from 0 to 0.71, with a mean value of 0.25, suggesting a good degree of competition across the sample EU countries. The Boone indicator varies between -1.57 and 0.23, with a negative average, which means that banks with higher marginal costs lose market share. Positive values of Boone index are registered in Lithuania, suggesting that the bigger a bank's marginal costs, the more market share will earn (Jayakumar *et al.*, 2018).

Table 2. Descriptive statistics of the variables

| Variable | Mean | Median | Max | Min | Std. dev. | Skewness | Kurtosis |
|----------|-------|--------|--------|--------|-----------|----------|----------|
| ZIN | 6.30 | 5.46 | 14.39 | -0.34 | 2.79 | 0.87 | 3.49 |
| NPL | 7.23 | 5.20 | 29.30 | 0.20 | 5.90 | 1.11 | 3.62 |
| PCD | 46.56 | 46.09 | 102.53 | 6.38 | 19.27 | 0.31 | 2.88 |
| BCA | 9.28 | 8.70 | 15.30 | 4.60 | 2.12 | 0.51 | 2.89 |
| LEI | 0.25 | 0.25 | 0.71 | 0.00 | 0.09 | 0.99 | 7.14 |
| BOI | -0.13 | -0.09 | 0.23 | -1.57 | 0.18 | -3.70 | 24.98 |
| BAC5 | 76.81 | 75.75 | 100.00 | 46.57 | 12.06 | 0.13 | 2.85 |
| GDP | 3.74 | 4.05 | 12.92 | -14.56 | 4.42 | -1.26 | 6.39 |

Source: authors' calculations

In conclusion, the summary statistics highlight a larger variability across the CEE countries in terms of economic growth, financial sector competition, and banking stability.

The Augmented Dickey-Fuller (ADF) is used to test for the presence of unit roots and the results are reported in Table 3. The null hypothesis of the test is that the data has a unit root against the alternative one of no unit root in the variables. The ADF statistics for all variables, except Boone indicator, are insignificant at 5% level of significance, which leads to non-rejection of the null hypothesis, the variables being non-stationary. Except for Boone indicator which is level stationary, for the other variables the first difference is stationary, which denotes that the variables are integrated of order one, $I(1)$.

Table 3. Panel Unit Root Test Results

| Variable | ADF level critical value | | | ADF t-statistic | ADF first difference critical value | | | ADF t-statistic | |
|----------|--------------------------|-------|-------|-----------------|-------------------------------------|-------|-------|-----------------|------|
| | 1% | 5% | 10% | | 1% | 5% | 10% | | |
| ZIN | -2.56 | -1.94 | -1.62 | -0.9636 | -2.56 | -1.94 | -1.62 | -8.2754 | I(1) |
| NPL | -3.43 | -2.86 | -2.57 | -1.2068 | -2.56 | -1.94 | -1.62 | -8.6273 | I(1) |
| PCD | -2.56 | -1.94 | -1.62 | -1.3451 | -2.56 | -1.94 | -1.62 | -6.9102 | I(1) |
| BCA | -2.56 | -1.94 | -1.62 | -1.1081 | -2.56 | -1.94 | -1.62 | -9.5947 | I(1) |
| LEI | -2.56 | -1.94 | -1.62 | -1.5225 | -2.56 | -1.94 | -1.62 | -9.4453 | I(1) |
| BOI | -2.56 | -1.94 | -1.62 | -3.6104 | | | | | I(0) |
| BAC5 | -2.56 | -1.94 | -1.62 | -0.1860 | -2.56 | -1.94 | -1.62 | -9.8657 | I(1) |
| GDP | -2.56 | -1.94 | -1.62 | -1.4479 | -2.56 | -1.94 | -1.62 | -5.6035 | I(1) |

Source: authors' calculations

The estimations of Pedroni's panel cointegration test are reported in Table 4. The empirical results endorse that the variables are cointegrated, highlighting a long-run equilibrium between banking competition, banking stability, and GDP per capita growth.

Table 4. Results of Panel Cointegration Test for different specifications and cases

| | Case 1 | Case 2 | Case 3 | Case 4 |
|---|--------------|--------------|--------------|--------------|
| Specification 1: GDP, LEI, Banking stability | | | | |
| Panel v-Statistic | -0.194201 | -1.313595 | -0.159179 | -1.167299 |
| Panel rho-Statistic | -1.120522 | 0.259635 | -1.483204 | -0.157432 |
| Panel PP-statistic | -2.336159*** | -2.715046*** | -2.727972*** | -2.240650** |
| Panel ADF-Statistic | -3.426041*** | -5.325513*** | -2.616295*** | -3.250496*** |
| Group rho-Statistic | -0.059646 | -1.299816 | -0.349022 | 0.106973 |
| Group PP-statistic | -3.003656*** | -3.565797*** | -3.319154*** | -2.731699*** |
| Group ADF-Statistic | -3.246907*** | -5.041835*** | -2.064985** | -2.814148*** |
| Inference | Cointegrated | Cointegrated | Cointegrated | Cointegrated |
| Specification 2: GDP, BOI, Banking stability | | | | |
| Panel v-Statistic | 0.391765 | -1.156948 | -0.301009 | -0.141875 |

| | Case 1 | Case 2 | Case 3 | Case 4 |
|--|--------------|--------------|--------------|--------------|
| Panel rho-Statistic | -1.253846 | -1.587158* | -1.249637 | -1.257609 |
| Panel PP-statistic | -2.547421*** | -2.856563*** | -2.455922*** | -2.464558*** |
| Panel ADF-Statistic | -3.912586*** | -3.533643*** | -3.966084*** | -4.162377*** |
| Group rho-Statistic | -0.442213 | -0.371934 | -0.472441 | -0.513788 |
| Group PP-statistic | -3.515266*** | -3.222374*** | -3.349577*** | -3.358261*** |
| Group ADF-Statistic | -3.834807*** | -4.063649*** | -4.506204*** | -4.567600*** |
| Inference | Cointegrated | Cointegrated | Cointegrated | Cointegrated |
| Specification 3: GDP, BAC5, Banking stability | | | | |
| Panel v-Statistic | 0.965019 | 0.477490 | 0.876932 | 0.511273 |
| Panel rho-Statistic | -1.075952 | -0.848309 | -1.028187 | -1.178787 |
| Panel PP-statistic | -2.251248** | -3.022907*** | -3.930948*** | -2.693591*** |
| Panel ADF-Statistic | -2.809325*** | -5.405271*** | -5.985849*** | -4.205742*** |
| Group rho-Statistic | 0.038278 | 0.140934 | -0.289633 | -0.386189 |
| Group PP-statistic | -4.373601*** | -3.907606*** | -5.976805*** | -4.248426*** |
| Group ADF-Statistic | -2.532992*** | -6.071689*** | -7.449304*** | -5.006307*** |
| Inference | Cointegrated | Cointegrated | Cointegrated | Cointegrated |

Note 1: Case 1: GDP, LEI, and ZIN; Case 2: GDP, LEI, and NPL; Case 3: GDP, LEI, and PCD; Case 4: GDP, LEI, and BCA.

Note 2: GDP represent economic growth; LEI is Lerner index, BOI is Boone indicator, BAC5 is 5-bank asset concentration; BCA is bank capitalization, NPL is non-performing loans; ZIN is bank-level Z-index; PCD is private credit by deposit money banks.

Note 3: Banking stability and is used to indicate ZIN, NPL, PCD, or BCA.

Note 4: * Significant at 10%. **Significant at 5%. *** Significant at 1%.

Source: authors' calculations

After investigating the cointegration relationship among the three sets of variables, a panel Granger causality test, based on VECM, is employed to observe the direction of causality between the variables. Table 5 reports the Granger-causal relationship between banking competition, banking stability, and economic growth.

Table 5. The results of Granger causal relationships

| Specifications/ Cases F-Statistic (Prob.) | Banking competition does not Granger- cause economic growth | Economic growth does not Granger- cause banking competition | Banking stability does not Granger- cause economic growth | Economic growth does not Granger- cause banking stability | Banking competition does not Granger- cause banking stability | Banking stability does not Granger- cause banking competition |
|--|---|--|---|---|---|--|
| Specification 1: GDP, LEI, Banking stability | | | | | | |
| Case 1 | 4.40886 (0.0138) | 0.77485 (0.4626) | 4.84915 (0.0091) | 6.59143 (0.0018) | 1.47721 (0.2316) | 1.17654 (0.3112) |
| Case 2 | 2.65506 (0.0361) | 0.89092 (0.4716) | 0.08544 (0.9182) | 4.78273 (0.0097) | 5.59257 (0.0046) | 3.83414 (0.0238) |
| Case 3 | 4.40886 (0.0138) | 0.77485 (0.4626) | 13.1962 (5.E-06) | 15.2192 (1.E-06) | 3.28033 (0.0404) | 3.78457 (0.0249) |
| Case 4 | 4.40886 (0.0138) | 0.77485 (0.4626) | 0.71877 (0.4890) | 2.50973 (0.0847) | 0.60933 (0.5451) | 1.14223 (0.3219) |
| Specification 2: GDP, BOI, Banking stability | | | | | | |
| Case 1 | 1.02487 (0.3614) | 0.73624 (0.4806) | 4.84915 (0.0091) | 6.59143 (0.0018) | 1.03431 (0.3580) | 2.64515 (0.0743) |
| Case 2 | 1.02487 (0.3614) | 0.73624 (0.4806) | 0.08544 (0.9182) | 4.78273 (0.0097) | 0.76999 (0.4649) | 0.36137 (0.6973) |
| Case 3 | 1.02487 (0.3614) | 0.73624 (0.4806) | 13.1962 (5.E-06) | 15.2192 (1.E-06) | 1.31159 (0.2725) | 0.88350 (0.4155) |
| Case 4 | 1.02487 (0.3614) | 0.73624 (0.4806) | 0.71877 (0.4890) | 2.50973 (0.0847) | 0.64873 (0.5242) | 0.83410 (0.4363) |
| Specification 3: GDP, BAC5, Banking stability | | | | | | |
| Case 1 | 1.06802 (0.3753) | 0.48917 (0.7437) | 3.06052 (0.0192) | 3.70966 (0.0069) | 4.13234 (0.0036) | 0.34609 (0.8463) |
| Case 2 | 0.92001 (0.4008) | 0.44064 (0.6445) | 0.08544 (0.9182) | 4.78273 (0.0097) | 0.16425 (0.8487) | 1.09889 (0.3359) |
| Case 3 | 1.06802 (0.3753) | 0.48917 (0.7437) | 4.69779 (0.0015) | 9.33225 (1.E-06) | 1.68315 (0.1581) | 0.81777 (0.5162) |
| Case 4 | 0.92001 (0.4008) | 0.44064 (0.6445) | 0.71877 (0.4890) | 2.50973 (0.0847) | 1.81631 (0.1662) | 0.79771 (0.4523) |

Note 1: Case 1: GDP, LEI, and ZIN; Case 2: GDP, LEI, and NPL; Case 3: GDP, LEI, and PCD; Case 4: GDP, LEI, and BCA.

Note 2: GDP represent economic growth; LEI is Lerner index, BOI is Boone indicator, BAC5 is 5-bank asset concentration; BCA is bank capitalization, NPL is non-performing loans; ZIN is bank-level Z-index; PCD is private credit by deposit money banks.

Note 3: Banking stability and is used to indicate ZIN, NPL, PCD, or BCA.

Source: authors' calculations

In what follows, we look systematically at possible short-run causality between competition and stability in the banking sector and economic growth, respectively.

We find evidence of unidirectional causality between banking competition and economic growth under the first specification, when Lerner index is used as

a proxy for banking competition, indicating that banking market power tends to enhance economic growth. For the other two specifications, the null hypothesis of banking competition does not Granger-cause economic growth cannot be rejected. On the contrary, there is no significant relationship between economic growth and banking competition. In line with Jayakumar *et al.* (2018), we highlight that the relationship between competition in the banking system and economic performance is non-uniform for the European countries.

Regarding the nexus between banking stability and economic growth, we find evidence of short-run unidirectional or bidirectional causality. Under the cases 1 and 3 of all specifications, it is found a bidirectional Granger causality between banking stability and economic growth. This means that financial soundness of banking sector, measured via bank Z-score (Case 1) or private credit by deposit money banks (Case 3), and economic performance, respectively, reinforce one another. A good economic performance can support a high degree of employment, higher salaries, and education, generating an increased demand for financial services. On the other hand, Z-score increases with profitability and solvency and during economic downturns, banking activity shrinks. These results are congruent with those of Jayakumar *et al.* (2018) and Dell’Ariccia, Detragiache and Rajan (2008). We also find support for unidirectional causality running from economic growth to banking stability, under the cases 2 and 4 for all specifications, when banking stability is measured via NPL or banking capitalization. A possible explanation could be the fact that economic wealth is reflected in a good quality of credit portfolio while regulating policy during an economic cycle can impact banking performance. Overall, we find strong evidence of Granger causality running from economic performance to banking stability.

Regarding the short-run causality results between banking competition and banking stability, we report evidence of bidirectional causality between competition-stability in the cases of specification 1 where Lerner index is considered jointly with non-performing loans and private credit by deposit money bank. This suggests that increased competition can have a positive impact on banking stability, while stable banks offer support to effective investments which may generate savings, a cycle with positive influences on the competition. The results are congruent with those of Jayakumar *et al.* (2018), Liu *et al.* (2013), and Hope, Gwatidzo and Ntuli (2013). Additionally, we report some evidence of the presence of unidirectional causality between some of the variables (BAC5->ZIN, under specification 3, case 1). We also find no evidence of Granger causality between banking competition and banking stability, particularly for specification 2, where Boone indicator is considered jointly with financial stability measures. The other possible situations are specification 3 (cases 2-4), and specification 1 (cases 1 and 4). A possible could be the fact that competition leads to lower interest rates, while these lower rates will decrease

returns of performing loans, which imply a non-linear relationship between competition and stability in the banking sector (Jayakumar *et al.*, 2018). The results are in line with those of Liu *et al.* (2013) and Lee and Hsieh (2014).

5. CONCLUSIONS

Based on panel Granger causality, derived from a VECM specification, we analysed the the direction of causality between banking competition, banking stability, and economic growth on the example of 11 CEE countries (Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia) over the period 2000-2015.

The analysis is based on different measures of banking competition (Lerner index, Boone indicator, and 5-bank asset concentration) and respectively several variables to represent the level and status of banking stability (Z-index, non-performing loans, private credit by deposit money banks and bank capitalization).

The empirical results highlight that the variables are cointegrated, indicating the presence of long-run equilibrium relationship between banking competition, banking stability, and GDP per capita growth. The results of our empirical study indicate both unidirectional and bidirectional causality between banking stability and economic growth. We highlight that financial soundness of banking sector, measured via bank Z-score or private credit by deposit money banks, and economic performance, respectively, reinforce one another. We also find support for unidirectional causality running from economic growth to banking stability, when banking stability is measured via NPL or banking capitalization. A possible explanation could be the fact that economic wealth is reflected in a good quality of credit portfolio while regulating policy during an economic cycle can impact banking performance. Overall, we find strong evidence of Granger causality running from economic performance to banking stability.

The research reveals non-uniform results for the relationship between banking competition and economic growth for CEE countries. The short-run causality results between banking competition and banking stability highlight evidence of unidirectional, bidirectional and, respectively, no causality between them, depending upon the deployment of particular indicators.

Our findings hold several policy implications. The policies that sustain the GDP per capita growth would seem to be able to generate a virtuous cycle with beneficial effects on the stability of the banking sector, which in turn feeds back on real growth itself. In addition, policies promoting competition in the banking system may have positive impacts on efficiency and therefore, on economic performance in CEE countries.

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THE RELATIONSHIP BETWEEN COMPETITION AND RISK-TAKING – A QUALITATIVE ANALYSIS ON FOUR MAJOR ROMANIAN BANKS

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Abstract

The current paper investigates the impact of competition on bank risk-taking by developing a quantitative database based on the categorization of es qualitative information belonging to CEOs' statements from 2007-2009 annual reports of four Romanian systemically important banks: BCR, Raiffeisen Bank, Banca Transilvania and Unicredit Bank. The results highlight the connection between banking competition and risk, along with presence of the impacts of financial regulation and business environment that affect this link.

Keywords: *bank competition; risk; business environment; financial regulation.*

JEL classification: G21, G28

1. INTRODUCTION

Global Financial Crisis has brought about significant changes for the Romanian banking sector. Before 2008, 43 credit institutions have been active while by the end of 2015 the number has dropped to 37. This trend towards banking consolidation is the result of an attempt to restructure the main activities, become more cost-efficient and deal with the burden of new financial regulation through the sale of the portfolios of operations to the more competitive local financial institutions (i.e. Bank of Cyprus, Millennium Bank, RBS and Volksbank) or market exit (i.e. La Caixa and Montepio). Meanwhile, the balance-sheet cleaning process and the changes in risk methodologies have resulted in decreasing NPLs ratio. The current paper investigates the nexus between competition and risk in the Romanian banking sector during 2007-2009, by coding the CEO's messages from annual reports.

In the extant literature, there are no similar studies in terms of methodology. The quantitative papers available promote two main theories on the relationship between banking competition and risk: competition-fragility and competition-stability. Therefore, the researches belong to three major categories: those that prove the presence of the competition-fragility relationship, those that confirm the competition-stability paradigm, and those that validate both perspectives.

Marcus (1984), Chan, Greenbaum and Thakor (1986), Keeley (1990), Hellmann, Murdock and Stiglitz (2000), Matutes and Vives (2000), Allen and Gale (2004), and Wagner (2010) support through their models the competition-fragility theory. In this case, even if banks have the possibility to choose the risk level of their portfolio, they prefer to transfer some risks to their depositors. When financial institutions are part of a competitive environment and profitability is a must, they do not obtain any informational advantages from their relationship with the borrowers, give up on an analysing he/she in-depth, take more risks and contribute to a more fragile banking system. If there are barriers to entry that limit competition, the banking entities have higher chances to enjoy their targeted profits and there is not enticement to put in place risky activities that increase the fragility of the entire banking sector.

Boyd and De Nicolo (2005) propose a new point of view, opposite to the competition-fragility paradigm. These two authors come up with the competition-stability perspective and consider that by assuming that banking competition contributes to profit generation and banking stability means ignoring the impact the market power has on the behaviour of financial institutions. Besides, clients, not the banking entities choose the risk level of the assets included in the portfolio. Boyd and De Nicolo (2005) confirm empirically that the concentrated banking sectors stimulate competition, that in turn facilitates higher interest rates for the borrowers. This is why the debtors prefer to take risky decisions to repay their loans and bring more fragility into the banking system.

Developing the ideas expressed by Boyd and De Nicolo (2005), Martinez-Miera and Repullo (2010) allow for the presence of imperfect correlations between the probabilities of default of each bank and identify a transfer effect of the risks, that leads to bankruptcy and a marginal effect that ensures higher revenues for the financial institutions, as the remaining solvent borrowers are "punished" to pay higher interest. In conclusion, the banking competition-risk relationship is validated by both theories, since an increase in the number of banks translates into lower probability of default, at the beginning, a probability that gets higher and higher afterwards.

The connection between banking competition and risk is of increasing importance, for bankers, researchers, investors and regulatory authorities. Even if the topic is present in several empirical studies, the current paper aims at conducting a more in-depth analysis, by performing a content analysis of the CEOs' statements included in the annual reports for 2007-2013 of four systemically important Romanian banks. In this way, important insights on improving regulatory framework can be drawn. For banking decision makers, the relationship between competition and risk is relevant in the light of developing new strategies to enter/expand on different markets and to manage

the risk. In addition, a very good understanding of the competition-risk nexus supports the implementation of new and more efficient banking regulations.

Moreover, the present research investigates the impact of business environment on competition and risk. This aspect should be considered since banking entities make decisions based on the market events and adapt their products and services to the needs of their clients.

2. LITERATURE REVIEW

The extant literature provides only quantitative studies on the bank competition-risk link and several researches on the impact of corporate governance on risk appetite. The current papers on the relationship between competition and risk in banking belong to three main directions: competition-fragility, competition-stability and a third hypothesis that supports both theories.

Competition-fragility

The more concentrated banking systems are more stable since the profits protect against fragility and stimulate banks to avoid risks.

Marcus (1984) proposes “franchise value” theory that states that fiercer competition on deposit markets leads to riskier decisions made by the bank, since franchise value diminishes. The author develops a theoretical model that encompasses relevant factors for the study of competition-risk relationship in United States.

Broecker (1990) confirms Marcus’ hypothesis (1984), discovering a negative relationship between loan quality and the number of active banks on the market. This research is not based on a state sample, but on the development of a theoretical model. Besanko and Thakor (1993) suggest that high rivalry translates into lower informational advantage in the case of credits and implicitly, greater risks taken by banks, while Matutes and Vives (1996) show that market power reduces the bank default profitability.

Keeley (1990), Edwards and Mishkin (1995), and Hellmann, Murdock and Stiglitz (2000) conclude that the liberalization of financial markets from US lowers both the charter value and the total profits and implies taking more risks.

Beside the papers focused on American banks, there are several researches that analyse European states. Capie (1995) investigates the stability and efficiency of the UK banking sector for the timeframe 1890-1940 and conclude that a less competitive banking system is more stable. On the other hand, Bofondi and Ghobi (2004) assert that growth in the number of banks in Italian banking sector worsens the default rate on loans. As for Spain, Salas and Saurina (2003) identify a significant robust relationship between Tobin Q, solvability rate and NPLs, whereas Jimenez, Salas Fumas and Saurina (2006) focus on banking competition and risks for 1988-2003, showing that there is a negative relationship between Lerner index and risk taking.

Moreover, some articles deal with the link between banking competition and risk based on an extended sample of countries. Boyd, De Nicolo and Al Jalal (2006) and De Nicolo and Loukoianova (2007) prove empirically the presence of a positive relationship between the market power and risk-taking. The first research is based on a sample of 2,500 banks from United States in 2003 and between 13,000 and 18,000 international financial institutions for the time period 1999-2004. The developed models continue the works belonging to Allen and Gale (2004) and Boyd and De Nicolo (2005), including, in addition, the option that banks invest in zero-coupon bond with a profitability $r \geq 1$. HHI measures competition, whereas Z-reflects the risks. Control variables refer to the factors that influence the bank (log of total assets), but also the state (labor market growth, unemployment rate and total revenues). The methodology used includes OLS and GMM. In the second study, beside Z-score, other indicators such as ROE are utilized to measure the risk. HHI is the competition measure.

Competition-stability

The competition-stability approach states that default probability gets higher in a more concentrated banking sector. The presence of big banks represents a potential risk for the stability of the entire banking system, because the default of such an institution exposes the entire banking sector to a systemic risk. Stiglitz and Weiss (1981) show that higher interest rates on loans, due to lower competition, increase the risk of the credit portfolio as a result of moral hazard and adverse selection. Other recent studies that support these results are those written by Boyd, De Nicolo and Al Jalal (2006).

Boyd and De Nicolo (2005) conclude that higher interest rates entice companies take more risks, behaviour that leads to increasing nonperforming loans ratio. In addition, the two researchers argue that market concentration impacts positively banking fragility. Boyd, De Nicolo and Al Jalal (2006), along with De Nicolo and Loukoianova (2006) prove that the default risk increases once the competition intensifies. Z-index measures risk, whereas HHI is the concentration indicator.

Competition-fragility and competition-stability

Though, Berger, Klapper and Ariss (2009) consider that the two theories are not opposed, but they complement each other. The paper based on a sample of 23 states (Austria, Bahamas, Bahrain, Belgium, Canada, Denmark, France, Germany, Ireland, Italy, Japan, Kuwait, Luxembourg, Macau, Netherlands, Norway, Qatar, Sweden, Switzerland, Taiwan, United Arab Emirates, United Kingdom, USA) during 1999-2005 concludes that fiercer competition translates into increasing rate of NPLs, as the competition-stability hypothesis claims. At the same time, higher market power diminishes insolvency risks, exactly what competition-fragility paradigm proposes. The indicators used to measure competition is Lerner index, whereas loan and deposit HHI confirms the robustness of the results. The financial stability is defined using variables such

as NPL ratio, Z-index and capital-asset ratio. In order to solve the endogeneity issue of the market power measure, the researchers make use of the GMM method.

Corporate governance and risk-taking

The extant literature provides lately mainly studies focused on the impact of corporate governance (CG) on the risk appetite of the financial institutions. The two major concepts, namely CG and risk-taking are strongly interrelated due to several bank characteristics such as board functioning, CEO duality, ownership structure, or the existence of external monitoring. Adams and Mehran (2012) and De Andres and Vallelado (2008) claim that the board of directors has the role to supervise and spot the potential risks the banks may face, and design and implement risk control systems. Even if strong board governance should limit the risks, the current researches have failed to provide conclusive results on this topic. Adams and Mehran (2012) state that the board size positively affects the overall banking performance. Yet, free-rider problems due to large boards may occur and negatively influence the bank value, since in increased groups coordination and process issues arise. De Andres and Vallelado (2008) and Anginer *et al.* (2016) come to the conclusion that there is a U-shaped relationship between board size and overall bank performance and intermediate boards lower bank risk appetite.

The quote of the independent board members impacts the bank risk-taking behaviour but the empirical researches have delivered mixed results. De Andres and Vallelado (2008) claim that larger and not excessively independent boards are more efficient in monitoring and advising functions and create more value. Erkens, Hung and Matos (2012) conclude that banks with more independent boards have obtained more equity capital during the crisis. Hence, Anginer *et al.* (2016) and Pathan (2009) show that independent directors are risk adverse.

All in all, the link between competition and risk in banking system is investigated in quantitative terms, based on the information provided by the financial statement of the banks. This study comes with a different approach by focusing on the statement the bank CEOs provide in the annual reports. These messages contain key references to the main events during the previous year and the decisions the bank has taken along with the results achieved. Thus, important insights can be drawn from such an analysis.

3. DATA AND METHODOLOGY

The time frame under analysis is 2007-2009. The sample includes the top four banks from Romania: BRD, Raiffeisen Bank, Banca Transilvania and Unicredit Bank. These banks are classified by European Bank Authority as being *other systemically important*. The sources of data are represented by the CEO's statements from the annual report for years 2007-2009. The data has been coded using the content analysis methodology explained by Schwartz-Ziv and

Weisbach (2013), Krippendorff (2004), and Liebllich, Tuval-Mashiach and Zilber (1998). Basically, the methodology consists in developing a quantitative database by categorizing qualitative information. All coding has been done both manually and using ATLAS TI.

The main codes applied in this study refer to the major variables: competition, risk, business environment and regulation. According to the coding for competition, the words/structures should refer to either structure (i.e. concentration, firm sizes, entry and exit conditions, product differentiation and vertical integration), conduct (i.e. policy objectives, marketing strategy, pricing policies and R&D) and performance (i.e. profitability, efficiency, product quality and technical progress). Risk includes references to activities with uncertain outcomes, whereas business environment refers to overall economic and financial conditions. Regulation focuses on new laws implemented by the regulatory authorities.

4. RESULTS

According to the CEO's statement, Unicredit Bank has focused on continuously expanding its activities in 2007 through the merger with HVB Tiriatic Bank. At the same time, special attention has been given to the "asset quality" in an attempt to meet the regulatory requirements. The profitability of the bank is expressed in terms of net profit and total assets. There are no further indications on the business environment and the possible effects of the upcoming financial crisis.

BRD's CEO provides a realistic and balanced statement by making references not only to the achievements of the financial institution he represents, but also to the uncertainties and regulations such as Basel II. First of all, BRD offers products and services to a large variety of customers such as "households", "micro-enterprises", "big companies", "public sector" and "local communities". The main policy objective is to keep the "commercial dynamism", whereas in terms of marketing strategy, it is important for the bank its "network expansion". The profitability is measured in terms of "deposits", "clients", "branches" and "net result", while efficiency relates to "improve processes and productivity". Regarding product quality, BRD aims as being "the best bank" benefiting from technical progress via a new "customer service center".

Patrick Gellen highlights the presence of risks (i.e. "uncertainties") and the continuous development of "risk and internal control mechanism" by BRD. At the same time, the success of BRD depends on "prudential regulations", "Basel II", "macroeconomic indicators" and "financial crisis", elements that refer to business environment and regulations. Consequently, the degree of competition depends on the potential risks, the business environment and the decisions taken by the regulatory authorities.

Steven van Groningen mentions that Raiffeisen Bank has tried to “understand specific needs” and provides “solutions” and “very good quality” products and services in an attempt to “be near our clients”. The marketing strategy can be defined using words like “innovation”, “quality”, “dynamism”, “ethics”, “passion”, “responsibility”. Profitability is expressed as “balanced development”, “market share”, “total assets”, “loans”, “deposits”, “net profit”, “revenues”, “expenses”, “dividends”. In terms of efficiency, Raiffeisen Bank should “outsource loans”, whereas technical progress means to “extend our branch network”.

The good results, the bank has obtained encompass “regulatory demands” and “minimum capital requirements”. Therefore, the competition level is impacted by risk and regulation.

Banca Transilvania has a diversified portfolio of “specialized products” that addresses to: “entrepreneurs”, “physicians”, “SME & Micro clients”, “corporate client”. As policy objectives, this banking entity is concerned with “organic growth”, “ambitious targets concentrating on further profit enhancement” and “strategic reorientation”. The marketing strategy deals mainly with the “launch new products”. The bank profitability is measured in terms of “operational profit”, “active clients” and “assets” and is facilitated by “new IT platform”. The outstanding performance should occur in 2008 as well, despite “uncertainties”, “challenging external events” and the “spillovers of the sub-prime mortgage crisis”. In addition, Banca Transilvania aims at improving “loan portfolio quantity”.

Table 1 summarizes the results of coding for year 2007. The most competitive bank is Unicredit Bank, followed by Banca Transilvania, Raiffeisen and BRD. BRD is the financial institution that is concerned the most with the potential risks and the impact of business environment on the overall results. Unicredit Bank and BT are equally interested in the evolution of macroeconomic conditions. Raiffeisen Bank and Banca Transilvania consider the risks when they develop their business strategies.

Table 1. The relationship between competition, risk, business environment and regulation year 2007

| | UB | BRD | Raiffeisen Bank | BT | TOTALS |
|--------------------------------|----|-----|-----------------|----|--------|
| <i>Business Environment</i> | 1 | 3 | 0 | 1 | 5 |
| <i>Efficiency</i> | 2 | 1 | 0 | 0 | 3 |
| <i>Firm sizes</i> | 0 | 0 | 1 | 0 | 1 |
| <i>Marketing strategies</i> | 3 | 0 | 2 | 4 | 9 |
| <i>Policy objectives</i> | 3 | 1 | 1 | 4 | 9 |
| <i>Product differentiation</i> | 0 | 1 | 0 | 0 | 1 |
| <i>Product quality</i> | 3 | 0 | 0 | 0 | 3 |

| | UB | BRD | Raiffeisen Bank | BT | TOTALS |
|---------------------------|-----------|-----------|-----------------|-----------|-----------|
| <i>Profitability</i> | 1 | 2 | 2 | 3 | 8 |
| <i>R&D</i> | 1 | 0 | 0 | 0 | 1 |
| <i>Regulation</i> | 0 | 1 | 1 | 0 | 2 |
| <i>Risk</i> | 0 | 2 | 1 | 1 | 4 |
| <i>Technical progress</i> | 3 | 1 | 1 | 0 | 5 |
| TOTALS: | 17 | 12 | 9 | 13 | 51 |

Note: Each figure shows the frequency of key words related to business environment, efficiency, and so on.

Source: author's calculations based on CEO's statements from bank's annual reports

Consequently, the outcomes of the research confirm that there is a relationship between competition and risk, even if the statement belonging to the most competitive bank does not contain any reference to uncertainties. Though, Unicredit Bank, Raiffeisen Bank and Banca Transilvania develop their competitive policies in alignment with potential harming events. At the same time, Unicredit Bank and Raiffeisen Bank reinforce the presence of a link between competition, risk and regulation, by referring to new requirements imposed by local authorities and Basel II. Finally, there is also a strong connection between competition, risk and business environment. Macroeconomic factors increase the degree of uncertainty and put a brake on competition.

In 2008, the CEO's statement from Unicredit annual report highlights the main policy drivers that remain further expansion and consolidation of market position. Yet, these strategies are correlated with the Romanian economic conditions: "high growth for the Romanian economy", "real GDP growth was 7.1%", "10% increase in private consumption, near 20% in investments and over 35% in bank loans", "6% annual compounded economic growth", "current account deficit of 12.3% of GDP" and "budget deficit of 4.8% of GDP".

Profitability is described by the value of net profit, customer deposits and loans, total capital ratio, ROE, ROA. As for risk, several indicators are mentioned: "cost of risk on loans" and "loan loss provisions".

In order to optimize the existing processes and implement new risk management methods, the bank has initiated several technological-intensive projects.

The BRD's CEO statement for year begins with a general description of the effects of financial crisis on Romanian economy, stressing "a general lack of confidence in the emerging countries", "slowing down of the growth", "degradation of a certain number of economic indicators, such as the balance of trade deficit, and some excesses, like the rise in the real estate prices" and "relatively low public debt, a weak dependency on the international markets, a well-controlled banking system, and the trust manifested by international

investors”. The situation has been challenging for the bank and has required adjustments of the conditions for foreign currency loans and cost cut-offs. The capital gain from the sale of equity interests in Asiban, the significant increase in the number of clients and in the amount of loans and deposits are only few representative results. Hence, the positive outcomes are partially due to “efficient risk management” in uncertain circumstances.

The CEO’s message from the annual report of Raiffeisen Bank starts with a complete explanation of the main factors that caused fiercer competition on deposit market and a drop in the amount of new loans. Basically, financial crisis has substantially diminished the confidence in the banking sector and made the cost of inter-bank credits higher. Therefore, the bank can get the most accessible funds only from its clients, in the form of deposits. Despite the difficult business environment, Raiffeisen has achieved very good financial results in terms of total assets, net profit, loans and deposits, due to better risk management strategies and an overall policy that places a lot of value on capital adequacy, liquidity and costs.

The measures taken by this bank are perfectly in line with the NBR regulations and have resulted in optimal outcomes to stress tests conducted by the Romanian central bank. Therefore, this Austrian credit institution is stable and capable of balancing the risks with a better market and financial position.

The Chairman and CEO of Banca Transilvania state at the beginning of their speech the differences between the outcomes of the financial crisis at the global level and what actually has happened in Romania. Given the changes on the market, BT has changed its strategies and focused more on maintain its market share by providing high quality products and services. The number of clients, net profit, shareholders’ equity and total assets show the strong financial position of this credit institution. The risk management is also a priority as the bank monitors monitor the soundness of loan portfolio and liquidity and has obtained outstanding results: “Capital Adequacy Ratio of over 15%”, “liquidity ratios and a loan to deposit ratio of about 0.9”.

The overall results for 2008 (Table 2) show a change in the CEO’s overall perspective. The main themes of the messages are related to the impacts of the financial crisis and the taken measures. For all the four banks, the business environment plays a role in the activities performed. Only the statement for BRD contains no reference to efficiency, showing that for the other credit institution it is clear that in order to preserve the market share and remain competitive they should restructure their operations and cut costs. New policies are implemented and the CEO’s describe them in full details. Special attention is given to risk as well, since banks become more aware of the negative effects of NPL and manage their liquidity and capital requirements more carefully. Though, only in the statement provided by Raiffeisen there are mentioned the regulations imposed by NBR and the stress tests that the bank should take.

Table 2. The relationship between competition, risk, business environment and regulation year 2008

| | UB | BRD | Raiffeisen Bank | BT | TOTAL |
|--------------------------------|----------|----------|-----------------|----------|-----------|
| <i>Business Environment</i> | 1 | 1 | 1 | 1 | 4 |
| <i>Efficiency</i> | 1 | 0 | 1 | 1 | 3 |
| <i>Firm sizes</i> | 0 | 0 | 0 | 0 | 0 |
| <i>Marketing strategies</i> | 0 | 0 | 1 | 1 | 2 |
| <i>Policy objectives</i> | 3 | 1 | 1 | 2 | 7 |
| <i>Product differentiation</i> | 1 | 0 | 1 | 0 | 2 |
| <i>Product quality</i> | 1 | 0 | 0 | 1 | 2 |
| <i>Profitability</i> | 1 | 5 | 0 | 1 | 7 |
| <i>R&D</i> | 0 | 0 | 0 | 0 | 0 |
| <i>Regulation</i> | 0 | 0 | 1 | 0 | 1 |
| <i>Risk</i> | 1 | 1 | 1 | 1 | 4 |
| <i>Technical progress</i> | 0 | 0 | 0 | 0 | 0 |
| TOTALS | 9 | 8 | 7 | 8 | 32 |

Note: Each figure shows the frequency of key words related to business environment, efficiency and so on.

Source: author's calculations based on CEO's statements from bank's annual reports

Year 2009 has been difficult for the banking sector as all the four CEOs mention in their year-end messages. The profitability is stated in terms of profit, loans deposits ROE and ROA. All the banks have continued to be more efficient and UB has developed its IT infrastructure to better control the risks. BRD CEO mentions the costs caused by new regulations in terms of capital requirements, whereas the statement for Raiffeisen makes references to the stress tests imposed by the NBR and the good results the bank has obtained. The summary of the analysis is depicted in Table 3.

Table 3. The relationship between competition, risk, business environment and regulation year 2009

| | UB | BRD | Raiffeisen Bank | BT | TOTALS |
|--------------------------------|----|-----|-----------------|----|--------|
| <i>Business Environment</i> | 1 | 1 | 1 | 1 | 4 |
| <i>Efficiency</i> | 1 | 1 | 1 | 1 | 4 |
| <i>Firm sizes</i> | 0 | 0 | 0 | 0 | 0 |
| <i>Marketing strategies</i> | 1 | 0 | 0 | 0 | 1 |
| <i>Policy objectives</i> | 3 | 3 | 1 | 1 | 8 |
| <i>Product differentiation</i> | 0 | 0 | 0 | 0 | 0 |
| <i>Product quality</i> | 1 | 0 | 1 | 0 | 2 |

| | UB | BRD | Raiffeisen Bank | BT | TOTALS |
|---------------------------|-----------|----------|-----------------|----------|-----------|
| <i>Profitability</i> | 1 | 1 | 1 | 0 | 3 |
| <i>R&D</i> | 0 | 0 | 0 | 0 | 0 |
| <i>Regulation</i> | 0 | 0 | 1 | 0 | 1 |
| <i>Risk</i> | 2 | 0 | 1 | 1 | 4 |
| <i>Technical progress</i> | 1 | 1 | 0 | 1 | 3 |
| TOTALS | 11 | 7 | 7 | 5 | 30 |

Note: Each figure shows the frequency of key words related to business environment, efficiency and so on.

Source: author's calculations based on CEO's statements from bank's annual reports

5. CONCLUSIONS

The current paper investigates the relationship between competition and risk in Romanian banking sector during 2007-2009. The methodology used is content analysis, based on the CEOs' statements from annual reports. The banks under analysis are top financial institutions in Romanian banking and belong to the class of other systemically important entities according to EBA.

The results of this research confirm the existence of a direct relationship between competition and risk, as competitive measures are aligned with potential dangers. In other words, the Romanian banks do not want to assume unnecessary risks only for achieving higher market shares. As a matter of fact, the banking entities under analysis are more conservative and risk averse since they prefer an "organic growth".

Business environment impacts the nexus banking competition-risk. Basically, taking riskier decisions and attracting new clients are conditioned by external events such as the effects of financial crisis and the governmental investments in agriculture and infrastructure.

Finally, regulation plays a role as well, since it means additional costs for the banks. These costs reduce the appetite for risks and the desire to sacrifice everything to be a market leader.

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Section III

EU FINANCIAL REGULATION AND ADMINISTRATIVE AREA

THE IMPACT OF CORRUPTION OVER THE EU FUNDS

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Abstract

The aim of this paper is to analyse the main factors that influence the absorption rate of European Funds in Romania, the relationships that establish between them, as well as to interpret the corruption phenomenon as part of the administrative capacity in Romania. The methodology used was both qualitative and quantitative, the first one through content analysis of various reports and studies related to EU Funds absorption factors and effects in Romania. The quantitative part of the research was realized using statistical methods in order to test the impact of the macroeconomic and administrative factors over the absorption rates of EU Funds in the EU Member States, to analyze whether there is a pattern in the distribution of these rates, as well as to realize predictions regarding the factors that influence it. The preliminary results indicate that corruption had an important role in the absorption rate of EU Funds in Romania, limiting the development possibilities through countrywide repetitive corruption-related processes, as it will be presented in Romania's case.

Keywords: *EU funds; Romania; absorption rate; corruption.*

JEL Classification: C53, O11, R11

1. INTRODUCTION

One of the most important effects of Romania's adherence to the European Union in 2007 was the access to European Funds (EF), in order to lead the way for an economic convergence and to create favorable conditions so that to ensure economic growth, sustainability, disparity limitations between Romania's regions and the ones from the other member states, under the Cohesion Policy.

As a new member state in the European Union, Romania has confronted with a series of difficulties with regard to the accession of the European Structural Funds, which, by the end of 2013, led to our country having the least absorption rate of all the other member states, of only 33.5%, compared to the EU's amount, of 62%. Even though it benefitted from the n+3 rule, which gave

Romania the possibility to expand by three years the period for attracting European Funds and implementing projects, it was still the last country among the EU member states, by the end of 2018 having absorbed 90.4% of the EU funds, compared to EU's 97.77% absorption rate.

While the literature offers different perspectives on the reasons for the low absorption of EU Funds in Romania, most of the papers, including studies and case-studies, indicate that there are complex factors involved in the project implementation phases that ought to be taken into account. The complexity comes from the diversity of causes, which can be divided into 2 categories: internal and external. Furthermore, some scientists that most of the factors influencing the absorption of EU Funds come from the administrative capacity of a country, of its internal built-in system which must face the new challenges that being an EU member state bring. This, however, implies another question, which points out to the elements that configure the administrative capacity of a country and how much does each element actually impact the rate of EU Funds absorption.

2. LITERATURE REVIEW

Starting with the last EU enlargement wave in 2007 researchers have tried to find and analyze the elements that most impact the EU absorption rates among the member states in order to explore the reasons for the differences between these countries in this field.

The need to understand what absorptive capacity means has been tackled often in the recent papers, some authors correlating it to the enlargement process (Cace *et al.*, 2009), while the absorption is "the degree to which a country is capable to spend, actually and efficiently, the financial resources allocated from the Structural Funds" (Cace *et al.*, 2009). Other authors (Oprescu *et al.*, 2005; Holt, 2017) imply that there is a distinction that has to be made between the absorption capacity on the side of the offer (how local, regional, national institutions responsible for the infrastructure are able to offer in order to ensure a proper environment for the implementation of EU projects) and on the side of demand (which is the absorption capacity of the final beneficiaries to successfully create and implement projects). Moreover, OECD has defined the absorption capacity as being "the accumulation of adequate information, dissemination, capacity building in local government and civil society to design and implement development projects" (OCDE, 2007).

In this respect, among the factors that influence the absorption capacity of a country, the most important ones refer to the macroeconomic absorption capacity, which is explained in relation to the GDP, meaning that the amount of money allocated annually from the Structural and Cohesion Funds to a member state cannot exceed 4% of its GDP. Moreover, Zaman and Georgescu (2014) connect the results achieved by Romania to the effects of the economic crises

that took place in 2008-2010, which led to a poor macroeconomic performance, but also support the fact that the regional and local aspects of a country have to be taken into account, as the absorption takes place at these lower levels. Macroeconomic development also includes the necessity of increasing the budgetary expenses as a result of the integration process, but also the absorption of the additional expenses that will take place (Oprescu *et al.*, 2005).

Another factor that has a role in the absorption rate of the EU funds is the co-funding capacity of a state to support the programs and projects that benefit from the EU funds and it also refers to the planning and guarantees of the national contributions and the collection of resources from several partners (Marinaş and Prioteasa, 2016).

Literature has though focused on the administrative capacity of a country (Țigănașu, Încălțărău and Pascariu, 2018; Oprescu *et al.*, 2005) which includes the ability and capacity of central and regional authorities to attract, manage and implement European Projects. This characteristic also includes the levels of corruption and bureaucracy (Tăulescu and Pătruți, 2014; Mihailescu, 2012; Bachtler and McMaster, 2007) – both of them increasing in times of economic crises in such a way that in 2011, Romania was ranked 115 out of 142 countries in terms of favoritism in decision of government officials (Transparency International Romania, 2011) and the indicator for government efficiency was at only 51%, the lowest in the EU at the time. Also, Hagemann (2019, pp. 120-121) argues that there is a difference to be made between the influences of these two, as corruption is seen detrimental to government capacity, as part of the efficiency of the bureaucracy. Moreover, even though it has its own measurement index, it is still an indirect measurement of capacity, usually lowering the motivation of civil servants as they do not depend on performance, but on the connections they have, in order to maintain their positions. The absorption of EU Funds also had to suffer in Romania because of unclear provisions in national legislation (Zaman and Georgescu, 2014), political instability (Mihailescu, 2012), lack of specialized trained personnel working in the management and implementation of European-funded projects, lack of coordination between operational programs and projects (Zaman and Georgescu, 2014), to the legal provisions that a member state has to ensure and create in order to be in line with the European legislation, to the architecture of the financial funding programs (the number of priorities, the intermediate bodies and the managing authorities) (Holt, 2017). Other authors identified as causes of the low absorption rate in Romania ((Cace *et al.*, 2009) apud (Zaman and Georgescu, 2009)) the lack of a long-term vision of the authorities, due to the insufficient resources to co-finance projects, the failure of the public-private partnership or lack of medium/long-term perspectives (Katsaitis and Doulos, 2009) in order to ensure sustainable projects.

Other studies have proved that the level and nature of decentralization (Mihailescu, 2012; Zaman and Georgescu, 2014; Markovič Hribernik, Kirbiš and Vek, 2008) have a major impact on the absorption rate of a country while the economic efficiency of a state is more visible when there is an administrative division policy, by which the local or regional authorities have the possibility of autonomously managing their own resources, identifying the real problems that their community confronts with and reinvesting the money they produce into projects that can bring added-value to their own community. Also, in the case of the new member states (Zaman and Georgescu, 2009) the more the institutions involved in the management of EU funded projects are of different levels, the greater the absorption capacity can become, but no perfect recipe has been discovered yet, as the degree of sub-national involvement depends on constitutional arrangements or institutional structures of the countries (Kersan-Škabić and Tijanić, 2017) Moreover, the administrative capacity of absorption includes the capacity of local/regional/national institutions to prepare projects, programs and plans in due time, to be able to organize an efficient framework for the development of the projects and partnerships, to be able to supervise the process of implementation by avoiding irregularities (Cace *et al.*, 2009).

The vast concept of what absorptive capacity implies for a country still constitutes a research theme among the scientists and researchers, but the problems encountered in Romania have been mainly administrative, as the paradigm has been described above.

3. METHODOLOGY

In order to test the impact of the macroeconomic and administrative factors over the absorption rates of EU Funds in the member states and especially in Romania, as well as in order to analyze whether there is a pattern in the distribution of these rates – geographically or depending on the moment of their accession to the EU, using the SPSS statistical program we have realized the Principal Component Analysis to study the statistical correlations between the variables considered, as well as a multiple linear regression in order to realize predictions regarding the factors that influence the absorption rate of EU Funds.

The variables considered were the Absorption Rate of EU Funds – as a dependent variable (RA), the Corruption Index (CI) level, the GDP, Inflation Rate (RI) and the Unemployment Rate (UR).

The database comprised the above-mentioned variables in the year 2013 – the final initial year of the previous Multiannual Financial Program for the 28 member states, in order to identify the similarities and differences between these states regarding the variables considered and identify if there is a pattern in the distribution of the absorption rates.

The starting point of the analysis was Table 1, both for the ACP, as well as for the regression.

Table 1. EU Member States data

| No. crt. | Country | Absorption rate (%) | CPI | GDP | Inflation | Unemployment rate |
|----------|----------------|---------------------|-----|--------|-----------|-------------------|
| 1 | Austria | 69.030 | 69 | 45.934 | 2.00 | 5.0 |
| 2 | Belgium | 68.890 | 75 | 42.168 | 1.11 | 8.4 |
| 3 | Bulgaria | 50.050 | 41 | 17.627 | 0.89 | 13.2 |
| 4 | Croatia | 18.270 | 48 | 20.703 | 2.22 | 17.3 |
| 5 | Cyprus | 61.290 | 63 | 31.962 | -0.04 | 16.9 |
| 6 | Czech Republic | 52.550 | 8 | 29.096 | 1.44 | 6.7 |
| 7 | Denmark | 54.410 | 91 | 44.882 | 0.79 | 7.1 |
| 8 | Estonia | 81.280 | 68 | 26.508 | 2.79 | 8.7 |
| 9 | Finland | 75.700 | 89 | 40.490 | 1.48 | 8.3 |
| 10 | France | 59.950 | 71 | 39.912 | 0.86 | 10.2 |
| 11 | Germany | 70.820 | 78 | 45.127 | 1.51 | 5.2 |
| 12 | Greece | 69.580 | 40 | 25.194 | -0.92 | 27.5 |
| 13 | Hungary | 59.010 | 54 | 24.006 | 1.73 | 8.8 |
| 14 | Ireland | 70.070 | 72 | 47.422 | 0.51 | 12.0 |
| 15 | Italy | 50.120 | 43 | 34.804 | 1.22 | 12.7 |
| 16 | Latvia | 65.960 | 53 | 22.402 | -0.03 | 11.6 |
| 17 | Lithuania | 78.770 | 57 | 25.903 | 1.05 | 10.9 |
| 18 | Luxembourg | 67.840 | 80 | 94.823 | 1.73 | 6.1 |
| 19 | Malta | 50.280 | 56 | 32.246 | 1.38 | 6.8 |
| 20 | Netherlands | 63.850 | 83 | 47.015 | 2.51 | 7.0 |
| 21 | Poland | 67.860 | 60 | 24.068 | 0.99 | 9.9 |
| 22 | Portugal | 78.670 | 62 | 26.359 | 0.27 | 15.3 |
| 23 | Romania | 38.310 | 43 | 18.859 | 3.99 | 7.3 |
| 24 | Slovakia | 52.680 | 47 | 27.409 | 1.40 | 14.1 |
| 25 | Slovenia | 62.900 | 57 | 28.534 | 1.76 | 9.8 |
| 26 | Spain | 62.940 | 59 | 32.158 | 1.41 | 25.8 |
| 27 | Sweden | 68.690 | 89 | 44.906 | -0.04 | 8.0 |
| 28 | UK | 56.780 | 76 | 39.154 | 2.56 | 7.1 |

Source: own representation from the Eurostat (European Commission, 2019) and World Bank database (World Bank, 2019) and Transparency International (2013)

3.1. Results of the ACP method

The results of the ACP method are revealed in Table 2.

Table 2. Correlation coefficients

| | | AR | Corruption Index | GDP | IR | UR |
|-------------------------|---------------------|-------|------------------|--------|--------|---------|
| AR | Pearson Correlation | 1 | .449* | .276 | -.340 | -.079 |
| | Sig. (2-tailed) | | .016 | .155 | .077 | .689 |
| | N | 28 | 28 | 28 | 28 | 28 |
| Corruption Index | Pearson Correlation | .449* | 1 | .665** | .011 | -.482** |
| | Sig. (2-tailed) | .016 | | .000 | .954 | .009 |
| | N | 28 | 28 | 28 | 28 | 28 |
| GDP | Pearson Correlation | .276 | .665** | 1 | .024 | -.371 |
| | Sig. (2-tailed) | .155 | .000 | | .903 | .052 |
| | N | 28 | 28 | 28 | 28 | 28 |
| IR | Pearson Correlation | -.340 | .011 | .024 | 1 | -.466* |
| | Sig. (2-tailed) | .077 | .954 | .903 | | .012 |
| | N | 28 | 28 | 28 | 28 | 28 |
| UR | Pearson Correlation | -.079 | -.482** | -.371 | -.466* | 1 |
| | Sig. (2-tailed) | .689 | .009 | .052 | .012 | |
| | N | 28 | 28 | 28 | 28 | 28 |

* Correlation is significant at the 0.05 level (2-tailed).

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

Source: own statistical representation

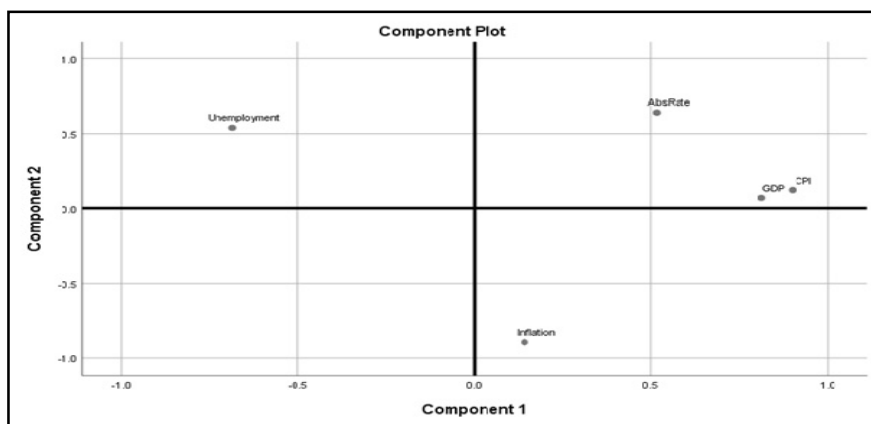
Between the AR and the CI there is a direct connection, when one of the values increases, the other one increases as well, the same happening when there is a decrease in value. CI has a strong connection with AR, GDP, but it has a reverse link with the UR. Strong but reverse connections exist between the IR and UR, but also between the UR – CI, IR.

Also, the analysis revealed that the first two factorial axes explain 75% of the total variation of cloud points, so that, according to the Kaiser and Benzecri criteria, we can only interpret those (AR and CI).

As seen in Figure 1, high values of the variables on the first ax show that CI and GDP are strongly connected to it, significantly explaining the differences between the statistical units, but there is also a good reverse correlation with the UR, meaning that when the member states have high values for the CI and the

GDP, they register low values for the UR (high values of the CI indicate a low corrupted country, while values closer 0 indicate a highly corrupted state), so that when corruption is high, the unemployment is high as well (like in the case of Greece, Bulgaria, Slovakia, Italy).

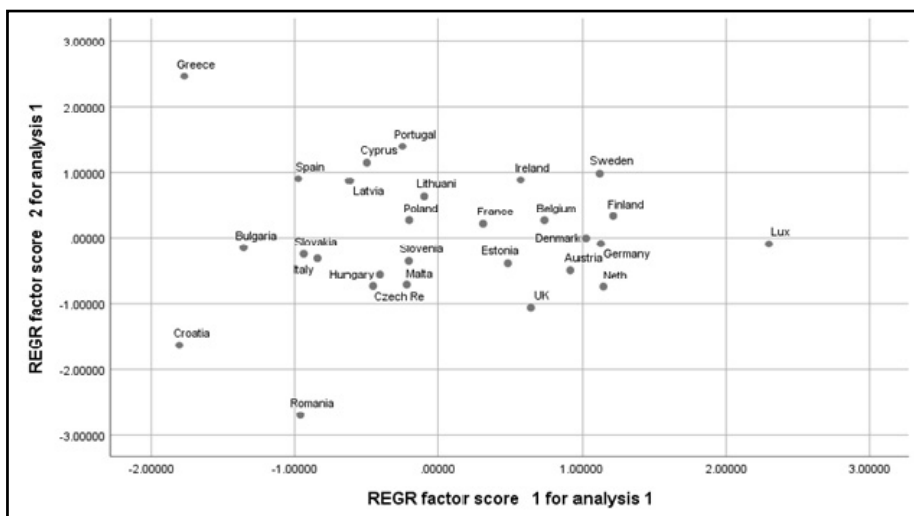
Figure 1. Component Plots



Source: own statistical representation

The second factorial ax explains the variables IR and AR but by a reverse link (Austria, Belgium, Poland).

Figure 2. Component plots



Source: own statistical representation

Figure 2 illustrates the fact that the member states that entered the EU in 2007 and 2013 (Romania, Bulgaria, Croatia) have negative coordinates on the first factorial ax, contrary to other countries that entered the EU in the previous accession waves, such as Luxembourg, Netherlands, Germany, Finland, Sweden, showing that the most obvious differences in terms of variables considered are in Croatia, Romania, Bulgaria.

Also, the first factorial ax indicates high absorption rates of EU funds, GDP and CI (meaning a low corruption level) in countries such as Sweden, Finland, Germany – which have been in the EU for a long time and low for the new member states. Also, where the unemployment is high, the absorption rate of EU funds, as well as the GDP are low (Spain, Greece, Cyprus and Romania). The second factorial ax belongs to the IR, indicating that in the new member states this variable had higher values (Romania, Croatia) than in the ones which acceded previously (Greece, Portugal, Cyprus).

3.2. The Regression method

In order to realize predictions upon the selected factors that influence the absorption rate of EU Funds in the EU member states, the AR is considered as the dependent variable, while the corruption index, the GDP, the Inflation rate and the Unemployment rate were considered independent variables.

The multiple regression matrix model for our analysis is the following:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p + \varepsilon \quad (1)$$

Using the STEPWISE method the following correlation tables have resulted, as seen in Table 3.

Table 3. Correlations

| | | AR | Corruption Index | IR | GDP | UR |
|----------------------------|------------------|-------|------------------|-------|-------|-------|
| Pearson Correlation | AR | .000 | .449 | -.340 | .276 | -.079 |
| | Corruption Index | .449 | 1.000 | .011 | .665 | -.482 |
| | IR | -.340 | .011 | 1.000 | .024 | -.466 |
| | GDP | .276 | .665 | .024 | 1.000 | -.371 |
| | UR | -.079 | -.482 | -.466 | -.371 | 1.000 |
| Sig. (1-tailed) | AR | | .008 | .038 | .078 | .345 |
| | Corruption Index | .008 | . | .477 | .000 | .005 |
| | IR | .038 | .477 | . | .451 | .006 |
| | GDP | .078 | .000 | .451 | . | .026 |
| | UR | .345 | .005 | .006 | .026 | . |

| | | AR | Corruption Index | IR | GDP | UR |
|---|------------------|----|------------------|----|-----|----|
| N | AR | 28 | 28 | 28 | 28 | 28 |
| | Corruption Index | 28 | 28 | 28 | 28 | 28 |
| | IR | 28 | 28 | 28 | 28 | 28 |
| | GDP | 28 | 28 | 28 | 28 | 28 |
| | UR | 28 | 28 | 28 | 28 | 28 |

Variables Entered/Removed^a

| Model | Variables Entered | Variables Removed | Method |
|-------|-------------------|-------------------|---|
| 1 | Corruption Index | | Stepwise (Criteria: Probability-of-F-to-enter ≤ .050, Probability-of-F-to-remove ≥ .100). |
| 2 | IR | | Stepwise (Criteria: Probability-of-F-to-enter ≤ .050, Probability-of-F-to-remove ≥ .100). |

a. Dependent Variable: AR

Source: own statistical representation

There are 2 possible models to be taken into consideration for the analysis conducted, the second one including the Constant, Inflation Rate and de Corruption Index, which led to a multiple linear regression, while the first one only characterizes the Corruption Index (simple linear regression).

Table 4. ANOVA^a

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|-------|-------------------|
| 1 | Regression | 951.713 | 1 | 951.713 | 6.573 | .016 ^b |
| | Residual | 3764.386 | 26 | 144.784 | | |
| | Total | 4716.099 | 27 | | | |
| 2 | Regression | 513.347 | 2 | 756.673 | 5.906 | .008 ^c |
| | Residual | 3202.752 | 25 | 128.110 | | |
| | Total | 4716.099 | 27 | | | |

a. Dependent Variable: AR

b. Predictors: (Constant), Corruption Index

c. Predictors: (Constant), Corruption Index, IR

Source: own statistical representation

According to Table 4, $SIG < 0.05$, which confirms that the variables are well specified and relevant.

Applying the STEPWISE method to the regression's results conducted to the fact that the second model is statistically significant and may be accepted as it explains most of the variation of the AR depending on the CI and the IR.

Following the ACP method and the Multiple Linear Regression in SPSS program, it can be observed that the Corruption Index as independent variable has a strong connection to the Absorption Rate of EU Funds, as dependent variable. Also, there are significant differences among the newest member states in the EU and the older ones regarding the absorption rates, which are statistically explained by some of the variables considered.

In this matter, the level of corruption has proved to be one of the main problems in attracting EU Funds for Romania, as part of the administrative capacity of the country.

4. CORRUPTION IN EU FUNDS IN ROMANIA

As corruption is considered an extremely complex and diversified phenomena, there has not been yet agreed upon a definition, although, in all the contexts available, it consists of the practices using abuse of power for private gain (Bakowski and Voronova, 2017). Taking into account the differences between the MS with regard to their legal, political systems, the national criminal law approach associates it with conflict of interest, clientelism, various forms of favoritism (including nepotism, cronyism and patronage), trading of influence (Bakowski and Voronova, 2017). Furthermore, Transparency International describes corruption as "behavior on the part of officials in the public sector, whether politicians or civil servants, in which they improperly and unlawfully enrich themselves, or those close to them, by the misuse of the public power entrusted to them" (OCDE, 2007), while the New Criminal Code in Romania, at articles 289-294, explains several crimes such as giving and receiving bribery, influence trafficking, buying of influence.

In a study published by European Commission (2017), 68% of the respondents in Romania said that they were personally affected by corruption in their daily lives, compared to the same study in 2013, which showed 57%. Also, several other studies realized by the Flash Eurobarometer have shown that the perception of corruption in Romania is highly positively widespread, with 45% considering the situation worse in comparison with a decade earlier, the result being strengthened by the Corruption Perception Index, which has always been one of the lowest in the EU (varying from 43 in 2013 to 48 in 2017).

Although it is not easy to determine the level of corruption, several instruments have been created, such as the Global Corruption Barometer, the CPI developed by Transparency International – giving scores from 0 –highly corrupt to 100 –very clean, Worldwide Governance Indicators, the Quality of

Government Survey, the latter ranking Romania as the last among the 28 Member States, with 6 regions being in the last 8 lowest-scoring European regions (Bakowski and Voronova, 2017).

Furthermore, (Bosco, 2016) in his study “Old and new factors affecting corruption in Europe- Evidence from panel data” conducted on 31 countries including the Western and post-socialist countries, argues that the corruption is affected by factors such as effectiveness of the government activity, the social risk of exposure to extreme poverty, privatization, as well as by the level of productive technology, so that national anti-corruption policies should emphasize the role of measures improving the overall wellbeing of the population as well as support the investments in technology. Moreover, the author underlines the role of proper adaptation of national regulations to EU legislation in order to reduce the corruption level of the EU Member States.

4.1. The main effects of corruption on the EU Funds absorption

In a study conducted by (Gruševaja and Pusch, 2011) they have come to the conclusion that the CPI (Corruption Perception Index) has a positive impact on the absorption of Structural Funds, especially at regional level. In this respect, Romania had and still has almost the highest CPI rates in the EU (with Greece being the last one; in 2013 Romania’s CPI was of 43, while in 2016 it was 48), while these practices conducted to restrictions and pre-suspensions imposed in the period 2011-2013 in the field of transport, regional development, competitiveness and human resources development, that slowed down the absorption rhythm of EU Funds and also led to numerous recommendations received from the European Commission in reducing its level. Only POR itself has had, in 2012, 4 out of his 5 axes pre-suspended on the grounds of public procurement indicating an error rate above the one allowed by the European regulations on continuing payments. According to the European Court of Auditors (2017), pre-suspensions are preventive measures, taken when the Commission informs the Member State that certain deficiencies regarding the payments realized have been done, not implying though serious deficiencies. Also, a significant part of the operational programs has been the object of interruptions or payment surcharges usually for a period of three to nine months, Romania being in the 3-6 months group, while for Spain and Italy the period was of over 9 months to almost a year. Furthermore, although Romania has had 5 out of 7 programs interrupted and 4 pre-suspended (Transport, Economic competitiveness, Regional Development and Human Resources), it did not have any of them actually suspended, but instead it reached top 3 among the Member States with the most financial corrections, after Spain and Czech Republic, with 379 million. Euro (while Spain had 416 and Czech Republic 395).

Several times throughout the implementation of the previous multiannual financial framework, the European Commission has raised the problem of

inadequate public procurement procedures in our country and the effects that may occur if the corruption and lack of transparency would not reduce. In this respect, Romania has been sanctioned by the EU several times between 2011-2013, with the suspension of the OSPHRD, ROP and OSPI programs, which led to significant delays in the reimbursements and the temporary inability of the institutions and organizations to implement their activities. In June 2011 the ROP has been suspended due to public procurement illegalities which rose from the fact that many contracts were allocated to local administrations involved in the leading parties in Romania. Among the irregularities that the Audit body encountered there were the use of unequal and differentiated criteria for the phase of evaluation and selection, conflict of interest, imposing restrictive requirements as selection criteria. Although the payments have been suspended for more than 2 months, in 2013 the Commission had to impose this measure again for the same reasons, for 5 out of 6 axes of the programs, as no improvement was observed.

Regarding the EU funds implementation, OLAF is the EU's instrument for anti-fraud, which annually presents a report containing results in the fight against corruption, prevention policies, case studies and best practices against corruption identified among the Member States.

Ever since 2007, Romania has been a top country regarding the number of investigations conducted, as well as regarding the number of recommendations received. In 2007, the highest occurrence of cases was in Romania, Bulgaria and Greece, most of the investigations though being conducted with regard to the SAPARD pre-accession funds, available until 2010, which led to a more intensified control of expenses and project implementation from OLAF.

It is to be noted that according to (OLAF, 2014), the recommendations are the main results of their investigations, in order to ensure that the EU funding reaches the awarded projects, that it safeguards the EU institutions and that any misconduct of the institutions is addressed and resolved. These recommendations are usually financial, but they can also be judicial and disciplinary, directed both to the EU institutions, but also to national authorities of the Member States.

A synthesis of the Annual Reports issued by OLAF in the period 2007-2017 has shown that Romania has always been among the 60-65% concerned suspected fraud in EU Member States, alongside Bulgaria, Germany, Spain, Italy and Poland. The cases concluded with regard to the investigations into the use of European Funds in the period 2007-2017 has shown that Romania has had the highest number of investigations, with a peak of 45 out of 199 in 2015 for which it received 22 recommendations (followed by Bulgaria with 19 investigations and Hungary with 17) and 21 out of 102 in 2016, for which it received 11 recommendations.

Table 5. Detection of irregularities

| Country | Annual Report/Period 2015 (2013-2015) | | Annual Report/Period 2016 (2013-2016) | | Annual Report/Period 2017 (2013-2017) | |
|----------------|--|---|--|---|--|---|
| | <i>Detected irregularities</i> | <i>OLAF: Investigations – recommendations</i> | <i>Detected irregularities</i> | <i>OLAF: Investigations - recommendations</i> | <i>Detected irregularities</i> | <i>OLAF: Investigations-recommendations</i> |
| Romania | 3606 | 90 | 4857 | 99 | 5759 | 107 |
| Spain | 6853 | 4 | 9766 | 5 | 11161 | 5 |
| Bulgaria | 513 | 34 | 720 | 38 | 904 | 43 |
| Czech Republic | 2788 | 4 | 3213 | 5 | 3480 | 7 |
| Hungary | 1876 | 29 | 2442 | 41 | 2808 | 49 |
| Poland | 3268 | 5 | 4731 | 13 | 5461 | 21 |

Source: own interpretation based on OLAF (2016, 2017, 2018)

Another indicator of the high corruption level registered in Romania has also been mentioned in the Annual Reports of OLAF, regarding the detection of irregularities by OLAF and the national authorities of the Member States with regard to the Structural and Agriculture Funds. As seen in Table 5., Romania was placed second after Spain in the number of detections, but being the first one with regard to the Number of recommendations received, which indicates that it has had greater issues than the other countries considered.

4.2. Effects on the public procurement procedures in the construction and infrastructure sector

Since the construction sector in Romania accounts for almost 58% of the total public expenditure, it is important to analyze how were the money distributed and what were the results in the field during the 2007-2013 programming period.

With a total allocation of 4.3 billion euro for the POST programme, one of the most significant, Romania only managed to absorb, by the end of the programming period, 58.79% of this amount of money. The problems in infrastructure are also visible when looking at the Global Competitiveness Index – which analyses the prosperity of a country from the manner in which the available resources are productively spent.

From this point of view, Romania's position has always been in the second half of the rank in the pillars of interest, as results from Table 6.

Also, as the most problematic factors for doing business, corruption appears usually in first 2-7 factors, alongside policy instability, inadequate supply or infrastructure of inefficient government bureaucracy, from which we can observe the importance and impact of a low capacity of reliable public institutions.

Table 6. Romania's place in the Global Competitiveness Index

| Series/Years | 17/18 | 16/17 | 15/16 | 14/15 | 13/14 | 12/13 | 11/12 | 10/11 | 09/10 | 08/09 | 07/09 | 06/07 |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1st pillar: Institutions | 86 | 92 | 86 | 88 | 114 | 116 | 99 | 81 | 84 | 89 | 94 | 88 |
| 1.03 Diversion of public funds | 91 | 106 | 97 | 82 | 114 | 115 | 96 | 84 | 75 | 80 | 86 | 88 |
| 1.05 Irregular payments and bribes | 66 | 90 | 90 | 69 | 76 | 79 | 67 | 57 | | | | |
| 1.07 Favouritism in decisions of government officials | 116 | 119 | 111 | 114 | 137 | 128 | 115 | 123 | 117 | 113 | 116 | 103 |
| 1.08 Wastefulness of government spending | 115 | 109 | 114 | 116 | 134 | 114 | 1-7 | 110 | 112 | 111 | 116 | 101 |
| 1.12 Transparency of government policy making | 113 | 110 | 84 | 86 | 115 | 136 | 140 | 137 | 128 | 124 | 126 | 118 |
| 2nd pillar: Infrastructure | 83 | 88 | 86 | 85 | 100 | 97 | 95 | 92 | 110 | 105 | 100 | 84 |

Source: own interpretation from the Global Competitiveness Index Reports 2006-2018 (World Economic Forum, 2006-2018)

The major problem concerned the public procurement contracts as they did not fully respect the law, especially in terms of the practice of single bidding, while the tendency was to establish political connections and satisfaction of personal needs.

An analysis led by Doroftei and Dimulescu (2015) concluded that there was a connection of 44% in the number of contracts awarded per company that can be explained by single bidding and the existence of a political connection, while this has a higher occurrence at the local level and in state owned companies.

The above-mentioned study also compares the total number of contracts signed in the field, emphasizing that the EU-funded contracts recorded a smaller amount of single bidded contracts than the ones that did not benefit from these funds, partly because of the stricter rules and the control procedures advanced by the EC through ECA and OLAF.

Table7. Number of contracts signed

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | All years |
|--|------|------|------|------|------|------|------|-----------|
| Total no. of contracts | 823 | 847 | 765 | 773 | 1124 | 881 | 851 | 6064 |
| Total no. of EU funded contracts | 45 | 76 | 195 | 298 | 548 | 414 | 329 | 1905 |
| Total no. of contracts with single bidder | 230 | 224 | 152 | 175 | 267 | 156 | 93 | 1297 |
| Total no. of EU funded contracts with single bidder | 13 | 16 | 21 | 52 | 105 | 34 | 18 | 259 |

Source: (Doroftei and Dimulescu, 2015)

Even though in the first years of the 2007-2013 programming period the practice for single bidding in the field was quite large, as we may see from Table 7, it can be noticed that in the last years (2012-2013) this practice considerably reduced for the EU-funded contracts, while the absorption rate of EU-fund progressively increased.

The ex-post Report of the implementation of POS-T acknowledges the fact that one of the major issues found stayed in the results of deviation of the law in the field of public acquisitions, which conducted to delays in the bidding and contracting phases, slow settlement of appeals during award procedures; as well as defective planning that leads to artificial compression of deadlines and metering as delays for times that might otherwise be considered normal in the process.

With regard to the main issues found in terms of public acquisitions by the audit authority, the problems identified are presented in Table 8.

Table 8. Public acquisitions issues

| Problem identified | No. of contracts in which the problem has been identified |
|---|--|
| Failure to meet the qualification criteria by the winning bidder | 13 |
| Restrictive/illegal qualification/selection criteria | 21 |
| Incorrect evaluation of the winning bid / incorrect application of the award criteria | 3 |
| Reducing the deadline between the date of submission of the contract notice and the closing date for submission of tenders | 3 |
| Insufficient / ambiguous description or failure to mention all the qualification / evaluation criteria | 5 |
| Changes in the awarding documentation (criteria, participation notice) without publishing a statement | 3 |
| Use of qualification criteria as assessment factors | 3 |
| Additional works / services / products awarded without meeting the cumulative terms of negotiation without prior publication of a contract notice | 8 |

Source: (MDRAPFE, 2017)

While the issue of the corruption level in a country is hard to calculate, there is strong evidence that it has a major influence on the economic development. In Romania, these practices, alongside with other factors such as management deficiencies, political instability and changes in the legislation, have led to suspension and pre-suspension of several programs during the 2007-2013 Multiannual Financial Framework, which, in turn, have led to delays in the implementation and thus, payment ratios of the EU-funded projects, with large amounts of money being cut down and lost.

Table 9 underlines the differences in the contracting ratio and payment ratio in the Eastern European member states, as they were the most important beneficiaries of these funds and have also joined the EU in the period 2004-2007, so that they're effectiveness is comparable.

Table 9. Differences in the contracting and payment ratio

| Country | Contracting ratio (2015) – % | Payment ratio (2015) – % | Difference between contracting and payment ratio |
|----------------|------------------------------|--------------------------|--|
| Lithuania | 99 | 99 | 0 |
| Poland | 100 | 92 | 8 |
| Estonia | 100 | 95 | 5 |
| Czech Republic | 103 | 89 | 14 |
| Latvia | 104 | 97 | 7 |
| Bulgaria | 105 | 95 | 10 |
| Slovenia | 107 | 105 | 2 |
| Romania | 116 | 73 | 43 |
| Croatia | 117 | 57 | 60 |
| Hungary | 117 | 111 | 6 |
| Slovakia | 122 | 97 | 25 |

Source: (KPMG, 2016)

Table 10. EU Funds implementation progress in Romania in 2007-2015

| Year | Contracting ratio (%) | Payment ratio (%) | EC Certification ratio (%) |
|------|-----------------------|-------------------|----------------------------|
| 2007 | 0 | 0 | 0 |
| 2008 | 6 | 1 | 0 |
| 2009 | 16 | 3 | 1 |
| 2010 | 44 | 9 | 2 |
| 2011 | 67 | 16 | 6 |
| 2012 | 79 | 22 | 12 |
| 2013 | 94 | 37 | 27 |
| 2014 | 106 | 52 | 45 |
| 2015 | 116 | 73 | 59 |

Source: own representation

Table 10 indicates the result of the sum of several administrative factors, as the administrative capacity also refers to the political stability of a country (Mihailescu, 2012) over the legal provisions that a Member State must ensure and create in order to comply with European legislation, the architecture of financial financing programs, the number of priorities and the structure of the intermediate bodies and managing authorities (Holt, 2017). Other authors identify as causes of low absorption rate in Romania (Cace *et al.*, 2009 *apud* Zaman and Georgescu, 2009) the lack of long-term vision of authorities due to insufficient co-financing of projects, lack of cooperation between institutions; the failure of the public-private partnership or the lack of medium / long-term prospects to ensure sustainable projects.

Although the Corruption Perception Index has a yearly determined value and it is an indicator by itself, its impact is also determined by the decentralization level of a state, with greater negative impacts on more centralized states, but it also depends on the institutional and structural landscape, on the legal and political, as well as social context, alongside with the national provisions regarding the management and implementation of the EU Funds.

5. CONCLUSIONS

Based on the results of the previous programming period 2007-2013 and on the statistical analysis realized in this article, we have come up with the result that the level of corruption in a country has a visible impact on the absorption rate of EU Funds, especially in the newly adhered member states, such as Romania and Bulgaria. In this regard, the fact that Romania's score in the CPI is one of the lowest in the EU it is connected to the low absorption rate for the 2007-2013 period. The above presented effects of corruption only raise awareness on the most striving items, as they are also mentioned in country reports annually issued by OLAF.

The fact that Romania has received the most recommendations and that it has been in the top countries regarding the number of fraud cases opened with regard to EU funds management should be an eye-opening fact that certain changes with regard to national legislation and practices should happen in order to avoid EU funds suspension or blockages.

Although the study demonstrates the effect of the corruption level of a country over the absorption rate and it underlines its most frequent results, it would be interesting to further continue with the research and analyze these effects over a period of 7-10 years using the same variables, in order to be able to determine a more precise impact and the effects of a high level of corruption in a member state.

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THE EQUITY PURCHASES IN PATENTS-DRIVEN M&As: EVIDENCE FROM THE EUROPEAN UNION

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Abstract

The motivations of the companies to participate in transactions like M&As are very diverse, despite the fact that they all sustain the external growth strategies which can lead to an increase in the wealth of the shareholders of the participating entities. In most cases, the acquirer and the target enter a concentration because they are interested in other company's resources, which can be material or immaterial. In nowadays, in a boundaryless economy, one of the most appreciated resources is knowledge. In this respect, the intangible assets, in general, and patents, in particular, are the accounting representation of knowledge in a company. In the post-M&A phase, through the integration process and after it, these resources can be transferred, taught or shared, but fundamentally the involved companies expect synergy gains, or that the combined firms to report efficiency gains higher than if they would activate separately. Because the acquirer pays for an opportunity to achieve synergy by using the resources of the target, the value of the intangible assets of the target company is considered to be predictor for the deal value paid in transaction. To those we add the size of the target company, its core activity and the accounting practice, the latter being added to the model, in a hierarchical manner.

Keywords: *innovation; theories of the firm; M&As; efficiency gains; performance.*

JEL Classification: F63, G34, O34

1. INTRODUCTION

Innovation is the baseline for many M&As, because it can be the source for knowledge transfer synergies. The knowledge can belong either to the acquirer

or the target and it is transferred from one company to the other, it can also be shared with the other company or, eventually, taught after the integration process is over (Gupta and Roos, 2001). One element of importance related to innovation are patents and there are a lot of companies which prefer to involve in M&As, to purchase innovation, instead of producing it. The key elements in this decision are time, costs and the ease of success. According to the resource-based theory of the firm and the knowledge-based view, differences in innovative performance between firms are a result of dissimilar knowledge sources (Cloudt, Hagedoorn and Van Kranenburg, 2006).

We start by analysing the main theories of the firm, considering the two main tools used by the companies to act like intermediaries: the market and the capital. Starting from the neoclassical theory of the firm, we get to a more contemporary approach, resource-based and knowledge-based view of the companies. Analysing a company through its knowledge imposes a presentation of its intellectual capital and attitude towards innovation.

2. THEORIES OF THE FIRM: PREDICTING THE BEHAVIOUR OF A COMPANY

Before of all, in analysing a company, any economist or researcher starts by defining: What is a firm? Which are the characteristics that are essential in identifying a company, the ones tied to its legal status or to its economic activities? This question is quite important if, for example, one wishes to understand a company's motives to involve in restructuring activities, like M&As (Hart, 2011). Over the course of time, a few brave authors brought some shade of light over the presented enigma, but they were conceptualized from different perspectives. And, this way, the theories of the firm were born.

In Spulber's (2009) opinion, firms exist only when they record an improvement in the efficiency of economic transactions. The efficiency of firms is compared to the alternative of direct exchange between consumers, which would be time consuming, and would necessitate barter, mediation and contracts. So, as a solution to this matter, the concept of companies was created, which act like intermediaries. In this respect, economic entities have two instruments which are the fundament of economic theories: market, on a side, and capital, on the other side.

Firm theories are models of business enterprises which can predict the nature of the company, its behaviour, structure or relations with the market and its partners, including the necessary explanations. Throughout history voices from the economic world stated quite a few theories related to the concept of firm, which will be presented in evolution. Every theory of the firm is an abstraction of the real-world business enterprise which is designed to address a set of its characteristics and behaviours.

Neoclassical theory of the firm establishes an equilibrium between purchase decisions on the input markets and supply decision on the output markets (Grant, 1996). For example, in his prominent microeconomics textbook, Varian (1992) defined firms as “combinations of inputs and outputs that are technologically feasible” and assumes that a firm develops its core activities to maximize the profits. The traditional organization theory analyses the internal structure of the firm and the relationships between its constituent units and departments and it is based on the view of an organization as an information-processing machine that takes and processes information, which circulates between different levels of the organization (Nonaka and Toyama, 2015).

Dissatisfaction with Knight’s explanation of the firm in terms of optimal risk allocation in the face of individuals’ differential risk preferences (Knight, 1921) encouraged the emergence of the transaction cost theory of the firm which focused upon the relative efficiency of authority-based organization (‘hierarchies’) with contract-based organization (‘markets’) (Coase, 1937; Williamson, 1973). Attempts at integrating economics and organizational approaches to the theory of the firm have included the behavioural theory of the firm (Cyert and March, 1963) and the evolutionary theory of the firm (Nelson and Winter, 1982).

According to Grant (1996), the resource-based view (RBV) of the firm is less a theory of firm structure and behaviour as an attempt to explain and predict why some firms succeed in establishing positions of sustainable competitive advantage and, in so doing, earn superior returns. In brief, the RBV attempts to explain firm sustainable competitive advantage as stemming from firm resources that are rare, valuable, hard or impossible to imitate or duplicate, and hard to substitute (Bromiley and Rau, 2016).

The RBV argues that firms achieve competitive advantages through the application of valuable resources at their disposal. Resources can be separated into those that are tangible and property based, and those that are intangible and knowledge-based (Hörisch, Johnson and Schaltegger, 2014; Wiklund and Shepherd, 2003). The emerging ‘knowledge-based view’ is not, as yet, a theory of the firm. There is insufficient consensus as to its precepts or purpose, let alone its analysis and predictions, for it to be recognized as a ‘theory’. To the extent that it focuses upon knowledge as the most strategically important of the firm’s resources, it is an outgrowth of the resource-based view.

3. ASSIMILATED SYNERGIES TO M&AS IN INNOVATIVE INDUSTRIES

The M&A literature shows that one of the most frequently cited reason for such operations is to achieve synergy. Invoking the concept of synergy in the pre-merger and acquisition phase is not a new practice. However, the forecasts for fixing a certain type of synergy at this stage (the forecasts) may not lead to

the desired effect. It is worth mentioning in this regard that some synergies take time to manifest, at least three years after the completion of specific operations.

From a theoretical point of view, synergies can be analyzed from a double perspective: as incentives for entities to engage in business combinations or as a result. As far as synergy types are to be of concern. It should be noted that where one can speak about a positive synergy effect, i.e. an increase in wealth, the probability to obtain the reverse phenomenon it must not be neglected. Thus, it is materialized in a negative synergy effect. We are tempted to believe, at least at first glance, that in the post-restructuring period of economic entities we can see both forms of synergy effect within the final entity, but overall, the impact of the combination should be positive.

Sirower (1997) is of the opinion that in justifying a company's option to engage in M&As: the premium paid to the target company's shareholders must be related with the synergy expected to be achieved in a competitive field. In fact, the premium is the first manifestation of the expected synergy if we were to start from the assumption that the manager concludes the transaction considering that the added value to be obtained exceeds that amount paid in addition to the shareholders of the target company (Sirower and Sahni, 2006). Given this, we consider that the best way to represent the premium is to report the deal value paid to the shareholders to the shareholders' funds of the target company.

Innovations are fundamental tools for organizational transformation that lead to successful business results. Thus, their assessment should focus on planning, execution and investment management in this respect. Consequently, a company should ensure that investment in innovation matches the strategic objectives of the company/post-merger companies; be innovative, by constantly reviewing company's/companies' capabilities to respond to industry change; and integrate post-concentration IT&C resources to achieve synergy (Chen, 2012). These issues must be correlated with the resource-based approach, which argues that the competitive advantages of a company are indissolubly linked to its valuable, rare and irreplaceable resources. Patents and any assets resulting from innovations may support this theory if such a company is involved in transactions such as M&As.

Technological innovations generate synergies that vary in the speed of occurrence and the magnitude of their impact. A classification that takes into account the impact of innovation determines two types of synergies: *additive synergies* and *multiplicative synergies* (Harrigan, DiGuardo and Cowgill, 2016).

If a business merger collectively uses its innovative resources to expense for research and development, reflected later in patents, then it creates *multiplicative synergies*, which contribute to enhancing technological skills instead of combining them. Thus, synthesizing ideas from different sources to create something radically different leads to synergies, thus contributing to the

organizational learning process associated with such inventions that lead to the development of vast technological skills.

As far as *additive synergies* are concerned, they are built incrementally on existing technologies. An example would be software programs that are modified to meet post-merger/acquisition needs. The advantage of these synergies is that they are faster in post-merger/acquisition and they improve the results of repetitive activities, streamlining phases and working processes. The disadvantage is the fact that they are limited, and their profitability decreases over time.

4. HYPOTHESES DEVELOPMENT

Woo *et al.* (2018) compare the premium with the expected synergy to be obtained from M&As, taking into account the influence of time as a factor: premiums are paid immediately, while synergies take time to manifest, they are expected to occur after at least one year from the transaction date. Most authors believe that they occur even after three years from that date (Weber and Dholakia, 2000; Loukianova, Nikulin and Vedernikov, 2017). In this context, they delimit the following situations:

a. $\text{synergy} \geq \text{premium}$ – this combination results from the accumulation of up-to-date positive synergies that are equal to or exceed the amount of the premium paid to the target entity's shareholders. In this case, we have the situation of a successful M&A;

b. $0 \leq \text{synergy} \leq \text{premium}$ – in this case, the present value of future synergies is positive, but does not exceed the amount of premium paid to the shareholders of the target company. In the literature, this situation corresponds to a merger or acquisition that is not successful (Zhu and Zhu, 2016);

c. $\text{synergy} \leq 0$. The literature shows that, when two economic entities decide to merge, the sum of the whole, over time, becomes larger than the mere sum of its component parts (Burgin and Meissner, 2017). Studies show that when it comes to synergy, it can be positive or negative. If the synergy is negative, it cumulates, in fact, to the premium and represents together the total loss in the process. This is considered the case when the M&A is a failure.

In fact, the size of the premium payable to the target company's shareholders may, in some cases, exceed the value of the stock market capitalization of the target company and is not correlated with the expected synergies for several reasons: insufficient understanding of the concept of synergy, presentation of the expected synergy without being identified specifically the sources for obtaining it without specific calculations or a presentation of the steps to be taken to achieve it.

Qian (2000) states that successful foreign direct investment for a company depends on firm's possession of intangible assets, but that is not sufficient, being sensitive to the ownership advantages provided by target countries in the local environment.

To date, little, or only weak, empirical support exists for assessing the influence of intangibles on the price paid by an acquirer for a target company. Considering the opinion of Harvey and Lusch (1997), there are a number of situations which necessitate the valuation of intangible assets for legal as well as accounting transactions: (1) an exchange in which intangibles are transferred between companies; (2) in an allocation of purchase price during acquisition when all the assets of a business, both tangible and intangible, are valued; (3) in support of the determination of royalty rates or license fees; (4) to estimate a loss due to abandonment or casualty; (5) in support of enterprise valuation, when the company is involved in a business concentration, like M&As; and (6) for their use as collateral in financing. Thus, they can influence, positively or negatively, the M&A and, indirectly, the deal value paid by the acquirer.

H₁: The value of the intangible assets and the size of the target company have a negative effect on the deal value paid in M&As, while the core activity of the acquired company has a positive effect on the same value, reported to the shareholders' funds.

H₂: The accounting practice of the target has a positive effect on the deal value paid in concertation, reported to the value of the shareholders' funds of the acquired company.

These hypotheses will be tested and validated using the statistical software SPSS 25.0.

5. RESEARCH METHODOLOGY AND DESIGN

To test and to validate the proposed research hypotheses, the study analyses the empirical data related to 164 M&As, for the 2011 – 2017 period of time, considering the target companies that are involved in M&A because they declared patents, as a motive for concentration. To reach the proposed research hypotheses, we use linear regression and crosstabulation.

5.1. Target population and analysed sample

To confirm the research hypotheses, the data regarding M&As were gathered from two databases, for the 2011-2017 period of time. The information regarding the deals representing M&As was collected from the Zephyr database (target name, target country, acquirer name, acquirer country, deal type, deal value, the motive – patents, primary NACE Rev.2 code for the target); financial information was collected from Orbis database (shareholders' funds, intangibles, total assets for the target company). The M&As considered to be innovation-based are marked with patents.

5.2. Models proposed for analysis and data source

This paper examines a series of factors influencing the deal value in M&As which involved target companies owning patents. The deal value was pondered

with shareholders' funds. Because the target companies are the ones that own the patents, the financial information are referring to them and include data related to assets, intangibles, the size of the company and NACE main section.

The proposed variables are presented in Table 1.

Table 1. The variables proposed for the analysis

| Symbol | Representation | Description | Explanation |
|---|---|-----------------------------------|---|
| <i>Deal value/ shareholders' funds (DV)</i> | % | Dependent variable | The ratio of deal value in the shareholders' funds of the target company. Information collected from Zephyr database (deal value) and Orbis database (equity). |
| <i>Intangibles/Total assets (IA)</i> | % | Independent variable/ numeric | The ratio of intangible assets in the value of total assets; information collected from Orbis database. |
| <i>Size of the company (SC)</i> | 1. Small company 2. Medium-size company 3. Large company 4. Very large company | Independent variable/ categorical | The size of the target company; information collected from Zephyr database. |
| <i>NACE main section (NACE)</i> | 1. Industry 2. Services | Independent variable/ categorical | According to EU, sections A-G from NACE Rev. 2 are associated to industry, sections H-U are composing the services. The data regarding the NACE main section for the target company are collected from Zephyr database. |
| <i>R&D/Total assets (RD)</i> | % | Independent variable/ numeric | The ratio of R&D expenses in the value of long-term assets; information collected from Orbis database. |
| <i>Accounting practice (AccP)</i> | 1. IFRS 2. Local GAAP | Independent variable/ categorical | The accounting practice of the target company; information collected from Orbis database. |

Source: authors' own processing

Dependent variable. This variable represents the ratio between deal value paid in the M&A and the shareholders' funds, for the year before the

concentration. Thus, this ratio reflects the excess amount paid over the value of the equity of the target company.

Independent variables. These variables are presented in Table 1 and they are calculated for the target company, considering the financial information for the year before the M&A. According to Rozen-Backer (2018), the data from the year before the concentration are specific to pre-M&A stage and they are collected from Orbis database.

The *accounting practice* variable is considered for the year of the merger, given the fact that there are studies which validated its significance in influencing a financial dependent variable (Aevoae, Dicu and Mardiros, 2018; Robu, Istrate and Herghiligi, 2019).

Our *hierarchical model* includes the following steps:

1) predicting the dependent variable DV from independent variables IA , SC and $NACE$; the model is presented in Eq. (1):

$$DV (\%) = \alpha + \beta_1 \cdot IA + \beta_2 \cdot SC + \beta_3 \cdot NACE + \varepsilon \quad (1)$$

2) predicting the dependent variable DV from independent variables IA , SC and $NACE$, to which we add the R&D ratio in total assets; the model is presented in Eq. (2):

$$DV (\%) = \alpha + \beta_1 \cdot IA + \beta_2 \cdot SC + \beta_3 \cdot NACE + \beta_4 \cdot RD + \varepsilon \quad (2)$$

3) predicting the dependent variable DV from independent variables IA , SC , $NACE$ and RD (including the accounting practices); the model is presented in Eq. (3):

$$DV (\%) = \alpha + \beta_1 \cdot IA + \beta_2 \cdot SC + \beta_3 \cdot NACE + \beta_4 \cdot AccP + \varepsilon \quad (3)$$

The used method is *hierarchical linear regression* (HLR) because it is a way to show if variables of our interest explain a statistically significant amount of variance in our DV after accounting for all other variables. Also, our study includes *variance inflation factor* (VIF), to identify multicollinearity problems. The VIF and tolerance are both widely used measures of the degree of multicollinearity of the i^{th} independent variable with the other independent variables in a regression model (O'Brien, 2007) and its normal threshold is 10.

6. RESEARCH RESULTS

The study will present a series of descriptive statistics for the analyzed variables (per total and on categories considered in the analysis), of the values of the Pearson correlation coefficients and the estimations of the parameters of the proposed regression models.

6.1. Descriptive statistics

Table 2 shows the descriptive statistics of our sample of M&As.

For our sample of M&As, the target companies report patents, according to Zephyr database, and we consider only the transactions that involve one acquirer and one target company (164 M&As, 164 acquirers and 164 targets). Out of the 164 targets, 67.07% are activating in industry and 32.93% in services, considering that sections A-G from NACE Rev. 2 are associated to industry, while sections H-U are composing the services (European Commission, 2008). According to Table 2, the proportion is the same for accounting practices (IFRS vs. local GAAP), while the vast proportion of the entities involved in M&As as targets are very large entities (76.22%). In the same time, we acknowledge the fact that, for medium and large entities, the acquirers paid up to 560 times the value of shareholders' funds purchased in M&A.

Table 2. The descriptive statistics for the chosen sample of M&As

| Variables | Categories | N | Mean | St. Dev. | Median | 95% Confidence interval | |
|-----------|------------|-----|-----------|-----------|-----------|-------------------------|------------|
| | | | | | | Lower | Upper |
| NACE | Industry | 110 | 2.860618 | 9.063363 | 1.922710 | 1.147886 | 4.573351 |
| | Services | 54 | 13.008817 | 31.769972 | 2.808645 | 4.337284 | 21.680350 |
| Year | 2011 | 1 | - | - | - | - | - |
| | 2012 | 1 | - | - | - | - | - |
| | 2013 | 13 | 2.840092 | 14.460311 | 2.336466 | -5.898186 | 11.578370 |
| | 2014 | 18 | 5.532233 | 13.315306 | 1.129262 | -1.089313 | 12.153779 |
| | 2015 | 37 | 4.140290 | 17.852485 | 1.958028 | -1.812025 | 10.092605 |
| | 2016 | 58 | 5.336873 | 17.087992 | 1.354132 | 0.843815 | 9.829931 |
| | 2017 | 36 | 10.737168 | 29.730512 | 3.644815 | 0.677810 | 20.796526 |
| AccP | IFRS | 110 | 5.147202 | 18.992685 | 1.487524 | 1.558094 | 8.736310 |
| | Local GAAP | 54 | 8.350962 | 22.355592 | 4.284978 | 2.249060 | 14.452863 |
| SC | Small | 4 | 32.998885 | 61.348493 | 3.306210 | -64.620257 | 130.61803 |
| | Medium | 2 | 46.957282 | 57.107131 | 46.957282 | -466.12993 | 560.044501 |
| | Large | 33 | 5.109697 | 14.422491 | 1.887392 | 560.044501 | 10.223690 |
| | Very large | 125 | 4.980912 | 17.631984 | 2.011642 | 1.859483 | 8.102341 |
| Total | | 164 | 6.202098 | 20.149504 | 2.023261 | 3.095200 | 9.308996 |

Source: authors' own processing using SPSS 25.0

6.2. Results on the influence of the microeconomic determinants of the percentage acquired in the target company

The correlations between the numeric variables included in the models are presented in Table 3.

Table 3. The correlations between the variables included in the models

| Indicators | Intangibles/ Total Assets | R&D/ Total Assets | Deal value/Shareholders' funds |
|--|------------------------------|----------------------|--------------------------------------|
| Intangibles/Total Assets | 1 | -.086 | .026 |
| | | .272 | .743 |
| R&D/Total Assets | -.086 | 1 | .476*** |
| | .272 | | .000 |
| Deal value/ Shareholders' funds | .026 | .476*** | 1 |
| | .743 | .000 | |
| Significance level: * p<0.05; ** p<0.05; *** p<0.01. | | | |

Source: authors' own processing using SPSS 25.0

The correlations reveal unexpected patterns. In M&As which involved patents, there isn't a significant correlation between the deal value paid for the target shares and the value of intangibles reported by the target companies (sig. = 0.743, $r = 0.026$). On the other side, the R&D expenses are positively and significantly correlated with the dependent variable, (sig. = 0.000, $r = 0.476$). this implies that the acquirers are interested in target companies that are involved in R&D and they are willing to pay a higher value for those companies that report a high R&D expense, reported to total assets.

Table 4 displays the estimations of the parameters of the three regression models proposed for testing and validation. For the presented models, the chosen predictors are microeconomic data, related to the target company (the ratio of intangibles in total assets, the ratio of R&D in total assets, size of the company and target's core activity). The model should predict how much of the variance of the dependent variable is justified by the target company's information.

The first regression model is significant ($F(3, 160) = 5.842$; $p < 0.001$) but explains a small percentage of the variance in the dependent variable ($R^2 = .099$). The predictors, size of the company (sig. = 0.007) and NACE (sig. = 0.003), to which we added the intangibles ratio, account for 9.9% of the variance of the dependent variable (the ratio between deal value and shareholders' funds).

Table 4. Parameters estimation for the HLR model

| Variables | Model 1 | | Model 2 | | Model 3 | |
|--------------------------------------|------------------------------|----------|------------------------------|----------|------------------------------|----------|
| | β | t-values | β | t-values | β | t-values |
| <i>Intangibles/Total assets (IA)</i> | -0.040 | -0.515 | 0.033 | 0.456 | 0.031 | 0.433 |
| <i>Size of the company (SC)</i> | -0.205*** | -2.717 | -0.078 | -1.069 | -0.084 | -1.119 |
| <i>NACE main section (NACE)</i> | 0.230*** | 2.975 | 0.109 | 1.467 | 0.104 | 1.389 |
| <i>R&D/Total assets (RD)</i> | - | - | 0.425*** | 5.575 | 0.430*** | 5.538 |
| <i>Accounting practice (AccP)</i> | - | - | - | - | -0.026 | -0.355 |
| R^2 | 0.099 | | 0.246 | | 0.247 | |
| <i>Adjusted R²</i> | 0.082 | | 0.227 | | 0.223 | |
| <i>R² change</i> | - | | 0.147 | | 0.001 | |
| <i>F</i> | F(3,160) = 5.842, p = 0,001 | | F(4,159) = 12.975, p = 0.000 | | F(5,158) = 10.348, p = 0.000 | |
| <i>Tolerance</i> | $\tau_1 = 1 - R_1^2 = 0.901$ | | $\tau_1 = 1 - R_1^2 = 0.754$ | | $\tau_1 = 1 - R_1^2 = 0.753$ | |

Significance level: ** p<0.05, *** p<0.01.

Source: authors' own processing using SPSS 25.0

In the second model, which is also significant ($F(4, 159) = 12.975$; $p < 0.001$), we added the R&D ratio. The change in R^2 is very consistent (0.147). According to the second model, when adding the R&D into the variable list, all the other predictors became not significant and the only significant independent variable is the ratio of the research expenses in total assets of the target. Also, this variable has a positive influence on the dependent variable, which means the higher the R&D expenses, the higher the price paid in the transaction.

In our third and last model, we added the categorical variable Accounting practice (AccP), but it is not significant nor changes the R^2 in a noticeable manner. Thus, we conclude that the accounting regulations that are applied by the target company in the year of the M&A do not have an influence on the price paid in the transaction.

Although our models presented in Table 4 don't have very high values of R^2 , the last model explains better the variance of the dependent variable than the previous one in the HLR. Moreover, the difference of R^2 between our presented models is statistically significant. Thus, we can say that the added variable in the second model improves the prediction of the DV. We can say that the added variable explains an additional 14.7% from the variance of our DV (deal value/shareholders' funds). For the third model, even though the increase has a low value and keeping in mind the theoretical aspects of the HLR, it still has a positive effect in our R^2 .

7. CONCLUSIONS

The analysis of the determinants of the deal value paid in a M&A transaction is of a great importance, given the fact that the difference between this deal value and the net worth of the purchased company is, in Sirower's opinion, the first manifestation of synergy. The premium paid in such a transaction can be based on different motives but, in the case of innovation-based M&As, the acquirer is searching for specific treats of the target company, which fall under the resource-based view, more specifically under knowledge-based view. For this reason, we reported the deal value to the correspondent part of the shareholders' funds of the target company, thus creating a ratio which was considered as dependent variable for our models.

Given the distinct nature of the knowledge and the distinctive way of being assessed, we chose the intangible fixed assets of the acquired company as a first determinant of the deal value. However, by testing this assumption on a sample of 164 M&As which had as main feature, the patents owned by the target companies, we conclude that the intangibles are not significant in predicting the deal value paid. On the other side, the size of the target and its core activity are significantly influencing the price paid for the acquired company. In a second model, we notice that, when considering the R&D expenses of the target, reported to total assets, this variable determines a consistent change in the R^2 ,

which means that the resulting model explains better the change I the dependent variable. In the last model, the accounting practice (IFRS and local GAAP) led to a R^2 which could predict more from the variance of the dependent variable, but the change is very small.

One of the limits of the study is represented by the fact that, although the M&As were selected based on the fact they involved patents, no information was available on their number and value, so they could be considered an independent variable.

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EDUCATION AND HEALTH – AREAS OF INTEREST IN ROMANIA?

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Abstract

Education and health are the foundation of every nation, so that it should be a priority for all organizations or institutions involved in these social areas. Education is a social phenomenon, specifically human. This emerged and developed with society as a result of the need to develop man as man, as a work force and social being at the same time. Education differs and develops in time according to the material and spiritual conditions of society. The World Health Organization has defined health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”, but also “the capacity to lead a productive social and economic life.” The European Union is following the evolution of the health systems of all member countries in terms of effectiveness, accessibility and resilience and draws up a report every two years. In the modern state, education and health care are integrated into systems administered and governed by governments, and the access of citizens to them varies from one country to another. The research objective is to identify major changes in education and health, and their impact on quality of life in Romania. The research method is the non-participatory observation. The data source is the information obtained from the National Institute of Statistics, as well as the legislative regulations in these fields of activity. The results of the research aim to highlight the effects of the reforms in education and health in Romania.

Keywords: *education; health; reform; Romania.*

JEL Classification: H20, M48

1. INTRODUCTION

Every country is transformed through **education**. A prosperous and civilized country invests in education because it is the engine that changes society for the better. The proportion of those educated in the total population is the barometer of success, because an educated man is one who has a clear scale of values and does not rebut the fundamental notions of human existence, such as truth, justice, freedom, courage.

The basic condition for the sustainable development of a nation **is the health of citizens**. A healthy people is one who is educated and knows how to preserve their health, to use the latest findings in the medical field, if necessary. Also, a people is healthy if they support morality, because the moral decay,

manifested through robbery, corruption, robbery by the authorities, attacks the very healthy fiber of a nation.

Together, education and health lead to a nation that will develop harmoniously with many benefits for its citizens, because the lack of one or the other or even worse of both leads to a lack of prospects or to a future in which the public good does not prevail. Reforms in health and education are absolutely necessary, and their correct application within nations has proven to be true success stories, yet becoming models for all countries aspiring to prosperity and harmonious development.

2. LITERATURE REVIEW

Education and health are two areas of great interest, even strategic for each nation, which wants a strong and harmonious development, which is why they have been regulated both internationally and nationally by various organizations and agencies in the field.

In the field of education, UNESCO (United Nations Educational, Scientific and Cultural Organization) contributes to world peace and security through collaboration among nations in education, science, culture and communication, the European Union supports Member States in their efforts to provide citizens the best education and training and sets the framework for this to enable member countries.

In the field of health, the World Health Organization has the role of maintaining and coordinating the health status of populations globally, and the EU is complementing national health policies by supporting Member State governments to achieve common goals, pool resources and overcome common challenges by developing European norms and standards for medical products and services and financing health projects.

At national level, the normative acts that ensure the proper development of the educational and health process are drafted by governments through ministries.

At the same time, many specialists have focused their attention on these areas by conducting various studies.

In the field of education there are studies that follow the evolution of education reform at country level (Afonso, 2014; Seeber *et al.*, 2019; Grek *et al.*, 2009; Aho, Pitkanen and Sahlberg, 2006; etc.), studies on the modern education system (Teichler, 2019; Fitzgerald *et al.*, 2016; Sandmann, Furco and Adams, 2016; etc.).

Multiple studies have been conducted on health (only in 2019 we identified about 1,000 studies). Regarding the reform of the healthcare system, aspect also covered in this study, the literature contains numerous and diverse articles, both international (Rechel *et al.*, 2019; Wasserman *et al.*, 2019; etc.) and national (Duran, Chanturidze and Gheorghe, 2019; Mosoiu *et al.*, 2006; Moisil and Jitaru, 2006; etc.).

3. RESEARCH METHODOLOGY

The objective of the research is to follow education and health reforms and to identify the major changes that have occurred as a result of their implementation, as well as their impact on the quality of life in Romania. *The research method* is the non-participatory observation. *The data source* is the information obtained from the National Institute of Statistics, Organisation for European Economic Co-operation (OECD), European Union, World Bank as well as the legislative regulations in these fields of activity. *The results of the research* aim to highlight the effects of the reforms in education and health in Romania, more precisely how they have influenced the quality of life in this European country.

4. REFORMS IN EDUCATION

In the history of education for children and young people, it is noticed that this was always essential for the political elite of the time. Thus, the Greeks formed children as citizens in the bud, and then to induce local patriotism by legends, shared meals and participation in speeches bright, Latins considered pater (father) the central character of life each and everything was subsumed triad fides, pietas and libertas, values that have defined the greatest and longevian empire of antiquity, medieval scholastic form good Christians, the Renaissance formed on homo universalis, Enlightenment has formed the rational, deistic and contractual man, XIX century moderns have made modern citizen, lived in a world desecrated (Nancu, 2017).

In Romania, the historical evolution of education systems has closely followed the evolution of the political and administrative system.

According to Wikipedia, the steps are as follows:

- The medieval period, characterized by a low interest in developing quality and sustainable education institutions;
- The beginning of the process of formation of the modern Romanian state after the Revolution of 1821, characterized by the initiation of the process of construction of national education and education systems, which led to the development of different types of educational institutions (elementary schools, gymnasiums, colleges, universities etc.) and the appearance of some laws on the organization and functioning of this system (Organic Regulation, Cuza's law, Spiru Haret's laws, etc.);
- In the period after World War I the integration of different educational systems was achieved as a result of the achievement of the Romanian unitary national state. Primary education was compulsory and free of charge for all citizens;
- After the Second World War and the establishment of the communist regime, the liberal educational system was replaced by a Soviet-type system based on ideology and mass indoctrination. In the period 1965-

1975 the Romanian education system was reformed through a series of measures and thus it was possible to eliminate the illiteracy in practice with the compulsory and free of the education up to the high school or professional level;

- After the Revolution of 1989, the Romanian education system was in a continuous process of reorganization.

Some authors have analyzed the evolution of the educational system regulation in order to serve the political interest in Romania (Nancu, 2017).

The Communist law of 1948 specified that education is organized exclusively by the State on the basis of the unity of structure and is based on democratic, popular and realistic-scientific bases, which have in fact been built by the systematic destruction of the Romanian interwar culture, defined as “bourgeois, fascist, reactionary.”

Through Law no. 11/1968, education is defined and consistent with the aims of the regime, namely general culture but subsumed to materialist-scientific atheism conception, the promotion of socialist morals, the development of a healthy body and of an intellectual and aesthetic education, the cultivation of patriotism.

Law no. 28/1978 captures the evolutions of the regime in the sense that education is not only a main factor of culture and civilization but it also aims at educating the new man with the task to ensure the implementation of party and state policy regarding the training of cadres for all fields of economic activity and social issues.

Law no. 84/1998 reflects the change of the political regime, and the Marxist ideology, the materialistic-scientific conceptions are replaced by a terminology that means the return to the interwar Romanian school, namely “the humanist traditions, the values of democracy, national identity, individuality, personality, and love of the past “.

Law no. 1/2011 promotes value-oriented education, creativity, cognitive capacities, volunteer capacities and actionable capacities, fundamental knowledge and knowledge, skills and abilities of direct utility, in the profession and in society, and the mission is training, through education, the mental infrastructure of the Romanian society in accordance with the new requirements deriving from the status of Romania as a member of the European Union and from the functioning in the context of globalization and the sustainable generation of a highly competitive national human resource, able to function effectively in today’s and future society.

Although at the declarative level education is a national priority, Romania invests just over 3% of GDP in education, although the law provides for a double percentage. Moreover, the education law was changed 61 times in 28 years, which has led Romania to be always behind the developed countries.

According to the Report of the Presidential Commission for the Analysis and Elaboration of Policies in the Field of Education and Research (2007), the educational system in Romania has four major problems:

- *It is ineffective*, as suggested by the achievements of Romanian students in the main international evaluations: PISA – Program for International Student Assessment (in the 2015 test, with 72 countries, Romania ranked 48th), TIMSS – Trends in International Mathematics and Science Study (in 2011, from 42 participating countries, Romania ranks 23rd in science and 22th place in mathematics) and PIRLS – Progress in International Reading Literacy Study (Romania is ranked 36th out of 45 in 2011 participating states) (TIMSS & PIRLS International Study Centre, 2019);

- *It is irrelevant* in relation to the economy and society of the future, which are based on knowledge. Through the Lisbon Agenda, the EU has set out a series of indicators to show the extent to which a country and the Union as a whole are capable of coping with the challenges of the knowledge economy. The position of Romania in relation to the indicators of the knowledge economy reflects the fact that the current education system is not able to provide Romania a competitive position in the knowledge economy (Table 1);

Table 1. Romania's position in relation to the Lisbon indicators

| Lisbon indicators | Romania (%) | European Union (%) |
|---|--------------------|---------------------------|
| The premature departure of the education system | 23.6 | 14.9 |
| The share of the 22-year-old population who graduated at least from high school | 66.5 | 77.3 |
| The share of 15-year-old students who fail to achieve even the lowest performance level (PISA 2001) | 41 | 19.4 |
| Proportion of graduates in mathematics, science and technology | 23 | 24.1 |
| Adult participation in lifelong learning | 1.6 | 10.8 |

Source: own processing after Vasile *et al.* (2007, p. 183)

- *It is unfair*, because only 24.54% of rural students go to high school and the proportion of rural students with poor results in Romanian, mathematics and science is 2-6 times higher than in urban areas. Approximately 80% of non-school-age youths are Roma, of which 38% are illiterate. The proportion of Roma children enrolled in primary education is 64%, compared to 98.9% – the national average. Major inequities are also recorded in children with special needs, prison groups or other vulnerable groups;

- *It is poor*, more than 82% of all school buildings are built before 1970, thousands of schools lack basic facilities (running water, WC, etc.), and the material endowment is precarious. Only 36% of the schools are connected to the

Internet, the human resource is aging worryingly, and the quality of the performance is generally weak (only 18% of the teaching staff has been trained to use information technology in teaching, and the curriculum is particularly loaded and, above all, lacking a clear vision).

All these problems add an external phenomenon, with great consequences for education, namely the demographic decline.

If we relate to the Finnish education system, which is considered the best and where the school is considered as a playground for children (students do not have uniforms, they learn in the yard and do not ring, laugh, talk unhelpful and no one teachers are partners and do not evaluate or write them) and the job of a teacher is one of the most respected, along with a doctor or a lawyer (all teachers have at least one master, 100% subsidized by the state; only 10 percent of graduates reach the chair and continue to learn by going to personal development courses two hours a week), in Romania, students have five national exams in 12 years of school (first in class II, other grade IV, VI and VIII, and Baccalaureate) and teachers based most of the time, on oratory talent to captivate students, lack of money, didactic materials, technology. Moreover, while Finland is working on the great reform to prepare its young people for the requirements of 2050, in Romania, the education law was changed several dozen times after 1989.

In summary, the current educational system has serious problems of efficiency, equity, quality and relevance for the knowledge economy.

5. REFORMS IN HEALTH

Health systems aim to meet the needs of the population regarding health and medical services, with three main axes, namely (Marin, 2009):

- Health needs and health demand;
- Financing and organizing health sectors;
- Healthcare infrastructure.

In the field of health, three major funding systems are distinguished in the European Union countries, namely (Marin, 2009):

- The Beveridge model, which involves public funding based on taxes;
- The Bismark model, which is based on compulsory insurance;
- The private financing model, which is based on voluntary insurance.

The Romanian health system is based on the Bismark model, i.e. social insurance, the sources of funding being provided by: the state budget, the budget of the National Health Insurance Fund, local budgets, own incomes, credits and external non-reimbursable funds, donations and sponsorships. It aims at ensuring fair and non-discriminatory access to a pre-established basic service package.

The reform of the public health system in Romania started with the elaboration of Law no. 95 of April 14, 2006. The Romanian legislation in the sanitary field had periodic changes and the impact on the population was not always favorable.

Framework Law no. 153/2017 is one of the most important laws that dealt with the reform of the sanitary system. The salary increases of medical staff from public funds provided by this law were applied in two stages:

- Starting January 1, 2018, the gross salaries of medical personnel increased by 25% compared to December 2017, including that of bonuses to be paid on 31 December 2017;
- Starting March 1, 2018, the salaries of doctors and nurses have risen to the level of basic salaries set at 2022.

In this context, as of 1 March 2018, the gross basic salaries of doctors and nurses increased as compared to January 2018, with rates ranging from 70% to 172%.

However, wage increases did not have the expected outcome. First, there was a halt in any number of departures medical professionals abroad. In addition, employees in the health care system become frustrated at work due to the numerous lacks of equipment and regulations in the field, which create all sorts of elements that hinder a good doctor-patient relationship and the problem of “scrap” is far to solve, many such cases being advertised.

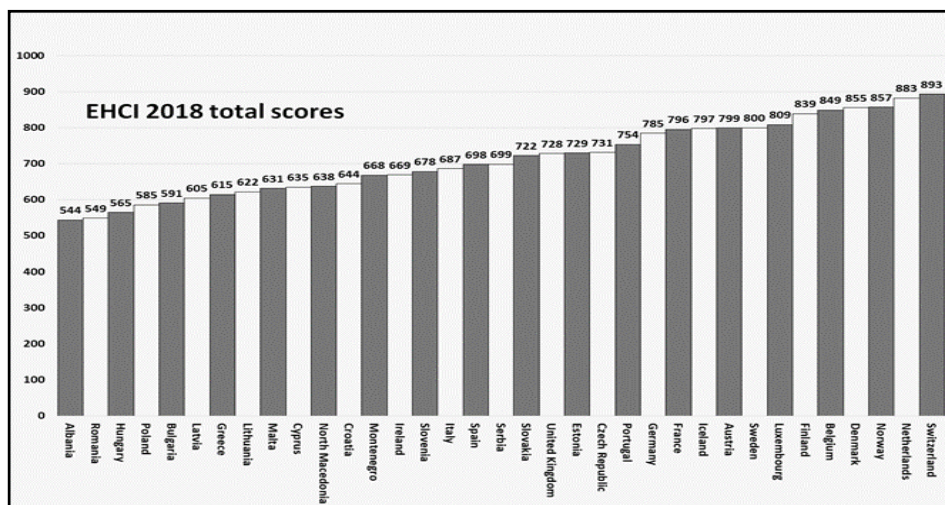
The bureaucracy in the Romanian healthcare system is also confirmed by the IQVIA study (QuintilesIMS), according to which, between 2013 and 2016, of 156 innovative medicines approved by the European Medicines Agency, only 20 were included in the list of compensated and free medicines in Romania while Italy introduced 86 medicines, Slovenia 52 and Bulgaria 33, and the European average is 51 (Neagu, 2017). Once a new drug is approved by the competent authorities and until it is introduced to compensate pass 43 months, respectively a double time compared to Bulgaria or the Czech Republic. In Germany, the period of introduction of new treatments on the list of compensated medicines is less than one month, and in the UK, it takes 4 months, according to the same study.

The European Commission’s report *State of Health in the EU* in 2017, conducted jointly with the OECD and the European Observatory for health systems and policies (European Commission, 2017), presents a series of conclusions on the health system in Romania:

- Life expectancy at birth remains almost six years below the European Union average and is one of the lowest in the European Union;
- Excessive episodic drinking among men is a serious public health problem;
- The Romanian health system is characterized by low funding and inefficient use of public resources, with the lowest per capita spending as a share of GDP in the European Union;
- “Pocket” spending represents one fifth of total healthcare expenditure and includes direct payments and unofficial payments;
- The efficiency of the health system is limited by delays in the transition from inpatient care and hospital care to ambulatory care and primary care;

- There is insufficient data to assess the quality of the assistance, and the assessment of medical technology is still at an early stage of development;
- There are a number of initiatives to improve the health care system.

Figure 1. EHCI 2018 total scores



Source: (Björnberg and Phang, 2019, p. 26)

Neither in the Euro Health Consumer Index 2018 Report (Björnberg and Phang, 2019), the situation of the Romanian health system is not better (Figure 1). Thus, the main conclusions are:

- Romania occupies the penultimate place with a weaker medical system than Bulgaria, but also countries from the former Yugoslavia, such as Macedonia or Montenegro (the following indicators taken into account for the achievement of the classification: rights and information of patients, accessibility, respectively the waiting times for treatment, the results of the treatments, the range of services offered and their extension, prevention and pharmaceuticals);
- Romania ranks first in the rate of treatment-resistant inpatient infections, infant mortality and first place mortality rates due to cancer and cardiovascular disease;
- In terms of per capita health spending, Romania is still in the queue of the ranking.

The conclusion of this report is that “Romania has serious problems in managing the entire public health sector. Romania, Albania and Bulgaria have an outdated structure of the medical system and should receive professional support to restructure their health services”.

6. IMPACT OF EDUCATION AND HEALTH ON THE FUTURE OF ROMANIA

Education and health are the vital systems to have a prosperous society. Nelson Mandela said that “Education is the most powerful weapon which you can use it to change the world” and Ralph Waldo Emerson “The first wealth of man is health.” Only by combining their harmonious can ensure a successful future for any people.

The World Bank calculates the Human Capital Index (HCI), which measures the potential for a child born today up to the age of 18. Practically, the indicator shows the productivity of the future generation compared to an ideal system of education and health. The indicator is calculated for 157 countries.

The calculation of the index starts from several factors:

- The probability of survival to age five;
- A child’s expected years of schooling;
- Harmonized test scores as a measure of quality of learning;
- Adult survival rate (fraction of 15-year old that will survive to age 60);
- The proportion of children who are not stunted.

In the case of Romania, the Human Capital Index – HCI led to the following conclusions, according to Table 2.

Table 2. The Human Capital Index (HCI) – Romania

| Factors | Conclusions |
|-----------------------------------|--|
| Human Capital Index | A child born in Romania today will be 60 percent as productive when she grows up as she could be if she enjoyed complete education and full health. |
| Probability of Survival to Age 5 | 99 out of 100 children born in Romania survive to age 5. |
| Expected Years of School | In Romania, a child who starts school at age 4 can expect to complete 12.2 years of school by her 18th birthday. |
| Harmonized Test Scores | Students in Romania score 452 on a scale where 625 represents advanced attainment and 300 represents minimum attainment. |
| Learning-adjusted Years of School | Factoring in what children actually learn, expected years of school is only 8.8 years. |
| Adult Survival Rate | Across Romania, 87 percent of 15-year old will survive until age 60. This statistic is a proxy for the range of fatal and non-fatal health outcomes that a child born today would experience as an adult under current conditions. |
| Healthy Growth (Not Stunted Rate) | Data on stunting are not available for Romania. |

Source: own processing after data of the World Bank (2018)

With a 60% productivity of future generations, Romania is one of the last places in Europe. In Germany, for example, the rate is 79%, in the UK 78% and in Finland 81%, according to Table 3.

Table 3. Human Capital Index in Europe

| Country | HUMAN CAPITAL INDEX |
|------------------------|----------------------------|
| Albania | 0.62 |
| Armenia | 0.57 |
| Austria | 0.79 |
| Belgium | 0.76 |
| Bosnia and Herzegovina | 0.62 |
| Bulgaria | 0.68 |
| Croatia | 0.72 |
| Cyprus | 0.75 |
| Czech Republic | 0.78 |
| Denmark | 0.77 |
| Estonia | 0.75 |
| Finland | 0.81 |
| France | 0.76 |
| Germany | 0.79 |
| Greece | 0.68 |
| Hungary | 0.70 |
| Iceland | 0.74 |
| Ireland | 0.81 |
| Italy | 0.77 |
| Kosovo | 0.56 |
| Latvia | 0.72 |
| Lithuania | 0.71 |
| Luxembourg | 0.69 |
| Macedonia, FYR | 0.53 |
| Moldova | 0.58 |
| Montenegro | 0.62 |
| Netherlands | 0.80 |
| Norway | 0.77 |
| Poland | 0.75 |
| Portugal | 0.78 |
| Romania | 0.60 |
| Russian Federation | 0.73 |
| Serbia | 0.76 |
| Slovak Republic | 0.69 |
| Slovenia | 0.79 |
| Spain | 0.74 |
| Sweden | 0.80 |
| Switzerland | 0.77 |
| Turkey | 0.63 |
| Ukraine | 0.65 |
| United Kingdom | 0.78 |

Source: own processing after data of the World Bank (2018)

One of the most alarming conclusions of the study relates to the quality of education, meaning that children in Romania stay at school, starting from kindergarten to high school about 12.2 years until the age of 18. However, if school years are adjusted to the quality of education, then 12.2 years equals 8.8 years. Basically, 3.4 years of study are missing. Moreover, between 2012 and 2017, the value of the Human Capital Index fell from 63% to 60%.

7. CONCLUSIONS

Although they are two areas of strategic interest, education and health in Romania have not benefited from proper attention from the authorities, which is why they have not made much progress. Moreover, they have undergone the most reforms, which, unfortunately, have not reached their goal. As various national and international reports and studies show, education and health in Romania have made little progress which is why our country is in the queue of the rankings.

In order to progress and reach the developed countries, massive investments should be made in these two areas of national interest. Thus, we could have a civilized and prosperous society geared to the knowledge economy.

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STRATEGIC PLANNING OF HUMAN RESOURCES IN PUBLIC ADMINISTRATION. INSIGHTS FROM NORTH EAST ROMANIAN REGION

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Abstract

The aim of our paper is to provide a complex and comprehensive picture of how public administration institutions in Romania succeed or not to implement a strategic planning process of human resources and to provide a customized picture of how the planning process is carried out within a local public administration institution in North East region of Romania. The main objectives governing this work are represented by analysis of the theoretical framework and identification of the importance and necessity of a process of planning human resources within the public institutions; identification of the measures initiated by the competent bodies and of the legal framework applicable to the realization of the human resource planning process within the public institutions; identifying the extent to which the process of human resource planning is carried out within local public institutions. The results show that for public administration institutions the authorities through a coherent reform could assure the planning process.

Keywords: *public administration; strategy; human resource; planning; civil servants.*

JEL Classification: H83, H11

1. INTRODUCTION

The present society is made up of a vast network of organizations in a continuous movement, so that they are formed, developed and then disappear. In such circumstances, we can say that the human resource is a vital resource for these organizations, a resource through which their operation and subsequent evolution are ensured. In terms of human resources within public organizations, they are of particular importance as they have the ability to produce and reproduce all the other resources of the organization in which they operate (Cometto *et. al.*, 2019). The use of human resources by this type of organization leads to the achievement of results that become evident with the passage of time

because “in achieving the fundamental missions that it has to accomplish, the public administration must use its strategic resources” (Tofan and Bercu, 2013, p. 115). Thus, in the absence of the human factor, public institutions and not only, would have great deficiencies in achieving organizational objectives in terms of efficiency, effectiveness and economy. The importance of human resources in public organizations has been and represents an axiom, since the achievement of the results anticipated by organizations depends directly on its people, on how they manage to adapt to the changes that occur, to overcome them and to carry on loads in good condition. Thus, “human resources are strongly marked by the time factor necessary for changes in mentalities, habits, behaviours” (Manolescu, 2003, p. 25) in the conditions in which organizations need to adapt to changes in the external environment, changes that have become much more profound and unpredictable, generated and continuing the process of administrative reform. Today, more than ever before, human resource planning plays a key role in materializing the strategies and objectives of any organization (Bryson, 2018; Pynes, 2004). The realization of this process becomes much more important within public organizations, because unlike the ones that make profit, they do not have much resources, the human one being the most valuable (Hazafi, 2017). Human resource planning is the process of identifying the human resources needs of an organization and the initiation and development of appropriate actions designed to meet these needs (Veselovsky *et. al.*, 2015). The strategic planning is considered as one of the strategies that are based on Competency-Based Training (Prabawati and AOktariyanda 2018), our study revealing that the training programs are strategic keys to assure the qualified human resource for public administration.

2. METHODOLOGY FRAMEWORK

Human resource planning is a process designed to ensure the optimal human resources needed within the organization to meet the organizational objectives. This process is of particular importance since any mistake, inaccuracy, and omission over the stages of its realization lead to a decrease in the quality and implicitly the efficiency of the services provided by the public organization.

2.1. Research Question

It is imperative that the process of human resource planning is carried out in accordance with the principles of public function and, implicitly, in accordance with the rules and procedures established at national level in this field, thus contributing to the observance of the principle of transparency and the quality of public services in Romania. In view of the above, we can state that this research has started from the following question: How are translated into practice and what effects produce the strategic human resource planning objectives set in the

national strategy, at the level of the local public administration institutions at regional level? Based on these considerations, we have formulated the general objective of research which is represented by: identifying the manner in which the process of strategic planning of human resources in the local public institutions in Romania, on the one hand, and on the other hand within institutions in the North-East Region, as well as the central authorities' attention to this process.

2.2. Specific Objectives of the Research

The specific objectives of the research are represented by:

- OS1: identifying the way to achieve the strategic planning of human resources within the main local public institutions at national level, in the light of the information provided by the competent bodies at national level;
- OS2: identification of local public institutions in the North-East Region that are experiencing a deficit or surplus of personnel by reference to the number of inhabitants;
- OS3: identifying the causes that determine the surplus and/or staff shortage in the local public institutions in Romania;
- OS4: identification of the existing legislative framework, legislative measures, proposals, possible solutions provided by the competent bodies for carrying out an optimal human resource planning process within public institutions;
- OS5: the analysis of the strategic planning of human resources in the local public administration institutions in the North-East Region;
- OS6: identifying and analysing the extent to which the objectives of the public function, as well as the strategic planning of human resources in the public institutions at the national level, are among the objectives of the North East Region institutions.

2.3. Research Hypothesis

The research started from the following assumptions:

- H1: Within the local public institutions at national level, the process of strategic planning of human resources is carried out properly, both in terms of the qualitative side and the quantitative side of the personnel needs;
- H2: In the framework of the local public institutions in the North-East Region, the process of strategic planning of human resources is achieved through the quantitative and qualitative aspect of the personnel needs;
- H3: Within the local public institutions in the North-East Region, there is no strategic human resource planning process to be carried out properly;
- H4: The existing legislative framework creates the premises for ensuring good human resource planning within the local public institutions at the national and regional level (North-East Region);

- H5: The existing legislative framework does not ensure the necessary conditions for the good planning of human resources within the local public institutions at the national and regional level (North-East Region);

- H6: The strategic planning process of human resources within the local public institutions is carried out in accordance with the objectives set at national level and assumed by the Strategy for the development of the public function 2016-2020.

2.4. Research Methodology

In the following we will analyse the process of planning human resources at the level of the local public administration institutions at national level, and then we will restrict the research at the level of the institutions from the North-East Region. We will undertake the analysis in this manner, as we would like to highlight the necessity to carry out the process of planning human resources within the public administration institutions, the ways in which they are carried out at national level and the possible particularities that may occur at regional level (Northeast). On the other hand, we intend to highlight whether the results of national planning differ from those at the regional level and also if the principles of public function in terms of legality, stability, transparency, and quality are respected. This analysis is of particular importance, as the process of planning human resources is an essential function in the life of public organizations, a function supported by the laws, guidelines, procedures developed by the competent bodies, namely the National Agency of Civil Servants, in order to establish the obligation to carry out the process in all public administration institutions.

It is of paramount importance that the process of planning human resources at the regional level should present the particularities of the national planning process (also established by some rules, procedures, guides). Thus, the obligation to respect all the elements indicated by the regional public administration institutions (the municipalities in the North-East Region) becomes necessary because any category of irregularities established at regional level then affects the quality of public services at national level, contributing to the decrease of satisfaction citizens on the whole.

In Romania, the process of planning human resources within local public institutions is carried out in the light of the applicable legislative framework, which establishes the number of human resources that these institutions have to contain, in the light of the informative tools provided by the specialized public institutions the management of human resources in the public sector and, last but not least, by the department / department / department / human resource manager at the level of each public institution.

At present, aspects related to public function management, including aspects related to the strategic planning of human resources, are provided in the Strategy for the Development of the Public Function 2016-2020 elaborated by

the National Civil Servants Agency. It represents the authority subordinated to the Ministry of Regional Development and Public Administration, enjoys the powers established by law, being the main body responsible for the management of all programs related to the public function and civil servants, elaborating the normative framework applicable to them.

In order to form an overview of the process of human resource planning (from the point of view of the quantitative side) within the local public institutions, at the national level, we will continue to present a comparative analysis of the evolution of human resources within these entities. We also intend to highlight the extent to which the planning objectives set out in the strategy have been respected and implemented by these institutions. We will take into account the reference years of 2017 and 2018, the analysis being based on data provided by the National Agency of Civil Servants.

Table 1. Public functions occupied in local public administration units during 2017-2018

| Year | Public functions occupied in local public administration units | | |
|------|--|-----------|-------|
| | Occupied | Vacancies | Total |
| 2017 | 71336 | 22151 | 93487 |
| 2018 | 74448 | 21331 | 95779 |

Source: authors computation based on the Agency of Civil Servants (2019)

As can be seen from the analysis of the above data, the National Agency of Civil Servants registered an increase in the number of positions occupied at the local public institutions in 2018 compared to the previous year, 2017 (Table 1). On the other hand, can see a reduction in the number of vacancies from one year to another. A possible explanation for this situation would be the increase in the level of wages in the public sector; an increase that makes public sector (local) posts more attractive.

As shown in Table 2, the share of civil servants in the local government under the age of 30 increased in 2018 compared to 2017, but remained still at a very low level. We cannot say the same thing about those aged 30-40 years and 40-50 years old, whose number has fallen from one another. What is really important is that those aged 40-50 holds the highest share of employees relative to the total number of employees in the local public administration. This data is relevant as it highlights the alarming statistics regarding the possible shortages of human resources within local public institutions, due to the fact that many civil servants are aged over 40 and 50 years old. Thus, retirements and/or promotions are more pronounced within these staffs, which may affect the activity of public institutions as a whole. Therefore, it is necessary to pay more

attention to the process of planning human resources within the local public administration institutions.

Table 2. Evolution of civil servants on the age between 2017-2018

| Year | Age | | | | |
|------|----------|-------------|-------------|-------------|---------------|
| | Under 30 | 30-40 years | 40-50 years | 50-60 years | Over 60 years |
| 2017 | 3.33% | 17.79% | 39.35% | 34.56% | 7.03% |
| 2018 | 3.37% | 17.16% | 37.68% | 33.45% | 6.91% |

Source: authors computation based on the Agency of Civil Servants (2019)

Another very important aspect in terms of quantitative human resource planning is the analysis of the gender structure of the employees in the institutions, as this may help to anticipate any abnormalities (deficit/surplus) in the staff structure (women are more prone to on-demand mobility in institutions, such as those generated by parental leave). As can be seen, females, still the predominant one, represent the largest share of employees in the local public administration.

Table 3. Evolution of public positions occupied by professional grades in the period 2017-2018

| Professional grade | Total public execution positions occupied | debutant | assistant | principal | superior |
|--------------------|---|----------|-----------|-----------|----------|
| 2017 | 60123 | 2.37% | 11.40% | 17.17% | 69.05% |
| 2018 | 63201 | 2.33% | 12.22% | 14.64% | 70.81% |

Source: authors computation based on the Agency of Civil Servants (2019)

Fluctuations from one professional grade to another are not significant, which marks stability in public office (Table 3). Another very relevant aspect of our study is the fact that the lowest share in the civil service structure belongs to the posts related to the professional debutant degree. This highlights the fact that there is no inclination to hire people with experience, young graduates, which not only contributes to speeding up the aging of the civil servants, but also to maintaining the term, closed state of the public administration, which we have become accustomed to for several years now. We can say that quantitatively, at the level of the entire authorities of the local public administration, the prerequisites of the process of planning the human resources are created, but we do not know exactly if this process is carried out properly at the level of each institution, with the possibility that certain local public institutions may have deficiencies in the process in one way or another.

**Table 4. Number of training programs and their participants
in the period 2017-2018**

| Year | Number of training programs | Number of participants |
|-------------|------------------------------------|-------------------------------|
| 2017 | 323 | 4890 |
| 2018 | 503 | 7551 |

Source: authors computation based on the Agency of Civil Servants (2019)

At the level of all local public institutions, it is noticeable that special attention is paid to the professional training of civil servants, as evidenced by the number of training/professional training programs addressed and organized strictly to the local public administration institutions (Table 4). We can say that, overall, is assured the prerequisites of human resource planning from a qualitative point of view, even if the number of beneficiaries is actually not the one expected.

A very important aspect to be mentioned is that the process of planning human resources within public organizations is not a simple decision to do or not to do. We can state that, under the current conditions, these organizations have a correlated obligation to do, respectively initiate and implement the process of planning human resources within them. This is supported precisely by the fact that the proper functioning and deployment of all other functions and activities depends on how the employees of the public institutions are structured and managed. In support of the argument that human resource planning is an impetuous process to be achieved, we bring to the foreground the bodies that support this, precisely through reports, guides, statistics that are made available to public authorities and beyond. Thus, the National Agency of Civil Servants, the Ministry of Public Finances, the National Institute of Administration, the Ministry of Regional Development and Public Administration, the General Administration of Public Administration, as well as other bodies with which they cooperate, such as the National Institute of Statistics, at the level of the public administration, the human resource planning process. Through the posturi.gov.ro portal, the planning of human resources through the quantitative side can be done in an easy manner, by presenting all vacancies at the level of the central and local public administration. Also, from the quantitative angle of the human resources planning, the Ministry of Regional Development and Public Administration through the General Administration of Public Administration helps the representatives of the administrative-territorial units, by providing the maximum number of positions in the local public administration that can be included, calculated by reference to the number of inhabitants. Planning human resources from the perspective of the qualitative side can be done by consulting the professional training/development sections of the National Agency of Civil Servants and the National Institute of Administration through its territorial training centres.

In the following, we will continue the quantitative analysis of human resources at the national level, but we will restrict and at the same time customize the analysis of the human resources planning process by highlighting the sides of this process within the mayoralties of the North-East Region as local public administration authorities. We want to highlight the extent to which national targets for planning are being respected and applied within the institutions in the region under review. Thus, in the local public administration, the human resource planning process is influenced by a number of factors such as: the number of inhabitants, the budget of the institution, the number of posts approved by administrative act, the dynamics of human resources determined by retirements, promotions, deaths, normative acts regarding the way of organizing the public function.

According to the annex to Government Emergency Ordinance no. 63/2010 updated, amending and completing the Law no. 273/2006 on local public finances and for the establishment of some financial measures, an annex which establishes the maximum number of positions that can be classified at the level of the administrative-territorial units, the number of posts in the local public administration is set as follows (Table 5 and Table 6):

Table 5. Number of posts in municipalities according to population groups

| Number of population groups | Number of posts in municipalities | | |
|-----------------------------|-----------------------------------|---------|---------|
| | minimum | average | maximum |
| 1 | 2 | 3 | 4 |
| 10.001-20.000 | 100 | 145 | 165 |
| 20.001-50.000 | 171 | 202 | 349 |
| 50.001-100.000 | 350 | 498 | 575 |
| 100.001-200.000 | 600 | 625 | 699 |
| 200.001-400.000 | 700 | 747 | 800 |

Source: according with the Annex of Government Emergency Ordinance no. 63/2010 updated

Table 6. Number of posts in cities by population groups

| Number of population groups | Number of posts in municipalities | | |
|-----------------------------|-----------------------------------|-----|---------|
| | minimum | | minimum |
| 1 | 2 | 3 | 4 |
| 1.501-3000 | 25 | 30 | 33 |
| 3001-5000 | 35 | 44 | 51 |
| 5001-10.000 | 53 | 63 | 75 |
| 10.001-20.000 | 76 | 100 | 130 |
| 20.001-50.000 | 131 | 151 | 189 |

Source: according with the Annex of Government Emergency Ordinance no. 63/2010 updated

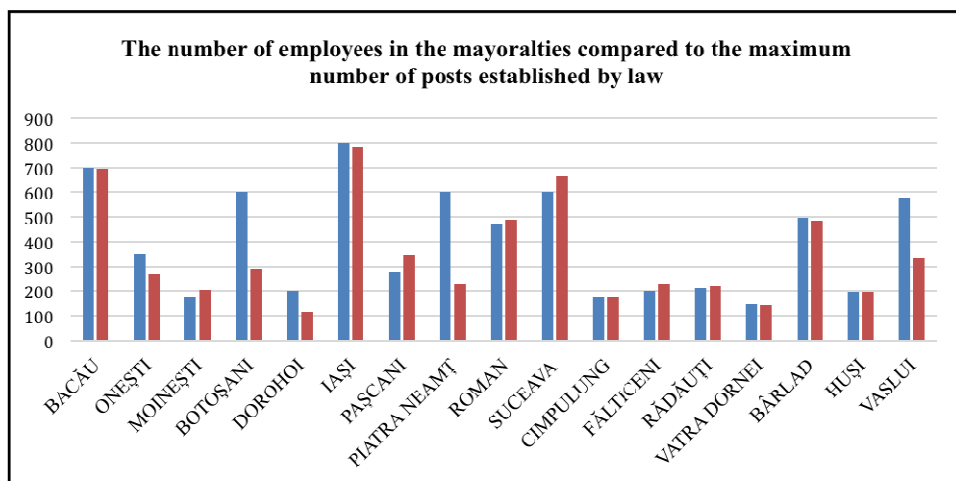
In order to be able to observe whether the process of strategic human resources planning in the North East public administration institutions is being carried out, we have analysed the sites of all city halls of the studied municipalities and towns in order to determine the number of their employees. The number of employees is an indicator reflecting human resource planning within these institutions, from a quantitative point of view. Thus, the extent to which the minimum and maximum number of employees is respected shows the concern of the representatives of the public institutions analysed about carrying out a human resource planning process.

Table 7. Number of employees of municipalities in the North-East Region in 2018

| County | Municipality | A.T.U. (Administrative Territorial Units) Population | Maximum number of posts established by law | Number of employees city hall |
|----------|-----------------------|--|--|-------------------------------------|
| BACĂU | Bacău | 197,003 | 699 | 695 |
| | Oneşti | 52,137 | 350 | 269 |
| | Moineşti | 24,545 | 171 | 202 |
| BOTOŞANI | Botoşani | 121,756 | 600 | 290 |
| | Dorohoi | 31,094 | 199 | 114 |
| IAŞI | Iaşi | 368,818 | 800 | 784 |
| | Paşcani | 42,883 | 282 | 345 |
| NEAMŢ | Piatra-Neamţ | 114,291 | 600 | 229 |
| | Roman | 70,116 | 473 | 488 |
| SUCEAVA | Suceava | 117,626 | 600 | 660 |
| | Câmpulung-Moldovenesc | 20,091 | 171 | 171 |
| | Fălticeni | 31,464 | 200 | 232 |
| | Rădăuţi | 33,463 | 212 | 217 |
| | Vatra Dornei | 16,985 | 146 | 140 |
| VASLUI | Bârlad | 72,165 | 495 | 485 |
| | Huşi | 30,416 | 196 | 194 |
| | Vaslui | 104,929 | 575 | 333 |

Source: own processing data on the basis of the information provided by the charts of the municipalities analysed since 2018 and based on the State of the Number of Posts of the Romanian Administrative Territorial Units in 2018 elaborated by the General Administration of Public Administration within the Ministry of Regional Development and Public Administration

Figure 1. Graphical representation of the number of employees of municipalities in the North-East Region compared with the maximum number of posts set by law in 2018



Note: the blue colour represents the maximum number of posts established by law and the red colour reflects the number of employees from mayoralities.

Source: own processing data on the basis of the information provided by the charts of the municipalities analysed since 2018 and based on the State of the Number of Posts of the Romanian Administrative Territorial Units in 2018 elaborated by the General Administration of Public Administration within the Ministry of Regional Development and Public Administration

As can be seen in Table 7 and Figure 1, the mayoralities of Onești, Botoșani, Dorohoi, Piatra-Neamț, Vaslui municipalities have a number of occupied positions far below the maximum accepted by the law, from which we can conclude that these institutions are facing or will face a shortage of staff in the future. Therefore, greater attention needs to be paid to these situations of decline by the officials of the institutions, by identifying the causes that determined and determined these situations by establishing a rigorous planning process. On the opposite side, there are the municipalities of Suceava, Fălticeni, Rădăuți, Roman who have more employees than the law stipulates, the surplus of staff within them exerting a great pressure on the budget of the institutions. The rest of the mayoralities have a relatively balanced number, some even close to or equal to the maximum number of accepted posts.

Table 8. Number of employees of city halls in the North-East Region in 2018

| County | City | Territorial Administrative Units Population | Maximum number of posts established by law | Number of employees city hall |
|----------|-----------------|--|--|-------------------------------|
| BACĂU | Buhuși | 20,988 | 131 | 130 |
| | Comănești | 23,890 | 136 | 170 |
| | Slănic -Moldova | 5,150 | 53 | 60 |
| | Târgu Ocna | 13,100 | 103 | 98 |
| | Dărmănești | 14,741 | 117 | 102 |
| BOTOȘANI | Darabani | 12,842 | 97 | 98 |
| | Săveni | 7,995 | 68 | 65 |
| | Bucecea | 5,384 | 53 | 61 |
| | Flămânzi | 11,874 | 95 | 90 |
| | Ștefănești | 6,077 | 53 | 52 |
| IAȘI | Hârlău | 12,677 | 96 | 98 |
| | Târgu Frumos | 14,552 | 110 | 153 |
| | Podu Iloaiei | 11,032 | 87 | 88 |
| NEAMȚ | Bicaz | 8,529 | 72 | 94 |
| | Târgu Neamț | 22,007 | 131 | 174 |
| | Roznov | 10,388 | 78 | 99 |
| SUCEAVA | Salcea | 10,565 | 83 | 79 |
| | Gura- Humorului | 17,112 | 129 | 148 |
| | Siret | 9,694 | 75 | 78 |
| | Solca | 2,602 | 32 | 36 |
| | Milișăuți | 5,467 | 53 | 45 |
| | Broșteni | 6,468 | 55 | 45 |
| | Cajvana | 9,522 | 73 | 78 |
| | Dolhasca | 11,461 | 93 | 95 |
| | Frasin | 6,609 | 57 | 85 |
| | Liteni | 10,301 | 83 | 79 |
| | Vicovu de Sus | 16,333 | 124 | 177 |
| VASLUI | Negrești | 10,386 | 75 | 87 |
| | Murgeni | 8,267 | 68 | 60 |

Source: own processing data on the basis of the information provided by the charts of the municipalities analysed since 2018 and based on the State of the Number of Posts of the Romanian Administrative Territorial Units in 2018 elaborated by the General Administration of Public Administration within the Ministry of Regional Development and Public Administration

Regarding the number of employees in the town halls of the North-East Region, it can be noticed that in many cases (Comănești, Vicovu de Sus, Târgu

Neamț, Gura Humorului, Comănești) the maximum number of employees allowed by law is exceeded (Table 8.). A possible explanation for these situations would be the advantages of providing a function in local public administration, including advantageous salaries and the stability of the public office. On the other hand, very few cases (Milișăuți, Broșteni, Murgeni) are those where the number of employees is below the maximum level.

We can say that the aforementioned situations are determined, first and foremost, by the reduced capacity of departments / comparisons / services / human resources offices in institutions that do not properly appreciate the real needs of human resources, both numerically and in the point of view of professional training. Thus, it is necessary to correlate the number of employees in institutions strictly in relation to the institutional needs.

Therefore, we can say that at the level of the local public administration institutions there is an increase in the number of public positions occupied. Also, there has been an aging of the civil servants, if we are to relate to their structure by age, the highest share is held by those aged 40-50 and closely followed by those aged between 50-60 years. These situations will be the main reason for the vacancy in the forthcoming periods of a very large number of posts, correlated with the significant number of female employees in the body of officials, mainly due to the retirements that will occur. So all these elements constitute the basis of human resource planning within the public administration institutions, elements that must also be related to the level of training that the officials of these institutions have to hold.

3. RESULTS AND DISCUSSIONS

The aim of the research is to highlight the way in which the human resource planning process is carried out within the public administration institutions. This process involves the posting of the type of staff best suited to the needs of the institution concerned. Thus, planning refers to both the number and qualifications of existing and potential employees.

From the collected data and their analysis, it is observed that at the level of the whole country, within the local public administration institutions there is an increase in the number of public positions occupied in 2018 compared to the year before 2017. As regards the gender structure of the employees of the institutions they have been observed to maintain the steady character of women's employment by public officials. At the level of age structure of civil servants at the level of the local public administration institutions and at the level of the central public administration, it was aging, the largest share of the civil servants being occupied by those aged 40-50 years, followed by those aged 50-60. On the other hand, there is an increase from one year to the next in the participation in the training/professional training programs of civil servants at the level of the analysed institutions. We can mention that the process of

planning human resources, quantitatively, at the level of the local public administration institutions, is one that presents certain deficiencies owing to the high percentage of officials aged 40-60 years, which means that massive recruitments will be carried out in the public service body in the following years, a process that will impinge on the efficiency of public tasks and on the budget of the institutions.

From the qualitative point of view of the human resource planning process, we can state that there is growing concern over the professionalization of the public function and, implicitly, the increase of the quality of human resources in the public sector from one year to the next, if it is let us relate to the number of training courses addressed to the local public administration institutions organized in the year just ended. In view of the above, we can say that hypotheses 1, 2, 3 and 6 have been validated (H1: Within the national public institutions at the national level, the process of strategic planning of human resources is done properly, both in terms of the qualitative side as well as the quantitative side of the personnel needs H2: Within the local public institutions of the North-East Region, the process of strategic planning of human resources is realized through the quantitative and qualitative side of the personnel needs H3: Within the local public institutions in the North East Region, there is no strategic human resource planning process to be carried out properly H6: The strategic planning process of human resources within the local public institutions is carried out in accordance with the objectives set at national level and assumed through the 2016-2020 Civil Service Strategy.), ia hypotheses 4 and 5 were invalidated (H4: The existing legislative framework creates the premises for ensuring good human resource planning within local and regional public institutions at the national and regional level (North-East Region); H5: The existing legislative framework does not ensure the necessary conditions for the good planning of human resources within the local public institutions at the national and regional level (North-East Region).

4. CONCLUSIONS

In public administration institutions, the freedom of the human resources planning process from a quantitative point of view is limited to the normative level, in the sense that there are a number of legal provisions that set the minimum and maximum limits of the number of employees. Thus, the number of public functions that can be occupied in the local public administration institutions must be dimensioned according to the number of inhabitants and according to the type of administrative-territorial unit (municipality, town, commune). However, at the level of the mayoralties in the municipalities and cities of the North-East Region it is noted that the maximum limits in terms of number of employees are exceeded and the minimum ones are not reached. Regarding the number of employees of the County Councils in Romania, in some cases the

same problem is manifested as in the case of the municipalities analysed, i.e. the exceeding of the maximum number established by law. Thus, by analysing the process of human resource planning within the local public administration institutions at the national and then regional level, we highlighted the way in which the objectives and particularities of the planning process at national level are found in the planning process within the institutions regional level.

In view of the above-mentioned results, we estimate that the objectives for the development of the public function assumed at strategic level at national level are found or contribute to the good development of the human resource planning process within the local public administration institutions. Strengthening the role of strategic management of human resources in the public administration and strengthening the role of the human resources department within the institutions is a strategic objective assumed at national level but which still has deficiencies in its transposition into practice, the results of our study and take into account the fact that the strategy containing these objectives is to be completed in the next year. At the level of the analysed local public administration institutions one can see the applicability of the strategic objectives at national level regarding the professionalization of the public function, with a view to increasing the number of organized training and retraining programs. Restructuring the activity of some public administration institutions is an objective with strict reference to the quantitative aspect of the human resource planning process. Thus, if we are to relate to those analysed local government institutions, the number of which is well below the maximum established by the law, sometimes even below the minimum level, we can state from this viewpoint that they have materialized the objective set in national plan. We can say that there has been a reorganization of the activity and, implicitly, a reallocation of the staff, resulting in a lower number of occupied public positions and implicitly a lower number of employees.

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THE PROFILE OF SMEs PROVIDING GREEN PRODUCTS AND SERVICES IN THE EUROPEAN UNION

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Abstract

As key factors for growth, employment and economic performance, small and medium-sized enterprises are among the top European strategies and policies. Besides their economic importance, the SMEs play environmentally a significant role, therefore, the aim of this study is to build a profile of SMEs providing green products and services by identifying the share of green products and services in the annual turnover of SMEs in the European Union, determining the structure of business and sector, in which operate the companies providing green products and services, and also by identifying the markets for green products and services. The results will describe the profile of SMEs providing green products and services and will present the trends on green products and services market in the European Union. To build the profile of SMEs providing green products and services, we have used and processed data from Eurobarometer Flash 456 – SMEs, Resource Efficiency and Green markets, including 13.117 interviews conducted between September 11 and 26, representative for the 28 member states of the European Union, including 500 interviews from Romania.

Keywords: *SMEs profile; green products and services; turnover; green market.*

JEL Classification: M13, M21, L22

1. INTRODUCTION

Europe 2020 Strategy for smart, sustainable and inclusive growth has identified as essential transition to a green economic model with low carbon emissions and efficient use of resources (CoR, 2014a). It means a transition to “green economy” that may influence both the competitiveness of enterprises and European economy in general.

For this purpose, the Green Action Plan was adopted in July 2014 aimed to help SMEs in understanding the opportunities provided by green economy as environmental challenges should be viewed by enterprises both as an opportunity and also as a threat to their employees, the labour market and the EU.

According to European Commission (2017), SMEs account for 99% of EU enterprises, in which employed two-thirds of labour force is employed. Therefore, they are extremely important for the EU both economically, and environmentally, having a significant impact on the environment. From this perspective, it is important that profile of companies providing green goods and services be analysed in the EU with a view of identifying the main trends in green products and services on the EU market.

The article contains a literature review on green products, services and companies, and then presents the applied methodology. To identify the profile of companies providing green products and services in the EU, we started by identifying the share of green products and services in the annual turnover of SMEs in the EU, the structure of business and the sector, in which companies providing green products and services operate, and the green products and services markets. The results outline the profile of SMEs providing green products and services and the trends on green products and services market in the EU.

2. LITERATURE REVIEW

Green products and services are essential for achieving smart and sustainable growth. They should contribute to energy saving, have less toxic compounds, be made from recyclable and reused materials, be resistant and easy to repair, minimize the impact on the environment during the entire life cycle of a product (European Commission, 2019).

Countries have policies providing for promotion of green farming and transformation of development regions into green regions. To be able to place a region into the “greenest” region in a country (Grinberga-Zalite and Ozolina, 2017), green goods and services companies should answer the following questions: What goods should we bring to the market? What information related to pollution may be disclosed? How waste could be reduced? Company manager could answer these questions only if he insists on sustainable growth (Kleiner, 1991). In this sense, an investment into green goods and services includes investment in research in development and management plans ensuring support for sustainable development.

As for behaviour of companies providing green goods and services, today the focus is on innovative green goods and services (Chang, 2018; Boldureanu *et al.*, 2013; Boldureanu *et al.*, 2017) as companies putting an emphasis on green innovation may acquire a competitive advantage through collaboration with several actors involved in the innovation process (Zimmerling, Purтик and Welpе, 2016). It means that integration also of final users along the innovation process may be extremely relevant for the success of green goods and services. Rapid and constant integration of final users into green innovation may be used as a risk management tool as we may identify changes in behaviour induced by innovation among potential users. It may help companies reduce risks related to market introduction of really new and green goods and services.

Online purchasing of green goods and services have a high application and growth potential. In this sense, buyers and sellers should assess and analyse the quality of online green goods purchasing services (Wang and Zhang, 2017).

As for national policies for promotion of green goods, Richards (2009) argues that these are highly important in reaching multiple objectives, starting from new job creation and low use of fossil fuels and ending with better opportunities to sell abroad for companies providing green goods and services.

Also, nations face green economy problems and barriers in turning SMEs into green companies. A study conducted on 30 Ukrainian companies (Potapenko, Kornatovskyy and Shylkina, 2017) reports that almost 40% of companies lack enough information on how to make their business greener. Other barriers include: national legal framework; insufficient funds for innovation in the environmental sector (only a few banks make loans for green modernization of a company), and also society the degree of awareness of manufacturers and consumers should be increased on environmental protection and sustainable development.

To promote green goods and services, the EU has adopted the Green Action Plan for SMEs (CoR, 2014b, pp. 4-5) that underlines that green economy should contain four elements in order to be successful:

- 1) reduction, or general reduction of energy consumption;
- 2) efficiency, raw materials and energy should be used more efficiently along the entire value chain of a good or service;
- 3) networks creation and exchange of good practices; comparison of information among member states and sector provides an opportunity to stimulate the provision of green goods and services, including markets outside the EU;
- 4) access to funding means that provision of availability of funds and reduction of bureaucracy are essential.

By applying the measures provided for in this plan, transition to a “green economy” and higher green competitiveness of SMEs could be achieved through improved access to funding, provision of more information, reduction of bureaucracy and consolidation of a green entrepreneurial culture.

3. METHODOLOGY

The study aims to build a profile of SMEs providing green goods and services and it has the objectives (O):

- Identification of the share of green goods and services in the annual turnover of SMEs in the EU (O1);
- Determination of the structure and sectors, in which operate companies providing green goods and services (O2);
- Identification of markets for green goods and services (O3).

To shape the profile of SMEs providing green goods and services, we have used data extracted and processes from the Eurobarometer Flash 456 – SMEs, Resource Efficiency and Green Markets, comprising 13.117 interviews conducted over the phone between September 11-26 of 2017, the interviews being representative for the 28 member states of the European Union. Data were provided by GESIS Data Archive, Cologne. ZA6917 Data file Version 1.0.0, doi:10.4232/1.12966. Data analysis was carried out using the statistical analysis software SPSS v.20, and the results have stressed out the profile of SMEs providing green goods and services and the trends on green goods and services market of the European Union.

4. RESULTS AND DISCUSSIONS

4.1. Identification of the share of green goods and services in the annual turnover of SMEs in the EU (O1)

The share of companies providing green goods and services in Romania is 78 companies of total 500 investigated companies (15.6%), which is much lower than the EU average – 746 of total 13117 (28.8%) companies (Table 1).

In the European Union, countries with the highest number of SMEs providing the highest amount of green goods and services are located in Austria (42%), Sweden (39%) and Finland (38%).

Nevertheless, more Romanian companies (21.4 %) plan to introduce on the market green goods in the next two years. Besides Romania, Greece (16%), France and Estonia (both 14%) also intend to introduce green goods in the next two years.

Table 1. Share of companies in the EU and Romania providing green goods and services

| Does your company offer green products or services? | EU | | RO | |
|--|-----------|---------|-----------|---------|
| | Frequency | Percent | Frequency | Percent |
| Yes | 3774 | 28.8 | 78 | 15.6 |
| No but you are planning to do so in the next 2 years | 1237 | 9.4 | 107 | 21.4 |

| Does your company offer green products or services? | EU | | RO | |
|---|--------------|--------------|------------|--------------|
| | Frequency | Percent | Frequency | Percent |
| No and you are not planning to do so | 7360 | 56.1 | 302 | 60.4 |
| Don't Know/Not Answer | 746 | 5.7 | 13 | 2.6 |
| Total | 13117 | 100.0 | 500 | 100.0 |

Source: computed by authors using European Commission (2018)

In Romania, of total 78 companies providing green goods and services, most (46.2 %) have a share between 0-5 % in turnover, followed by 15.4 % of companies with a share of 6-10% (Table 2). The highest share of over 75 % of green goods is found in 9 SMEs that correspond to a percentage of 11.5 %.

Table 2. Share of green goods in annual turnover

| Share | EU | | RO | |
|-----------------------|-------------|--------------|-----------|--------------|
| | Frequency | Percent | Frequency | Percent |
| Up to 5% | 1279 | 33.9 | 36 | 46.2 |
| 6-10% | 518 | 13.7 | 12 | 15.4 |
| 11-30% | 475 | 12.6 | 9 | 11.5 |
| 31-50% | 246 | 6.5 | 3 | 3.8 |
| 51-75% | 195 | 5.2 | 3 | 3.8 |
| More than 75% | 576 | 15.3 | 9 | 11.5 |
| Don't Know/Not Answer | 485 | 12.9 | 6 | 7.7 |
| Total | 3774 | 100.0 | 78 | 100.0 |

Source: computed by authors using European Commission (2018)

In the EU, the situation is comparable: out of 746 companies providing green goods and services (28.8%), most companies (33.9%) have a share between 0-5 % in total turnover, followed by 13.7% of SMEs with a share of 6-10%. The share over 75% in turnover of green goods and services was reported by 576 companies, 15.3% of total companies.

4.2. Determination of the structure of business and sectors, in which operate companies providing green goods and services (O2)

Another element, based on which, we could shape the profile of companies providing green goods and services in the EU is the identification of the sector of operating companies (Table 3).

Table 3. Sector of companies providing green goods and services

| Sector | EU | | RO | |
|---------------|-------------|--------------|-----------|--------------|
| | Frequency | Percent | Frequency | Percent |
| Manufacturing | 848 | 22.5 | 24 | 30.8 |
| Retail | 1291 | 34.2 | 22 | 28.2 |
| Services | 877 | 23.2 | 11 | 14.1 |
| Industry | 758 | 20.1 | 21 | 26.9 |
| Total | 3774 | 100.0 | 78 | 100.0 |

Source: computed by authors using European Commission (2018)

In Romania, the sectors in which operate companies providing green goods and services include: Manufacturing (30.8%), Retail (28.2 %), Industry (26.9 %) and Services (14.1 %). In the European Union, clearly prevails the services sector (34.2 %), while other sectors have a close level at around 20 %.

Table 4. Structure of companies providing green goods and services by number of employees

| How many employees does your company have? | EU | | RO | |
|--|-----------|------------|-----------|------------|
| | Frequency | Percent | Frequency | Percent |
| Micro (1 to 9 employees) | 1371 | 36.3 | 24 | 30.8 |
| Small (10 to 49 employees) | 1203 | 31.9 | 35 | 44.9 |
| Medium-sized (50 to 249 employees) | 784 | 20.8 | 9 | 11.5 |
| Big (250 employees or more) | 400 | 10.6 | 7 | 9.0 |
| Total | 16 | 0.4 | 3 | 3.8 |

Source: computed by authors using European Commission (2018)

Most SMEs providing green goods and services are small enterprises (between 10 and 49 employees) with a share of 44.9 % in Romania, and micro-enterprises (between 1 and 9 employees) with a share of 36.3 % in the rest of the European Union. It should be noted that in Romania just one company is a private enterprise.

4.3. Identification of markets for green goods and services (O3)

Regarding the identification of markets for green goods and services, we should investigate the method of distribution for green products and services (Table 5).

Table 5. Distribution methods

| Green goods distribution | EU | | RO | |
|--------------------------|-----------|---------|-----------|---------|
| | Frequency | Percent | Frequency | Percent |
| Directly to consumers | 2516 | 66.7 | 48 | 61.5 |
| To other companies | 2814 | 74.6 | 48 | 61.5 |
| To public administration | 1465 | 38.8 | 11 | 14.1 |

Source: computed by authors using European Commission (2018)

In the European Union, we observe that most companies distribute to other companies (74.6 %) and directly to consumers (66.7%), while, in Romania, both distribution methods are used by 61.5 % of companies.

Also, in order to build the profile of companies providing green goods and services, the period of time since when green products have been distributed (Table 6).

Table 6. Green product distribution period

| How many employees does your company have? | EU | | RO | |
|--|-------------|--------------|-----------|--------------|
| | Frequency | Percent | Frequency | Percent |
| Less than one year | 172 | 4.6 | 7 | 9.0 |
| Between 1 and 3 years | 790 | 20.9 | 19 | 24.4 |
| More than 3 years | 2712 | 71.9 | 51 | 65.4 |
| DK/NA | 100 | 2.6 | 1 | 1.3 |
| Total | 3774 | 100.0 | 78 | 100.0 |

Source: computed by authors using European Commission (2018)

Most companies have been selling green products for over three years (71.9 % in the European Union, and 65.4 % in Romania).

As for markets on which green products and services are sold (Table 7), data analysis shows that national markets are preferred by most SMEs – 86.7 % in the European Union, and 91.0 % in Romania. European Union is another important market (29.2 % of European and 12.8 % of Romanian companies), other international markets having a small share (under 4 %).

Table 7. Markets on which green goods and services are sold

| How many employees does your company have? | EU | | RO | |
|--|-----------|---------|-----------|---------|
| | Frequency | Percent | Frequency | Percent |
| National market | 3273 | 86.7 | 71 | 91.0 |
| European Union | 1066 | 29.2 | 10 | 12.8 |
| Other European country | 247 | 6.5 | 10 | 12.8 |
| North America | 72 | 1.9 | 2 | 2.6 |

| How many employees does your company have? | EU | | RO | |
|--|-----------|---------|-----------|---------|
| | Frequency | Percent | Frequency | Percent |
| China | 102 | 2.7 | 1 | 1.3 |
| Australia | 60 | 1.6 | 1 | 1.3 |

Source: computed by authors using European Commission (2018)

5. CONCLUSIONS

As reported by the literature in the field and by the reports of the European Commission (2017), SMEs account for 99% of all enterprises in the EU, being viewed as the economic backbone of the European Union. These should have not only economic but also environmental importance as they have a significant impact on the environment. Still, the conducted analysis shows that a few of total studied companies have green operations and provide green goods and services. Therefore,

✓ in the studied sample, we have identified 746 (28.8%) companies providing green goods and services in total number of 13117 companies. For Romania, the share of companies providing green goods and services is 78 companies of total 500 studied (15.6%) companies;

✓ 33.9% of companies have a share of green goods between 0 – 5 % in total turnover in the EU, and 46.2% in Romania;

✓ the main sector of companies providing green goods is that of services (34.2 %) in the European Union and manufacturing (30.8%) in Romania;

✓ by structure, main companies providing green goods are micro-enterprises (between 1 and 9 employees) in the EU with a share of 36.3 %, and small enterprises (between 10 and 49 employees) in Romania, with a share of 44.9 %;

✓ in terms of distribution method for green goods, we observe that most companies distribute to other companies (74.6 %) and directly to consumers (66.7%) in the European Union, and to both in 61.5 % of Romanian companies;

✓ most companies have been selling green goods for over 3 years (71.9 % in the European Union and 65. 4 % in Romania);

✓ 86.7 % of European and 91.0 % of Romanian companies prefer to sell green goods on their national markets.

All these features contribute to shaping the profile of companies providing green goods and services in the EU. Although the share of companies that intend to introduce green goods and services onto the market in the next two years is 21.4 % in Greece -16%, and in France and Estonia – almost 14%, data show that there is a high interest for promoting green goods and services.

The trend in green goods and services is closely linked to the European and national policies promoting green economy and to the adoption of measures provided for in the Green Action Plan for SMEs through improved access to

funding, provision of more information, reduction of bureaucracy, and consolidation of green entrepreneurship culture.

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THE IMPACT OF GLOBALIZATION ON FOREIGN DIRECT INVESTMENT IN EUROPEAN UNION

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Abstract

In context of market globalization, foreign direct investment has become a key factor in ensuring sustainable economic growth. This statement is valid in the context of the international economic-financial crisis, when the attraction of foreign capital is a real engine for ensuring macroeconomic stability.

"Geopolitics" is a term used very much by the whole world. It is complex and combines so many domains when it comes about economic development. People from international politics invoke frequently this term to analyze different issues of foreign policy.

Such overstatement ignores the fact that geopolitics as a method for analyzing international relations has a history that includes a common vocabulary, well established if concepts are sometimes conflictual, a solid body of thinking and a group recognized by theoreticians and scholars.

For geopolitical research, geography is an important aspect in nowadays and it appears to be relevant to the most important aspects of major strategies. Countries may use their strategical position to make connections with different countries to improve the level of trade or to make different alliances.

This paper aims first of all to revitalize geopolitics, to highlight European financial and monetary policies and to show the impact of geopolitics on foreign direct investment in European countries. By combining these elements, we will have a clear and broad picture of the global economic and financial situation. Thus, geographic conditions are both a set of opportunities and constraints.

Foreign direct investment has important effects on the economies of host countries, among which the most important are the increase of labor productivity through know-how transfer, technology, management and marketing skills, favoring technological progress and long-term economic growth in the countries' development. Also, the foreign direct investment has an impact over the macroeconomic indicators.

While most theoretical studies support the idea that foreign direct investment helps economic growth in host countries, some empirical studies have not reached the same conclusion.

Keywords: globalization; geopolitics; foreign direct investment; know-how.

JEL Classification: F0, G0

1. INTRODUCTION

What determines transnational corporations to internationalize firms and which are the factors that drive investors to focus on a global area? Foreign direct investment is a potential source of development for a country, involves technology transfer and produces a major impact on the labor force. Transnationals, through their international investments, can or may not have a beneficial effect on the economies of the host country.

From the theoretical research and in-depth studies of John Harry Dunning (1979, 2001), a British specialist in international affairs and investment, says there is no single factor that causes firms to internationalize, but there are a number of factors and conditions that can be broken down by three components: ownership, localization and internalization. JH Dunning's conclusion was that a country's Country Investment Position (PIN) follows a pathway and crosses some stages according to the evolution of a country's economic development, known as the Investment Development Path (IDP). Subsequent research on the economy of several countries (developed, emerging, transition) has demonstrated the veracity of the IDP paradigm, but also the evolution of the country-specific PIN (economic structure, external exchanges, links in the area, degree of openness, etc.).

Through "eclectic paradigm" or the OLI model, J.H. Dunning (1979), provides an explanation for the internationalization of firms. Thus, the way in which a firm is internationalized depends on the advantages of:

- Ownership that benefits the investor in relation to other companies: ownership of certain resources, access to financial resources, techniques, brand, assets, patents, trademarks, skilled personnel, know-how, etc.

- Location of the host country's interest (development and access to the domestic commodity market, trade liberalization agreements with other countries), the business and cultural environment, the opening to financial markets or resources.

- Internalization firms have the freedom to choose their operating mode on a particular market and will choose the most advantageous internationalization mode according to the existing possibilities (Dunning, 2001).

2. THE IMPACT OF GLOBALIZATION OVER THE WORLD

Globalization is one of the most important parts of the world's economy in the 21st century. This concept does not have its own definition, but it is explained by the elimination of the barriers between the states' economies and implicitly the intensification of their relations (Postelnicu, 2000).

When we talk about globalization it is inevitable not to talk about geopolitics too – which represents an important factor when it comes about economics' development.

Geopolitics is a political science that studies the impact of a country's location and geographic position on its foreign and domestic policy, as well as the impact of the space factor on international policy as a whole.

The American O'Sullivan (1986) and English Peter J. Taylor (1991) argue that geopolitics is shaping a new meaning to designate the place and role that control over certain geographical areas has in building regional or global power balances. Peter J. Taylor (1991) defines geopolitics as "a discipline that has to" study the rivalry between two great powers "in the sense of exercising" the domination of powerful states over weak states". In the same sense, P. O'Sullivan (1986) sees geopolitics as a "geography of relations between power holders, whether they are heads of state or international organizations."

Another point of view is that of Saul B. Cohen (2015), who states that geopolitics is the "study of the relationship between the international power policy and the corresponding characteristics of geography". And Colin S. Gray, in 1977, defines geopolitics as a "political interpretation of a global geographic reality." In 1996, Martin Ira Glassner in *Political Geography*, second edition, defined geopolitics as "the science that studies the state in the context of the global space phenomenon in an attempt to understand both the foundations of the state's power and the nature of the interactions between states."

The creation of the European Union was a step towards the evolution and development of states, the free movement of goods, commodities, capital and people, stimulating economies and competitiveness. Thus, many investors have outsourced their activities in different countries that in which they found benefits from a legal and also financial point of view.

3. FOREIGN DIRECT INVESTMENT IN EUROPEAN UNION

The internationalization of the market has encouraged companies to formulate different approaches to internationalized business, which has led to extensive activities, such as foreign direct investment (FDI). The International Monetary Fund (IMF) defined investment (FDI) as an investment involving a long-term relationship that reflects a lasting interest of a resident entity in a single economy (direct investor) in a resident entity in another economy than that of the investor. According to the World Bank, foreign direct investment refers to net investment inflows to 10% or more of a long-term interest in the voting company operating in a non-investor economy and may be further developed as an amount of share capital, reinvested earnings, other long-term capital and short-term capital, as shown in the balance of payments in that economy (Almfraji and Almsafir, 2014).

The European Union fully benefits from foreign direct investment that helps economic development, job creation as well as innovation. However, while benefiting from all these positive aspects, it needs to pay increased attention to

the security and control of activities carried out within the European framework to protect businesses, employees and, implicitly, the citizens of each state.

On 13 September 2017, the European Commission decided to draw up a more in-depth analysis of FDI in the European Union. Because of the limitations of FDI statistics, a new database based on company-level data has been built. This database allows a detailed presentation of the foreign ownership of EU firms, which is currently unavailable from any alternative source (European Commission, 2017).

Table 1. Mergers and Acquisition data made in European Union by non-European Union countries breakdown by entity type

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Total (2007- 2017) | Share of total |
|--|------|------|------|------|------|------|------|------|------|------|------|--------------------------|-------------------|
| Industrial companies | 906 | 962 | 757 | 969 | 1023 | 1029 | 1207 | 1347 | 1288 | 1137 | 1065 | 11690 | 65.0% |
| Financial companies | 86 | 90 | 84 | 84 | 84 | 91 | 117 | 169 | 136 | 131 | 71 | 1143 | 6.4% |
| Individuals/ Families | 31 | 55 | 35 | 55 | 53 | 70 | 105 | 113 | 114 | 106 | 196 | 933 | 5.2% |
| Banks/ Insurance companies | 125 | 90 | 54 | 67 | 71 | 74 | 80 | 89 | 78 | 78 | 75 | 881 | 4.9% |
| Private equity firms | 62 | 56 | 35 | 56 | 69 | 68 | 71 | 91 | 108 | 66 | 84 | 766 | 4.3% |
| Mutual & Pension Funds/ Nominees/ Trust | 40 | 28 | 28 | 58 | 54 | 46 | 54 | 72 | 87 | 86 | 110 | 663 | 3.7% |
| Public authorities/ States/ Governments | 15 | 21 | 23 | 30 | 37 | 35 | 48 | 41 | 51 | 50 | 34 | 385 | 2.1% |
| Foundation/ Research institutes | 4 | 5 | 11 | 4 | 6 | 6 | 11 | 6 | 12 | 8 | 10 | 83 | 0.5% |
| Venture capital | 2 | 5 | 4 | 0 | 1 | 2 | 3 | 3 | 1 | 6 | 2 | 29 | 0.2% |
| Managers/ Directors/ Employees | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 4 | 6 | 0.0% |
| Hedge Funds | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0.0% |
| Not classified | 164 | 169 | 120 | 100 | 127 | 94 | 131 | 148 | 143 | 106 | 103 | 1405 | 7.8% |
| Total | 1435 | 1481 | 1151 | 1423 | 1526 | 1515 | 1828 | 2080 | 2019 | 1774 | 1754 | 17986 | 100.0% |

Source: JRC Foreign Ownership Database (European Commission, 2019b)

Concerning the analysis of FDI flows into the EU, the Commission committed to: “carry out by the end of 2018 further in-depth analysis of foreign direct investment flows into the EU, especially in strategic sectors (e.g. energy, space, transport) or assets (technologies and inputs linked to strategic sectors, critical infrastructures across sectors, sensitive data) that may raise concerns in the areas of security, public order and/or control of critical assets, in particular when the investor is owned or controlled by a third country, or benefits from significant state subsidies” (European Commission, 2017).

In total, investors from about 170 countries have invested in the EU. This number has remained relatively constant over the last ten years, with around 1,500 to 2,000 investors a year.

In 2016, Foreign Direct Investment in the European Union accounted for 42% of GDP. 81% of them were represented by multinational companies whose structure became very complex in order to manage global production chains and minimize tax and regulatory burdens (European Commission, 2019a).

The Foreign Direct Investment can also be represented by Mergers and Acquisition that non- UE can make in European countries.

Between 2007-2017 (see Table 1), 65% of Industrial companies from European Union were purchased by foreign investors, followed by financial companies, Individuals and Banks/Insurance companies.

It is a fact that European Union is the world’s leading source and destination of foreign direct investment (European Commission, 2017).

4. CONCLUSIONS

In a growing world, investors are trying to keep up with the growing competitiveness. The most important aspects that each state must take into account are employees, citizens, the environment, and the benefits that the host state can have later.

The European Union has an important global position, with many development opportunities as well as material and human resources. At the same time, we must keep in mind that many investors choose countries where taxes are lower, cheaper labour and more permissive laws.

Considering how much this regional union has developed, the many processes it has gone through to reach what it is today, its global confidence, we can say that the European Union promises a good future for both foreigners and citizens, through involvement and support.

In conclusion, globalization and also geopolitics helps the countries to develop by creating opportunities and relationships based on trust.

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A CONTENT ANALYSIS OF TRANSPARENCY REPORTS OF BIG FOUR IN EUROPE

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Abstract

Auditors have always been viewed as confidence providers for the information published by their clients. But the failure of a big audit firm (Arthur Andersen) impacted the trust in auditors. In this context, IAASB stated in A Framework for Audit Quality (2014) that the audit firms must maintain a high level of quality of their services and must publish in a transparency report (TR) the information about how that quality is assured. The first mandatory TR for public companies in Europe appeared in 2008. More recently, specific requirements in the European Union have been imposed for the statutory audit of public interest entities through the Regulation No. 573/2014. Some of these requirements refer to the elements of the TR, and the obligation of making this report public, etc. The study aims to investigate what kind of information and how it is communicated in TR by carrying out a content analysis of TR published by the Big Four audit firms located in Europe. A keynes analysis conducted using corpus tool Wmatrix4 has identified specific linguistic means that are used to express the guarantee of high quality of Big Four auditing services.

Keywords: *transparency report; audit quality; key semantic domain; emotional register.*

JEL Classification: M40, M42, M48

1. INTRODUCTORY REMARKS

The role of financial auditors has always been seen as essential for the well-functioning of the capital market as they should ensure a high level of credibility of financial reports (Deumes *et al.*, 2012). Still, questions have been raised in the last years on the quality of services provided to public interest entities (PIEs) by financial auditors and audit companies. These questions appeared due to lack of transparency of audit companies regarding issues relevant for internal evaluation of audit quality as a part of internal system of governance. As a result, regulators had to impose to audit companies the mandatory requirement to prepare or even disclose information regarding internal (EC, 2010; PCAOB, 2011). The argument of regulators is based on the need to reduce informational asymmetry

between audit companies and capital market participants that could be achieved through a greater transparency regarding the internal system of governance of audit companies (Deumes *et al.*, 2012). This attitude of regulators has also been motivated by the recent global financial crisis and the lawsuits in which had been involved important audit companies, one of these lawsuits resulting in bankruptcy (see the case of Arthur Andersen).

In fact, the need for transparency of audit companies is but a natural continuation of the need for transparency in global economy. As mandatory financial and non-financial reporting has been imposed for most companies, it was only foreseeable for audit companies, as indirect interveners on the financial market, to have been imposed similar requirements. So, although some audit companies in Europe had published voluntarily transparency reports, through Directive 2006/43/EC (Article 40), amended by Regulation (EU) No 537/2014, imposed the obligation for statutory auditors and audit companies auditing public interest entities to publish, no later than four months after the end of financial year, an annual transparency report containing, at least, the following information:

1. a description of the legal structure and ownership of the audit firm;
2. where the statutory auditor or the audit firm is a member of a network:
 - a description of the network and the legal and structural arrangements in the network;
 - the name of each statutory auditor operating as a sole practitioner or audit firm that is a member of the network;
 - the countries in which each statutory auditor operating as a sole practitioner or audit firm that is a member of the network is qualified as a statutory auditor or has his, her or its registered office, central administration or principal place of business;
 - the total turnover achieved by the statutory auditors operating as sole practitioners and audit firms that are members of the network, resulting from the statutory audit of annual and consolidated financial statements;
3. a description of the governance structure of the audit firm;
4. a description of the internal quality control system of the statutory auditor or of the audit firm and a statement by the administrative or management body on the effectiveness of its functioning;
5. an indication of when the last quality assurance review was carried out;
6. a list of public-interest entities for which the statutory auditor or the audit firm carried out statutory audits during the preceding financial year;
7. a statement concerning the statutory auditor's or the audit firm's independence practices which also confirms that an internal review of independence compliance has been conducted;

8. a statement on the policy followed by the statutory auditor or the audit firm concerning the continuing education of statutory auditors;
9. information concerning the basis for the partners' remuneration in audit firms;
10. a description of the statutory auditor's or the audit firm's policy concerning the rotation of key audit partners and staff;
11. where not disclosed in its financial statements, information about the total turnover of the statutory auditor or the audit firm, divided into the following categories:
 - revenues from the statutory audit of annual and consolidated financial statements of public-interest entities and entities belonging to a group of undertakings whose parent undertaking is a public-interest entity;
 - revenues from the statutory audit of annual and consolidated financial statements of other entities;
 - revenues from permitted non-audit services to entities that are audited by the statutory auditor or the audit firm;
 - revenues from non-audit services to other entities.

The European Union had been imposed to transpose the provisions of Directive 2006/43/EC into their national legislation until mid-2008, and until mid-2014, the provisions of Regulation No 537/2014.

The aim of the study is to stress out the similarities and differences in linguistic register present in transparency reports published by BIG 4 in Europe. Conclusions of earlier studies show that, on the one hand, TRs *remain a ritualistic* exercise of power that is of no interest to a wider public (Girdhar and Jeppesen, 2018, pp. 282), and on the other hand, there is great variety in the way in which information published in TRs is presented (Čular, 2017; Pott, Mock and Watrin, 2008). An analysis of linguistic micro-structures may bring a further description of TRs positioning between being a ritual exercise imposed by law and a likely marketing instrument.

2. LITERATURE REVIEW

Although the obligation to publish transparency reports had been first established in the European Union in 2006, becoming operational in 2008, and other countries introduced this requirement for audit companies. So, since 2008, there has been for audit companies in Japan an obligation to publish a transparency report (Fu, Carson and Simnett, 2015). Also, Canadian audit companies must publish audit quality reports, but not integrally, being only obliged to make certain information public (such as, the number of the firm's offices). In USA, Public Company Accounting Oversight Board (PCAOB) established, at the request of US Treasury Committee, that big audit companies (companies having at least 100 public companies as clients) must prepare

annually, starting with 2010, transparency reports containing information similar to those required for the auditors of public companies in Europe through the Directive 2006/43/EC. Following these examples, Australia, starting with 2013, imposed for audit companies providing services to, at least, ten” significant entities” to prepare and publish annually transparency reports on company’s website. In what regards method of publication, the rules in Australia are similar to those impose by the European Directive (Fu, Carson and Simnett, 2015).

Anyway, until the appearance of these imperative rules, many audit companies, especially the Big 4, provided transparency reports voluntarily in order to send a message on high quality of audit services supplied to the market (Deumes *et al.*, 2012; Fu, Carson and Simnett, 2015).

Since the first published TRs, there have been discussions, on the one hand, regarding their content, and on the other hand, on the way these are perceived by the stakeholders. A study conducted by Pott, Mock and Watrin (2008) reported that there are no differences in the perception of key information regarding internal control system in audit companies and information regarding independence of auditors, whether accountants or auditors, but there are differences in perception of financial information and structure of governance of audit company, in the sense that the first are viewed more important by accountants, and the latter, by auditors. On the other hand, in terms of content, in countries where the publication of TRs had become mandatory, the content was also imposed by rules and standardised, so that there may be found minor differences in content, which is differentiated only by the number of details or used language.

A review of transparency reporting practices used by Big 4 in three European countries (UK, Germany and Denmark) was conducted by Girdhar and Jeppesen (2018), who discovered that in terms of TRs content, it is mainly influenced by two factors: the degree of control inside the international network to which the audit company belongs, and the requirements of national environment, in which the audit company operates. Similar conclusions were reached previously by Seal (2006), who, based on institutionalized agency theory, found out that auditors are seen as agents of authority delegated by investors and that their intentions are also driven by the values and norms of a specific institutional environment. Also, Seal (2006) has also underlined that there is high degree of freedom of Big 4 in UK in what regards the layout of TRs, as long as they comply with all requirements related to content.

The results of Girdhar and Jeppesen’s study (2018) put forward several subtle explanations on the degree of undertaken freedom, and then its use in preparing TRs. First, TRs complete the list of compulsory reports that companies already make and invest their time and resources into (financial reports, CSR reports, integrated reports, etc.). Secondly, TRs have an extremely limited readership. They are read by the members of audit inspection oversight body,

and by the competing audit companies that want to make sure these reports do not make a discordant note on the audit market. Therefore, it is less motivating to invest time and resources into an activity that does not stir the interest of other stakeholders. The third subtle observation of the study is that, in countries where the publication of TRs is just a response to complying with regulations, such as Germany and Denmark, and in which, the results of inspection oversight body are not made public, *transparency is defined merely as complying with the minimum legal requirements* (Girdhar and Jeppesen, 2018, pp.280). In contrast, TRs of Big 4 in UK respond to the same regulations, but the motivation to prepare them is the fact that a TR is an occasion to appear on the short list of companies with good practices on the audit market of UK. The results of inspection oversight body are made public in UK and the reports of firms complying with high standards are mentioned (La Rosa, Caserio and Bernini, 2019; Girdhar and Jeppesen, 2018; Seal, 2006). So, they also turn into possible marketing instruments for the issuing entity.

3. RESEARCH DESIGN

In this study, we aim to contribute to the mapping of the linguistic repertoire used in TRS of the BIG 4 in Europe by presenting the (1) key words, (2) preferred semantic domains, (3) the displayed emotional register, and (4) the preferred categories of stakeholders.

TRs were downloaded from the web sites of the BIG 4 companies in Europe, available in English language, and not protected by copyright. Table 1 briefly describes the structure of analysed corpus.

Table 1: Structure of analysed corpus

| Domain | Number of documents used in the analyses | Number of key words in analysed documents | Average number of key words per document |
|----------|--|---|--|
| Deloitte | 6 | 63,759 | 10,627 |
| EY | 6 | 84,507 | 14,085 |
| KPMG | 6 | 44,308 | 7,385 |
| PwC | 7 | 113,004 | 16,143 |
| Total | 25 | 305,578 | 12,223 |

Source: author's processing

Content analysis was conducted using Wmatrix4 software (Wmatrix, 2019; Rayson, 2003) that combines techniques of linguistic analysis with methods of natural processing of language. The web interface Wmatrix4 provides access to CLAWS (Constituent Likelihood Automatic Word-tagging System), corpus annotation instrument USAS (UCREL Semantic Analysis System), and

linguistic analysis standard methodologies, as well as to lists of frequencies, list of key words or concordances (Rayson, 2003, 2008).

4. FINDINGS

4.1. Key words in TRs of BIG 4 in Europe

Table 2 presents the first ten key words identified in each of the four analysed corpuses. The selection of key words is made by LL values (log likelihood) calculated by relation to BNC (British National Corpus) Sampler Written, $LL > 6,63$ ($p < 0,01$).

Table 2. Top of first 10 key words identified in the analysed corpus

| Deloitte | EY | KPMG | PwC |
|------------------------|------------------------|------------------------|----------------------|
| audit (6546.89) | EY (7970.17) | audit (5612.21) | audit (4944.52) |
| quality (2479.47) | audit (6576.80) | KPMG (4970.70) | our (3705.24) |
| Deloitte (2181.05) | our (3508.51) | engagement (2469.74) | quality (3579.94) |
| partner (1711.52) | global (3252.88) | quality (2421.12) | PwC (3578.12) |
| our (1658.44) | quality (3086.76) | global (1684.84) | engagement (2169.21) |
| engagement (1473.51) | engagement (1831.97) | partner (1399.94) | partners (2117.88) |
| firm (1438.58) | independence (1659.99) | member firms (1398.90) | assurance (1980.69) |
| risk (1182.11) | professional (1506.47) | policies (1219.21) | firm (1771.06) |
| partners (1117.66) | clients (1385.92) | professional (1130.42) | clients (1568.72) |
| independence (1005.37) | and (1355.27) | client (1125.02) | management (1540.04) |

Source: author's processing

In Table 2, in all four analysed corpuses, the monitoring of key words found in the first four positions provides us a summary of power statements in TRs. The BIG 4 promotes its *name* (by its proper name and use of 1st person plural, *our*), mission to provide audit and *quality*, as well as the *partner(s)*. *Engagement* is in the top of first six key words, in all four columns. The analysis of concordance lines for *engagement* shows positive relations with other key terms, such as *team*, *clients*, *risk*, *partner(s)*, *quality*, *control*, etc. Although less natural for a simple reading, such a reading stresses out the power of repetition of a word used much over the frequency in the reference texts of the British National Corpus – Sampler Written. At a distance regarding LL values, we find

similarities in the repeated use of the term *clients*. Differentiations in word clouds are generated by significantly different values of LL of the words *risk* and *independence* (Deloitte), *global* and *independence* (EY), *global* and *policies* (KPMG) or *assurance* and *management* (PwC).

4.2. Preferred semantic domains in TRs of the Big 4 in Europe

Similarly to the selection of key words, the identification of unique semantic domains was conducted by LL values (log likelihood) calculated by relation to BNC Sampler CG Business. The argument for selection of BNC Sampler CG Business for comparison refers to *de facto* target audience of TRs, the members of audit inspection oversight body and competitors, the business vocabulary natives. Table 3 presents the first 10 semantic domains for each analysed corpus, in descending order by log likelihood values (presented in the table in brackets).

Table 3. Top of first 10 unique semantic domains for the 4 analysed companies

| Deloitte | EY | KPMG | PwC |
|---|---|---|---|
| Business: Generally (4057.48) | Business: Generally (3180.01) | Business: Generally (2432.73) | Business: Generally (3307.58) |
| In power (1188.77) | Helping (1232.52) | Other proper names (1455.56) | In power (1523.35) |
| Investigate, examine, test, search (813.24) | In power (1080.39) | Evaluation: Good/bad (1082.61) | Evaluation: Good/bad (1102.81) |
| Personal relationship: General (779.92) | Evaluation: Good/bad (969.61) | Professional (1059.89) | Investigate, examine, test, search (969.46) |
| Evaluation: Good/bad (724.72) | Investigate, examine, test, search (816.32) | Inclusion (751.31) | Personal relationship: General (908.78) |
| Law and order (710.51) | Professional (812.11) | In power (732.01) | Belonging to a group (890.92) |
| Danger (681.39) | Inclusion (764.90) | Law and order (729.67) | Law and order (841.82) |
| Personal names (643.21) | Danger (703.55) | Social Actions, States and Processes (715.27) | Inclusion (819.84) |
| Inclusion (618.93) | Wanted (702.33) | Belonging to a group (704.33) | Cause & Effect/Connection (705.82) |
| Professional (599.49) | Not part of a group (683.87) | Personal relationship: General (700.77) | Danger (618.75) |

Source: author's processing

Exploration of similarities between TRs of the BIG 4 in Europe show three semantic fields appearing as common places on the linguistic repertoire map of TRs. We have ignored the *Business* domain: *Generally*, the omnipresence of which is given by the nature of the analysed corpus. The three recurrent semantic domains in the top 10 are *In power*, *Evaluation: Good/bad* and *Inclusion*. For the semantic domain *In power*, the concordance lines underline in the entire analysed corpus that the most frequently subordinated terms are: *management*, *Board (of Directors)*, *committee*, *CEO*, *Executive* și *leadership* denoting care for compliance with the requirements of point 1 of the Regulation No 537/2014. For the semantic domain *Evaluation: Good/bad*, the concordance lines are dominated in the entire corpus by words and expressions derived from *quality*, *standards*, *evaluate* and *rating*. For the semantic domain *Inclusion*, the concordance lines stress out such words and expressions as *comprise*, *comprehensive*, *insider*, *involve*, *embedded*.

Semantic domains *Personal relationship: General*, *Investigate*, *examine*, *test*, *search*, *Law and order*, *Professional* and *Danger* are found three of the four analysed corpuses, so they may be also associated with common places in the structure of TRs.

Differentiations are given by different values of LL of such semantic domains as *Helping* (EY), *Social Actions*, *States and Processes* (KPMG), or *Cause & Effect/ Connection* (PwC). In other words, besides references to common places, most often imposed by legislation, each entity of the BIG 4 seems to tell a story of transparency in audit favouring differently the semantic domains.

4.3. Emotional register displayed in TRs of the BIG 4 in Europe

Ratio between the presence of positive and negative feelings and emotions in TRs is in favour of positive ones, except the TRs of KPMG. As an example, Table 4 shows only the first five positions in the top of relative frequencies associated with positive and negative feelings identified in the analysed TRs. The Table shows the intensification in the accentuation of the positive side of feelings and emotions for each analysed company.

Table 4: Most frequent emotional states displayed in the analysed TRs

| | positive emotions | negative emotions |
|-----------------|-------------------|-------------------|
| Deloitte | satisfied (0.03) | threat(s) (0.03) |
| | confidence (0.03) | fear |
| | trust (0.02) | force |
| | proud (0.01) | retaliation |
| | like (0.01) | concerned |

| | positive emotions | negative emotions |
|-------------|---------------------|---------------------|
| EY | trust (0.05) | fear (0.01) |
| | confidence (0.04) | attacks (0.01) |
| | satisfied (0.01) | threat (0.01) |
| | pleased (0.01) | unrest (0.01) |
| | proud (0.01) | retaliation (0.01) |
| KPMG | satisfied (0.02) | threats (0.05) |
| | trust (0.01) | intimidation (0.01) |
| | courage (0.01) | suffer (0.01) |
| | faith (0.01) | fear |
| | proud (0.01) | retaliation |
| PwC | trust (0.05) | threats (0.02) |
| | satisfaction (0.04) | retaliation (0.01) |
| | confidence (0.03) | disappointed |
| | proud (0.01) | fear |
| | like (0.01) | concerned |

Source: author's processing

The words referring to positive and negative feelings and emotions further describe the differences in the emotional register displayed in TRs of each company. In the table, these words appear in the descending order of relative frequencies of appearance in each analysed corpus. We observe *satisfaction*, *confidence*, or *trust* are common places on the emotional map of TRs, and the preferences in use are unequally distributed among the four analysed companies. Similarly, in case of words referring to negative feelings and emotions, it is not the same if the relative frequencies in the corpus are the highest for the words *threat(s)* and *intimidation* (in case of KMPG), or for the words *fear* and *attack(s)* (in case of EY).

4.4. Categories of preferred stakeholders in TRs of the BIG 4 in Europe

The quality of services provided to PIEs by audit companies has an impact on all categories of stakeholders on the capital market. It is natural for all these categories of stakeholders to be found on the pages of transparency reports. Earlier studies (Girdhar and Jeppesen, 2018; La Rosa, Caserio and Bernini, 2018; Čular, 2017; Fu, Carson and Simnett, 2015) reported the decline in trust for the entire public both in audit companies, and in the added information value brought by TRs, and the fact that these reports have a limited audience.

Table 5. Top of first 5 categories of stakeholders preferred in TRs of the BIG 4

| Deloitte | EY | KPMG | PwC |
|--------------------------------------|---------------------|------------------|--|
| partners (0.32) | partners (0.20) | partners (0.33) | partners (0.41) |
| members (0.13) | members (0.11) | auditors (0.32) | members (0.18) |
| auditors (0.11) | auditors (0.09) | members (0.18) | auditors (0.13) |
| stakeholders (0.05) | leaders (0.09) | leaders (0.05) | directors (0.06) and stakeholders (0.06) |
| leaders (0.04) and regulators (0.04) | stakeholders (0.08) | reviewers (0.05) | leaders (0.05) |

Source: author's processing

Table 5 presents the top of the first 5 categories of stakeholders by frequency with which they were mentioned in each analysed corpus. The resulted image is representative for the term *boilerplate invoked* through the voice of a British oversight body in the study of Girdhar and Jeppesen (2018, pp. 276).

5. CONCLUSIONS

The results of our study confirm the findings of earlier studies that reported weak variability of the content of TRs from one company to another. In this study, the differences are minor as the analysis investigated only the content of TRs after it became compulsory in Europe to prepare and publish such reports by complying with a specific content. In terms of used words, we observe the desire to underline a concern for *quality* showing a message that any company wants to deliver to all of its stakeholders, but especially to *clients*, a word that has also been often used. Significant differences in the use of specific words (in the sense that they are more often used in some TRs) were discovered for: *risk* and *independence* (Deloitte), *global* and *independence* (EY), *global* and *policies* (KPMG) or *assurance* and *management* (PwC). Anyway, other authors (La Rosa, Caserio and Bernini, 2019) also observed that, in spite of the duty to publish TRs, a great part of its content may be viewed as voluntary and discretionary in Europe.

In terms of tone used in TRs, it is positive in most cases, marked by more frequent use of the words expressing positive emotions (such as, *satisfied*, *confidence*, *trust*, *proud*). In case of KPMG, the tone is mostly negative, shown in the frequent use of such words *threat*, *intimidation* and *suffer*.

In terms of stakeholders preferred in reports, they are represented especially by *partners*, *members* and *auditors*, *regulators*, *reviewers* (from oversight body) that might suggest a possible awareness of audit companies regarding the lack of interest for TRs outside this profession. After all, the provided image is a discourse in a closed circle, all the participants listed above being part of the immediate family of players on the audit market.

Although regulations are an argument for lack of differentiations, the overall image seems to be far from that in which TRs turn also into marketing instruments for audit companies.

The limits of our study are determined by our attention to the micro-linguistic structures. First, by focusing on the linguistic details of the TRs, a part of the links among the components, as well as the whole structure runs the risk of being pushed into the background. Even if the concordance lines permit a contextualization of the micro-linguistic structures analysed, it is necessary to develop the research for a better understanding of the structure and details of the TRs' architecture. Second, considering that the previous studies mention an adaptation of the forms and content of the TRs to the national regulatory and institutional environment, beyond the content imposed by the Regulation (EU) No 537/2014, a linguistic analysis of all the TRs published on the national level by the audit firms is useful. Third, since the TRs' specificity is influenced by the national context, an analysis that could capture the analogies and the metaphors in these reports would offer an in-depth perspective on the manner in which the technical and often arid message of the audit firms comes to become comprehensive and meaningful for the extended categories of stakeholders.

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QUALITY OF FINANCIAL REPORTING IN ROMANIA: MEASURING QUALITATIVE CHARACTERISTICS PRE AND POST IFRS ADOPTION

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Abstract

This paper has as a main purpose to analyse the influence of mandatory IFRS adoption on the quality of financial reporting for Romanian companies listed on the Bucharest Stock Exchange (BSE). Using, for assessing the quality, a measurement tool to evaluate it in terms of the underlying fundamental and enhancing qualitative characteristics proposed by van Beest, Braam and Boelens (2009), the paper aims to answer the following questions: "Does the mandatory adoption in 2012 of IFRS for companies whose values have been admitted to trading on the regulated market significantly influences the quality of financial reporting?" "Are the industry and company size factors able to influence the quality of financial reporting"? and "To what extent are the results obtained using this measurement technique also achieved through the use of other frequently used ones, i.e value relevance or earnings management?". The analysis includes a total of 34 companies listed on the BSE from 2009 to 2017 period, comprising a total of 306 observations. The data for the analysis were collected from the individual financial statements of the companies, prepared in accordance with the Romanian Accounting Regulation (RAS) for 2009-2011 and with IFRS for 2012-2017. The results show that IFRS adoption and the size of the company have a positive and significant influence on the financial reporting quality while industry does not.

Keywords: *Financial Reporting Quality; IFRS adoption; Qualitative characteristics; Relevance; Faithful representation.*

JEL Classification: G30; M41

1. INTRODUCTION

The objective of financial reporting is to provide financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to the

entity. Those decisions involve buying, selling or holding equity and debt instruments, and providing or settling loans and other forms of credit (IASB, 1989, 2010, 2018). In this context, it is questionable to determine the usefulness of the financial information provided by managers through the annual financial reports and at the same time the quality of the information and, more importantly, the financial reporting quality.

In the literature, the quality of financial information is treated differently from the financial reporting quality, the latter being more extensive and not only addressing the financial information, but also the other information contained in the disclosed annual reports. Most often existing investors or the potential ones do not possess a general knowledge in the economic field, which is why certain purely financial, but qualitative information, is not necessarily useful without being accompanied by a series of information that concerns the activity in general, the impact it exerts on the environment and on society, as well as on the risks to which the company is exposed. Georgescu, Păvăloaia and Robu (2014, p. 827) assert that the quality of the accounting information is determined by its capacity to capture the reality regarding the financial position and performance of the company by confronting the interested parts. More precisely, it is reflected in the fundamental characteristics, relevance and faithful representation, as well as in the enhancing ones (comparability, verifiability, timeliness and understandability) (Carp, 2015, p. 80), characteristics described in extenso in the second section.

As stated above financial reporting quality is a broader concept that not only refers to financial figures, but also to disclosures, and other non-financial information useful for the decision making process included in the annual report (van Beest, Braam and Boelens, 2009, p. 4). The CFA (Chartered Financial Analyst) Institute (2019) defines *financial reporting quality* as the accuracy with which a company's reported financials reflect its operating performance and their usefulness for forecasting future cash flows and it pertains to the quality of information in financial reports, including disclosures in notes. High-quality reporting provides decision-useful information, which is relevant and faithfully represents the economic reality of the company's activities during the reporting period as well as the company's financial condition at the end of the period.

National approaches to financial reporting quality occur mainly due to the mandatory implementation of IFRS for the preparation of individual financial statements. Thus, in Romania, taking into account, among other things, *the need to align with international practice to promote the transparency and comparability of financial statements and the fact that some of the companies whose shares were traded on a regulated market belonged to multinational groups that applied the International Standards Financial Reporting, respectively the need to ensure the consistency between them* (MFP, 2012), the Minister of Public Finance, issued the 881/2012 Order stipulating that starting

with the financial year 2012, companies whose securities are admitted to trading on a regulated market have the obligation to apply IFRS when preparing their individual annual financial statements.

Literature label IFRS as high-quality financial reporting standards (Palea, 2013; Dimitropoulos *et al.*, 2013; Ball, 2016). Thus, as stated by Săcărin, Bunea and Gîrbină (2013, p. 406) promoters of IFRS sustained the idea that adopting IFRS will increase the quality of financial reporting which will diminish the informational asymmetry and the risk and consequently will decrease the cost of capital.

Over time the mandatory application of IFRS by different countries, including Romania, was subject to many studies in order to determine if there is indeed an increased transparency, comparability and overall an improved quality of financial reporting to that of other companies in the European Union, which also apply IFRS.

This paper aims to bring added value in measuring the quality of financial reporting for Romanian companies. In order to do so, an assessment tool meant to encompass all the qualitative characteristics (the fundamental ones and the enhancing ones) was used. This way we avoid focusing only on information disclosed in financial statements (used by accrual and value relevance-based models). As van Beest, Braam and Boelens (2009, p. 4) state, none of the frequently used measurement methods enables a comprehensive assessment of financial reporting quality including all qualitative characteristics as defined in the Conceptual Framework for Financial Reporting.

The paper is structured as follows: section two presents a brief history of the qualitative characteristics proposed by IASB. Then, in section three we review a number of the studies that have been published on the subject of the adoption of IFRS, mainly on the impact of mandatory adoption on the financial reporting quality. Subsequently, the research methodology, the used data and results are presented, and finally, the conclusions and limitations.

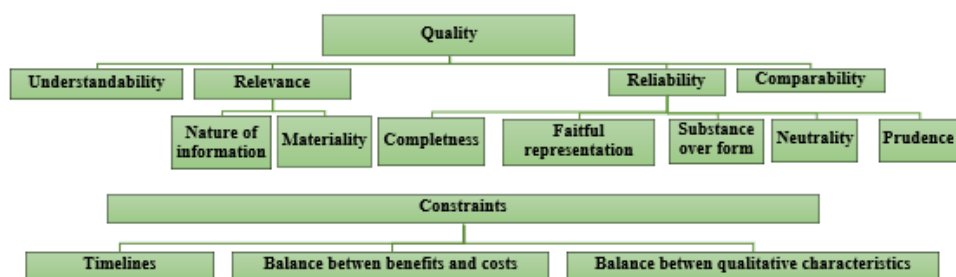
2. THE QUALITATIVE CHARACTERISTICS PROPOSED BY THE IASB: 1989-2018

Starting from the stated objective of financial reporting, the IASB's Framework for the Preparation and Presentation of Financial Statements, first published in 1989, proposed and explained a number of four qualitative characteristics of financial information whose acceptance in national accounting regulations had to lead to an increase in the quality of financial information (presented on the first level of the scheme shown in Figure 1).

In order to be considered useful by users in the decision-making process, financial accounting information had to be easily understood by users, a feature described as the *understandability* of information. For this purpose, users are assumed to have a reasonable knowledge of business and economic activities

and accounting and a willingness to study the information with reasonable conscientiousness. This feature did not, however, allow the exclusion from the financial reports of complex information that could be relevant to the economic decision-making needs of users on the grounds that it would be difficult for the users to understand.

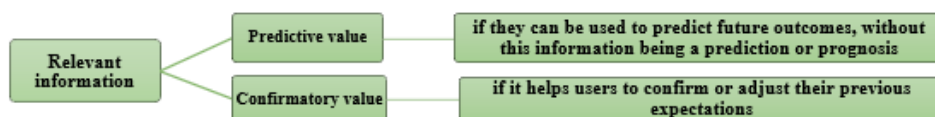
Figure 1. Qualitative characteristics of information from the 1989 General Conceptual Framework



Source: own projection after van Beest and Braam (2006, p. 12)

Then, in order to be useful, the information presented should have been able to influence the economic decisions of the users, helping them to evaluate past, present or future events, or to confirm or correct their previous assessments, a characteristic described as *relevance* of the information. The relevance of information is affected by its nature and materiality. In some cases, the nature of information alone is sufficient to determine its relevance, in others, both the nature and materiality are important. Information is material if its omission or misstatement could influence the economic decisions of users (IASB, 1989). Also, in order to be considered relevant in the decision-making process, the financial information must have predictive value, confirmatory value, or both as shown in Figure 2.

Figure 2. Characteristics of the relevant information



Source: own projection

A third important characteristic was the *reliability* of the information. This was possible when the information was not biased, it did not contain significant errors, and it faithfully represented the transactions and events that it intended to

represent, or could reasonably be expected to represent. As can be seen, reliability was ensured by meeting certain requirements, namely:

- information had to represent faithfully the transactions and other events it either purports to represent or could reasonably be expected to represent;
- information contained in financial statements had to be neutral, that is, free from bias;
- the transactions and other events that it purports to represent had to be accounted for and presented in accordance with their substance and economic reality and not merely their legal form;
- information had to be accounted for considering the prudence principle (also known as conservatism), in order to avoid the overstatement of assets and income and the understatement of liabilities and expenses;
- the information in financial statements had to be complete within the bounds of materiality and cost;

Last but not least, an important characteristic was the *comparability*, which implied that users could compare financial reports over time. According to it, the measurement and presentation of the same transactions and events had to be carried out in a consistent manner within an entity and over time for that entity and in a consistent manner for different entities. Users should have been notified of any changes in the accounting policies used and also of the effect of these changes on the entity's position and performance.

All of these characteristics were complemented by a series of constraints as:

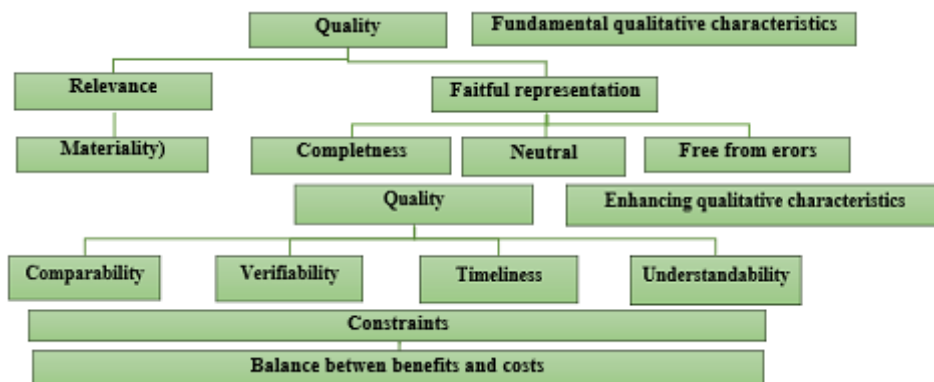
- timeliness – the information had to be presented in a timely manner, sometimes even before all aspects of a transaction or other event were known, thus affecting reliability. By ensuring that the information is reliable, we can get into a situation where delivery is far behind and the information is no longer of interest to users, despite their reliability;
- benefits from this information had to exceed the cost of providing it;
- there had to be a balance between characteristics to meet the objective of financial statements (IASB, 1989).

With the replacement of the Framework for the Preparation and Presentation of Financial Statements version 1989, with the version issued in autumn 2010, the Conceptual Framework for Financial Reporting, the qualitative characteristics underwent a number of changes (Figure 3).

In this version of the Framework, *reliability* has been replaced by *faithful representation* (Dima Cristea and Șărămăt, 2011, p. 7), and the latter, together with *relevance*, were considered fundamental qualitative characteristics, the others being considered enhancing qualitative characteristics meant to complement the quality of financial reporting. At the same time, materiality and prudence, features that ensured the reliability of the financial accounting information, were no longer considered as components of the faithful representation. Thus, in order to faithfully represent reality, the information:

- must be neutral, free from bias;
- must be complete;
- be free of material error

Figure 3. Qualitative Characteristics of information from the Conceptual Framework for Financial Reporting 2010 version



Source: own projection

Additionally, in order to ensure the quality of financial information, the 2010 version of the Conceptual Framework classified *comparability* (which implies that information users can compare financial reports over time), *understandability* (accounting information must be easy to understand by the users), *timeliness* (provide information on a timely basis) and *verifiability* (different informed and independent observers could reach a consensus, although not necessarily a total agreement, that a particular representation is a faithful representation) as enhancing qualitative characteristics whose purpose is to increase the usefulness of relevant and faithfully represented information (IASB, 2010).

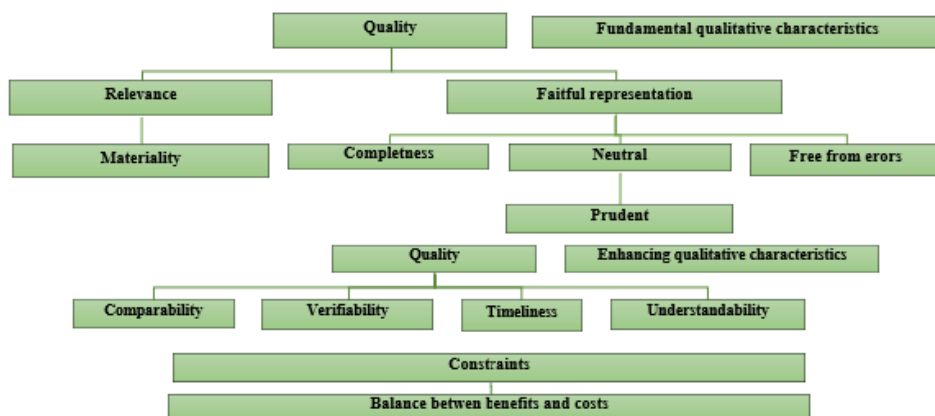
The IASB issued the latest version of the revised Conceptual Framework for Financial Reporting on March 29, 2018, the annual periods beginning after 1 January 2020 being the effective date for preparers who develop an accounting policy based on the Conceptual Framework (EY, 2018). The revised version includes changes to the previous Conceptual Framework, published in 1989 and revised in 2010. The 2010 version was criticized for lack of clarity, the exclusion of certain important concepts and to be overcome with regard to the current thinking of IASB (EY, 2018). The 2018 version of the Framework is more comprehensive than the old one – its aim is to provide the Board with the full set of tools for standard setting and it covers all aspects of standard setting from the objective of financial reporting, to presentation and disclosures (KPMG, 2018).

The status of the qualitative characteristics of the Conceptual Framework for Financial Reporting issued in March 2018 is presented in Figure 4.

Changes in the 2018 version of the Qualitative Characteristics chapter are few. The Board has reintroduced the concept of prudence, and defined the concept of measurement uncertainty in assessing the usefulness of financial information (EY, 2018). Thus:

- prudence has been reintroduced in close correlation with neutrality: “neutrality is supported by the exercise of prudence” (pct. 2.16 IASB, 2018). Also, regarding prudence, it is specified that its exercise does not imply an information asymmetry because the latter is not a qualitative characteristic of useful financial information;
- the measurement uncertainty was presented – the Board acknowledged that measurement uncertainty is a factor that can affect faithful representation;
- it is explicitly reaffirmed the need to faithfully represent transactions in terms of their economic content and not their legal form, highlighting the usefulness of materiality as opposed to the 2010 version of the Framework.

Figure 4. Qualitative characteristics of information in the Conceptual Framework version 2018



Source: own projection

At the Romanian Accounting Regulations (RAS) level one can observe the presentation of the four main qualitative characteristics proposed in Conceptual Framework 1989 version, namely: *understandability*, *relevance*, *reliability* and *comparability*, defined as attributes that determine the usefulness of information for the first time in the Order of the Minister of Public Finance 3055/2009 (pct. 2.2 MFP, 2009, sec. 2). Subsequently, the Order of the Minister of Public

Finance 1802/2014 takes over from the international referential that the information must be relevant and represent exactly what it intends to represent, thus explaining the fundamental qualitative characteristics. In addition, in order to enhance the usefulness of information in the decision-making process, OMFP 1802/2014 reiterates the enhancing characteristics proposed by the IASB Conceptual Framework 2010 version, namely: *comparability*, *verifiability*, *timeliness* and *understandability* (MFP, 2014, sec. 2.3). At present, for the companies whose values were admitted to trading on the regulated market, the provisions of the Order of the Minister of Public Finances no. 2844/2016 apply. The Order, which provides for the approval of the Accounting Standards in line with International Financial Reporting Standards, transposes IFRS requirements and do not explicitly disclose the qualitative characteristics presented in the Conceptual Framework 2010 version, these being considered implicit.

3. LITERATURE REVIEW

For the analysed period, the last 9 years, several studies have examined various aspects of the implementation of IFRS in numerous countries, including Romania. Among them, many have measured the impact of mandatory IFRS adoption on the quality of financial reporting, using various methods to assess that quality i.e. accrual models, value relevance models, research focusing on specific elements in the annual report, and methods operationalizing the qualitative characteristics, mainly relevance and timelines.

The method suggested by van Beest, Braam and Boelens (2009) is that of models that analyse qualitative characteristics, operationalizing them and aim to assess the quality of different dimensions of information simultaneously to determine the decision usefulness of financial reporting information. Jonas and Blanchet, (2000), Lee *et al.* (2002) and McDaniel, Martin and Maines (2002) develop questions referring to the separate qualitative characteristics in order to assess information quality. Some of these are not complete and focus exclusively on relevance and faithful representation (McDaniel, Martin and Maines, 2002), or timeliness (McGee *et al.*, 2008). Van Beest, Braam and Boelens (2009, p. 8) state that although understandability, comparability, and timeliness are perceived to be less important than relevance and faithful representation, for a comprehensive assessment it remains important to include them in the analysis. Despite the benefits described by the authors, the method has not been widely used over the years, the paper of Yurisandi and Puspitasari (2015) being the only one of its kind identified so far. The authors replicate the case study for listed companies at Indonesian Stock Exchange (IDX) that present the highest market capitalization and concluded that relevance, understandability and comparability level increased after IFRS adoption while faithful representation decreased and timeliness maintained unchanged. Considering that one of the stated objectives of this paper is to compare the results obtained using this method with other

results obtained over the years we present a selection of representative papers both at international and national level.

Starting from 2005, the European Regulation 1606/2002 has mandated the adoption of IAS/IFRS, starting 1 January 2005, in all the member states of the European Union with the ultimate goal of increasing transparency in financial reporting. IAS/IFRS adoption in the European Union therefore represents an extraordinary event for empirical research on the quality of financial reporting for two main reasons. First of all, IAS/IFRS adoption in the European Union has been mandatory (Palea, 2013, p. 248). Secondly, supported also by Soderstrom and Sun (2007, p. 675), as it has involved different countries that followed a variety of country-specific Generally Accepted Accounting Principles (GAAP). The accounting literature, on the topic can be divided in two: research on IAS/IFRS adoption prior to the European Regulation 1606/2002 (voluntary adoption) and research on mandatory IAS/IFRS adoption. Considering that the subject of this paper covers the effect of the mandatory adoption of IFRS on financial reporting quality we will focus only on some representative papers that approached the same topic.

Dimitropoulos *et al.* (2013) examined the impact of IFRS adoption on the quality of accounting information using a sample of 101 firms listed in the Athens Stock Exchange for a period of eight years (2001–2008). They found evidence that the implementation of IFRS contributed to less earnings management, more timely loss recognition and greater value relevance of accounting figures, compared to the local accounting standards. Kargin (2013) investigated the value relevance of accounting information pre and post the implementation of IFRS for Turkish listed firms from 1998 to 2011. The results showed that value relevance of accounting information has improved in the post IFRS period (2005–2011) considering book values while improvements have not been observed in value relevance of earnings. Kythreotis (2014) analysed the quality of financial statements examining the two fundamental qualitative characteristics – relevance and faithful representation, measured by the usage of four alternative regression models. The sample consisted of listed companies of fifteen European countries that had mandatory adopted IFRS from 2000 until 2009. The findings obtained showed an increase in relevance, while the reliability remained unchanged.

Also, another fact to be considered is the adoption of IFRS around the globe in a number of jurisdictions, outside the European Union. Thus, following the mandatory implementation of IFRS in Australia as of 2005, Chua, Cheong and Gould (2012) examined its impact on accounting quality by focusing on three perspectives: (1) earnings management, (2) timely loss recognition, and (3) value relevance. They found that the pervasiveness of earnings management by way of smoothing has reduced, while the timeliness of loss recognition and relevance had improved.

Garcia *et al.* (2017) analysed whether changing from local standards to IFRS improved the quality of accounting for Latin American, using a sample of 923 companies from Argentina, Brazil, Chile and Mexico for 2000–2014 period. The results indicated that changes from local accounting regulations to IFRS increased the value relevance.

For Romania there are many papers, both theoretical (Albu *et al.*, 2011; Săcărin, Bunea and Gîrbină, 2013; Ionaşcu *et al.*, 2014; Pășcan, 2015) and empirical, that concern the effect of IFRS adoption. The most relevant, empirical ones, regarding the topic of the paper, are published mainly after 2013, one year after the mandatory adoption of IFRS, thus the researchers being able to conduct comparative, pre and post adoption analyses using the results for two financial years prepared under IFRS. These papers focus mainly on measurement technique as value relevance and earnings management. Pășcan (2014), using a methodology based on the value relevance of the accounting information, empirically tested whether IFRS adoption in Romania increases the quality of accounting data reported by Romanian companies listed on BSE over the years 2010-2013. The results showed that IFRS adoption in Romania generated an enhancement of accounting quality, registered especially in the case of information about the book value of equity. Nichita and Gajevszky (2015) investigated whether the adoption of IFRS for the individual financial statements of Romanian listed companies has improved the value relevance of the accounting numbers, the results exposing a higher value relevance of earnings and net income post IFRS adoption. The authors draw attention to the fact that this increase cannot be entirely related to IFRS adoption, being influenced by other factors. Also, Gajevszky (2015) using the accrual model tested whether quality has improved due to IFRS adoption for Romanian listed companies. The results showed that companies presenting their individual financial statements in accordance with IFRS exposed a higher quality of financial reporting in the post-adoption period. Carp (2015) analysed the impact generated by the mandatory application of IFRS for Romanian listed companies on the neutrality of the financial information, assessed through the dimension of earnings management. The results showed an increase of the earnings management for the period 2010-2011, characterized by financial statements drawn up according to RAS. In comparison, the 2012-2013 period exposed lower degrees of earnings management, as well as a descending dynamic for it, thus reflecting a positive impact of IFRS on the quality of the information reported by quoted Romanian companies. The research conducted by Robu (2015) reflected an increase in value relevance in the case of IFRS adoption for Romanian listed companies and the fact that IFRS adoption seems to be different when taking into consideration the industry in which the company operates. Dobre, Brad and Ciobanu (2015) conducted a research on a four-year period of time looking both at timely loss recognition and at value relevance for Romanian entities that are listed on the

Bucharest Stock Exchange. The results provided evidence that there seems to be more timely loss recognition and more value relevance for Romanian listed entities after the adoption of the IFRS in the individual financial statements.

4. METHODOLOGICAL APPROACH

The instrument proposed by the authors and used as such in the present research is an index of 21 items, grouped into five sections: two for relevance and faithful representation – fundamental qualitative characteristics and three for understandability, comparability and timeliness – enhancing qualitative characteristics. For the fourth enhancing characteristic proposed by the IASB Conceptual Framework, *verifiability*, separate items were not built, as van Beest, Braam and Boelens (2009, p. 12) included it in the measuring instrument as a sub notion of faithful representation. For assessing each item, a five-point scale which allows us to determine to what extent the financial reports meet each of the qualitative characteristics was used. Appendix 1 provides an overview of the 21 items used to operationalize the qualitative characteristic, alongside with the measurement scales used to assess the value of the distinct items.

Based on the assigned values we computed:

- standardized scores for each category (relevance, comparability etc.) that is computed as the sum of the observations divided by the number of observations, for the items of each section;
- a score for **fundamental characteristics (FQC)**, based on scores obtained for relevance and faithful representation calculated by adding the standardized scores of relevance and faithful representation, divided by 2, both qualitative characteristics being weighted equally;
- a score for the **enhancing characteristics**, based on scores obtained for understandability, comparability and timeliness, which is computed by adding the standardized scores for the three and dividing by 3, all being weighted equally;
- a score that includes both the score on the **fundamental characteristics** and the one on the **enhancing characteristics (FEQC)**, the first weighing 67%, its components being considered by the Conceptual Framework as the most important in relation to the quality of financial reporting. Also, for this score, we computed variations with distinct weights (50:50, 75:25, 80:20) in order to determine whether such a change alters the obtained results using the 67:33 score. Appendix 2 provides an overview of these scores.

The main purpose of this paper, as stated above, is to analyse the influence of mandatory IFRS adoption on the quality of financial reporting for Romanian companies listed on the Bucharest Stock Exchange, thus aiming to answer the following questions: “*Does the mandatory adoption in 2012 of IFRS for companies whose values have been admitted to trading on the regulated market*

significantly influences the quality of financial reporting?”, “Are the industry and company size factors able to influence the quality of financial reporting”? and “To what extent are the results obtained using this measurement technique also achieved through the use of other frequently used ones, i.e. value relevance or earnings management?”. In order to achieve these objectives, we constructed the following hypotheses:

H1: The adoption of IFRS **increases** the quality of financial reporting assessed by all **fundamentals** and **enhancing** qualitative characteristics;

H2: The adoption of IFRS **increases** the quality of financial reporting assessed only by the **fundamental’s** qualitative characteristics;

H3: The adoption of IFRS **increases** the **relevance** of financial reporting;

H4: The adoption of IFRS **increases** the **faithful representation** of financial reporting;

H5: Alongside with the adoption of IFRS, the **size of the company** and the **industry influence** the financial reporting quality.

And we will test them using *OLS regression*. Thus, we have the following equations:

$$FEQC = \beta_0 + \beta_1 \text{Acc Standards} + \varepsilon \quad (1)$$

$$FQC = \beta_0 + \beta_1 \text{Acc Standards} + \varepsilon \quad (2)$$

$$\text{Relevance} = \beta_0 + \beta_1 \text{Acc Standards} + \varepsilon \quad (3)$$

$$\text{Faithful rep.} = \beta_0 + \beta_1 \text{Acc Standards} + \varepsilon \quad (4)$$

$$FEQC = \beta_0 + \beta_1 \text{Acc Standards} + \beta_2 \text{Industry} + \beta_3 \text{Size} + \varepsilon \quad (5)$$

$$FQC = \beta_0 + \beta_1 \text{Acc Standards} + \beta_2 \text{Industry} + \beta_3 \text{Size} + \varepsilon \quad (6)$$

$$\text{Relevance} = \beta_0 + \beta_1 \text{Acc Standards} + \beta_2 \text{Industry} + \beta_3 \text{Size} + \varepsilon \quad (7)$$

$$\text{Faithful rep.} = \beta_0 + \beta_1 \text{Acc Standards} + \beta_2 \text{Industry} + \beta_3 \text{Size} + \varepsilon \quad (8)$$

Where:

FEQC is the total quality score of financial reporting based on both the scores of the **fundamental** and **enhancing** qualitative characteristics;

FQC is the total quality score of financial reporting based on the scores of the **fundamental** qualitative characteristic’s relevance and faithful representation;

Relevance is the standardized score for relevance calculated as average for the items of these section;

Faithful rep. is the standardized score for faithful representation calculated as average for the items of these section;

Acc. Standards is a dummy variable (0 if companies prepare their annual report in accordance with RAS, and 1 if companies prepare their annual report in accordance with IFRS);

| | |
|-------------------|--|
| Industry | is a compound variable of industry dummies according to Romanian classification of activities in the national economy code sections; |
| Size | is the natural logarithm of total assets; |
| $\beta_{0,1,2,3}$ | regression coefficients; |
| ε | random variable, error. |

For the present paper we excluded the two variables considered by van Beest, Braam and Boelens (2009), *country* because the data were collected only for Romanian companies and *leverage* because data for common equity was not available for a significant number of companies, leading to too many missing cases.

5. SAMPLE AND DATA

The analysis includes a total of 34 companies listed on the Bucharest Stock Exchange (BSE) on the Standard and Premium tier. From a total of 87 listed companies registered in 2018 we excluded some companies as follows:

- 12 financial institutions, financial investment institutions, mutual funds and other similar financial entities;
- 41 companies for which it was not possible to collect data for the analysed period.

The data were collected from the individual financial statements of the companies reported in accordance with the Romanian Accounting Regulations (2009-2011) and with IFRS (2012-2017). The time horizon considered was the period 2009-2017, thus totalling 306 observations.

The year 2012 was excluded from the regressions as it is considered the year of transition to IFRS. Thus, at the time of data collection, a series of adjustments and restatements that would significantly influence the assessment of the financial reporting quality using this index were identified. The primary source of data collection was the Bucharest Stock Exchange website and for the 2009-2011 period the websites of the analysed companies.

6. RESULTS AND DISCUSSION

The results for the descriptive statistics for quality of financial reports related to accounting standards (Appendix 3), that include the year 2012, suggest that IFRS provide higher financial reporting quality than RAS for both quality measures (FEQC and FQC) and also for relevance and faithful representation. To test whether these quality differences are significant, we conducted OLS regressions. Also, without pointing out the results, the models were tested on linearity, homoscedasticity, multicollinearity and normally distributed data. The scatter plots of the residuals show a random array of dots, indicating linearity and homoscedasticity. The variance inflation factor (VIF) was smaller than 2 for

each of the variables in each of the regression models, which indicates the absence of multicollinearity. Finally, all variables were normally distributed.

Appendixes 4 and 5 present the regression results used to test whether mandatory IFRS adoption increases financial reporting quality (model 1) and whether alongside with it, industry and company size are influence factors for financial reporting quality (model 2). Consistent with results in prior literature, obtained using other measurement techniques for assessing financial reporting quality (Carp, 2015; Gajevszky, 2015; Pășcan, 2014 – for Romania; Iatridis, 2010; Dimitropoulos *et al.*, 2013; Kythreotis, 2014; Yurisandi and Puspitasari, 2015; Chua, Cheong and Gould, 2012 for other countries that mandatory adopted IFRS), the results show a significant positive influence of the accounting standards, namely IFRS, on accounting quality for both quality measures (FEQC and FQC). Also, our findings indicate a positive influence of company size on the quality of financial reporting. Although the results indicate a positive influence of the *industry* on financial reporting quality, this is not statistically significant, which is why, within the analysed sample, we will not consider it as a factor of influence. Additionally, we performed a robustness analysis to examine the influence of the proportion of the fundamental to the enhancing qualitative characteristics. Appendix 8 shows that the results are robust for different weightings of both fundamental and enhancing qualitative characteristics.

According with the findings in Appendix 3, measuring financial reporting quality exclusively in terms of the fundamental qualitative characteristic's *relevance* and *faithful representation*, IFRS drawn up annual reports provide more relevant information that faithfully represents economic phenomena to a greater extent than RAS annual reports. The results presented in Appendixes 6 and 7 show that the influence of IFRS on the fundamental qualitative characteristics differs significantly. Thus, Appendix 6 shows that the quality scores on relevance are higher in the IFRS annual reports than in the RAS annual reports, mandatory IFRS adoption exerting a positive and significant influence on financial reporting quality. Appendix 7 shows that the quality scores on faithful representation are also higher in IFRS drawn up annual reports than in the RAS ones, mandatory IFRS adoption exerting a positive significant influence on financial reporting quality. Consistent with results in prior literature, assessing value relevance pre and post IFRS adoption (Nichita and Gajevszky, 2015; Robu, 2015; Brad, Ciobanu and Dobre, 2016; Pășcan, 2014 – for Romania; Dimitropoulos *et al.*, 2013; Kargin, 2013; Kythreotis, 2014; Garcia *et al.*, 2017 for other countries that adopted IFRS) these results suggest that annual reports prepared in accordance with IFRS offer more relevant information that faithfully represents economic phenomena to a greater extent than RAS annual reports. As in the previous case, our findings indicate a positive influence of company size on the quality of financial reporting, assessed

exclusively in terms of the fundamental qualitative characteristic's *relevance* and *faithful representation*. Although the results indicate a positive influence of the *industry*, this is not statistically significant.

Overall, the results lead to the validation of the hypotheses 1, 2, 3 and 4 and to the partial validation of the fifth hypotheses.

7. CONCLUSIONS AND LIMITATION

Considering the mandatory IFRS adoption for the preparation of individual annual financial statements of Romanian listed companies, starting with the financial year 2012, the main objective of this paper is to analyse its influence on the quality of financial reporting for Romanian companies listed on the BSE from 2009 to 2017. Using for assessing the quality a measurement tool to evaluate it in terms of the underlying fundamental and enhancing qualitative characteristics we applied eight regression models in order to test the financial reporting quality which included three years of reporting in accordance with RAS and five years of reporting in accordance with IFRS. The year 2012 was excluded from all the regressions because it presented a series of adjustments and restatements which would have significantly influenced the assessment of the financial reporting quality using this index

The first two regressions (based on eq. 1-2) show a significant positive influence of the accounting standards, namely IFRS, on accounting quality assessed both *by al fundamentals and enhancing qualitative characteristics* (FEQC) and only *by the fundamentals accounting characteristics* (FQC).

From the regressions based on eq. 3-4 we found that the quality scores on relevance and faithful representation are higher in the IFRS annual reports than in the RAS annual reports, mandatory IFRS adoption exerting a positive, statistically significant, influence on financial reporting quality assessed exclusively in terms of the fundamental qualitative characteristic's relevance and faithful representation. These results suggest that annual reports prepared in accordance with IFRS offer more relevant information that faithfully represents economic phenomena to a greater extent than RAS annual reports.

Also, our findings (based on eq. 5-8) demonstrate a positive influence of company size on the quality of financial reporting. Although the results indicate a positive influence of the industry on financial reporting quality, this is not statistically significant, which is why, within the analysed sample, we will not consider it as a factor of influence of the quality.

From the results obtained for the robustness analysis we found that, for different weightings of both fundamental and enhancing qualitative characteristics, the results are robust.

This research has several limitations. The survey covers the 2009-2017 period and data collection for the 2009-2011 period could not be performed for more than half of the listed companies. Being an extended time horizon (data for

9 years) for the 41 companies excluded from the survey, no data could be collected for the pre-IFRS period. Also, the qualitative characteristics could not be measured by two independent ratters, thus not being able to test the inter-rater reliability of the measurement scales.

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Appendixes

Appendix 1. Overview of the measures used to operationalize the fundamental and enhancing qualitative characteristic (including the measurement scales)

| | Question | Operationalisation | Concept | Analysed information / section |
|--------------------------------|--|--|--------------------|--|
| Relevance | | | | |
| R1 | To what extent does the presence of the forward-looking statement help forming expectations and predictions concerning the future of the company? | 1- No forward-looking information 2 – Forward-looking information not an apart subsection 3- Apart subsection 4 – Extensive predictions 5 – Extensive predictions useful for making expectation | Predictive value | Information on investment and expected results for the subsequent year, future transactions, contracts or projects to be executed |
| R2 | To what extent does the presence of non-financial information in terms of business opportunities and risks complement the financial information? | 1 – No non-financial information 2 – Little non-financial information, no useful for forming expectations 3 – Useful non-financial information 4 – Useful non-financial information, helpful for developing expectations 5 – Non-financial information presents additional information which helps developing expectations | Predictive value | Information on business opportunities, risks affecting the company, social implication and its attitude towards environmental policies |
| R3 | To what extent does the company use fair value instead of historical cost | 1 – Only HC 2 – Most HC 3 – Balance FV/HC 4 – Most FV 5 – Only FV | Predictive value | Basis of preparation of financial statements provided usually in note 2 |
| R4 | To what extent do the reported results provide feedback to users of the annual report as to how various market events and significant transactions affected the company? | 1 – No feedback 2 – Little feedback on the past 3 – Feedback is present 4 – Feedback helps understanding how events and transactions influenced the company 5 – Comprehensive feedback | Confirmatory value | Information on various market events and significant transactions presented in the Annual reports and Board of Directors report |
| Faithful representation | | | | |
| F1 | To what extent are valid arguments provided to support the decision for certain assumptions and estimates in the annual report? | 1 = Only described estimations 2 = General explanation 3 = Specific explanation of estimations 4 = Specific explanation, formulas explained etc. 5 = Comprehensive argumentation | Verifiability | Level of detail regarding the explanations of critical accounting estimates provided usually in note 3 |
| F2 | To what extent does the company base its choice for certain accounting principles on valid arguments? | 1 – Changes not explained 2 – Minimum explanation 3 – Explained why 4 – Explained why + consequences 5 – No changes or comprehensive explanation | Verification | Accounting principles described; what explanations exist for their use |
| F3 | To what extent does the company, in the discussion of the annual results, highlight the positive events as well as the negative events? | 1 – Negative events only mentioned in footnotes 2 – Emphasize on positive events 3 – Emphasize on positive events, but negative events are mentioned; no negative events occurred 4 – Balance pos/neg events 5 – Impact of pos/neg events is also explained | Neutrality | Information on the existing provisions, negative events that have affected the company, existing contingent liabilities. |

EUROPEAN UNION FINANCIAL REGULATION AND ADMINISTRATIVE AREA

| | Question | Operationalisation | Concept | Analysed information / section |
|--------------------------|---|--|--|---|
| F4 | Which type of auditors' report is included in the annual report? | 1 – Adverse opinion 2 – Disclaimer of opinion 3 – Qualified opinion 4 – Unqualified opinion: Financial figures 5 – Unqualified opinion: Financial figures + internal control | Free from material error, verification, neutrality, and completeness | Auditors' report |
| F5 | To what extent does the company provide information on corporate governance? | 1 – No description CG 2 – Information on CG limited, not in apart subsection 3 – Apart subsection 4 – Extra attention paid to information concerning CG 5 – Comprehensive description of CG | Free from material error, verification, neutrality, and completeness | Corporate governance statement |
| Understandability | | | | |
| U1 | To what extent is the annual report presented in a well-organized manner? | 1. Unorganized, without headings, order of components, conclusions 2. Just headings, without order of components, conclusions 3. Headings, order of component, without conclusions 4. Headings, order of component and conclusions, 5. One single organized document | Understandability | Annual report |
| U2 | To what extent are the notes to the balance sheet and the income statement sufficiently clear? | 1 – No explanation 2 – Very short description, difficult to understand 3 – Explanation that describes what happens 4 – Terms are explained 5 – Everything that might be difficult to understand is explained | Understandability | The narrative explanations present in notes to the financial statements |
| U3 | To what extent does the presence of graphs and tables clarify the presented information? | 1 – no graphs 2 – 1-2 graphs 3 – 3-5 graphs 4 – 6-10 graphs 5 – more than 10 graphs | Understandability | Annual report |
| U4 | To what extent is the use of language and technical jargon in the annual report easy to follow? | 1 – Much jargon (industry), not explained 2 – Much jargon, minimal explanation 3 – Jargon is explained in text/ glossary 4 – Not much jargon, or well explained 5 – No jargon, or extraordinary explanation | Understandability | Annual report |
| U5 | What is the size of the glossary? | 1 – No glossary 2 – Less than 1 page 3 – Approximately one page 4 – 1-2 pages 5 – > 2 pages | Understandability | Annual report |
| Comparability | | | | |
| C1 | To what extent do the notes to changes in accounting policies explain the implications of the change? | 1 – Changes not explained 2 – Minimum explanation 3 – Explained why 4 – Explained why + consequences 5 – No changes or comprehensive explanation | Consistency | New information, rules or regulation generally cause companies to change their estimates, judgements, and accounting policies provided in the notes |
| C2 | To what extent do the notes to revisions in accounting estimates and judgements explain the implications of the revision? | 1 – Revision without notes 2 – Revision with few notes 3 – No revision/ clear notes 4 – Clear notes + implications (past) 5 – Comprehensive notes | Consistency | Adjustment for previous years' earnings figures in order to visualize the impact of the change on previous results provided in the notes |

EU FINANCIAL REGULATION AND ADMINISTRATIVE AREA

| | Question | Operationalisation | Concept | Analysed information / section |
|-------------------|---|---|---------------|--|
| C3 | To what extent did the company adjust previous accounting period's figures, for the effect of the implementation of a change in accounting policy or revisions in accounting estimates? | 1 – No adjustments 2 – Described adjustments 3 – Actual adjustments (one year) 4 – 2 years 5 – more than 2 years + notes | Consistency | Adjustment for previous years' earnings figures in order to visualize the impact of the change on previous results provided in the notes |
| C4 | To what extent does the company provide a comparison of the results of current accounting period with previous accounting periods? | 1 – No comparison 2 – Only with previous year 3 – With 5 years 4 – 5 years + description of implications 5 – 10 years + description of implications | Consistency | Financial statement and the notes to financial statements |
| C5 | To what extent is the information in the annual report comparable to information provided by other organizations? | An overall conclusion of comparability compared to annual reports of other organizations | Comparability | The structure of the annual report, and the explanation of transactions and other events that are of special importance |
| C6 | To what extent does the company present financial index numbers and ratios in the annual report? | 1 – No ratios; 2 – 1-2 ratios; 3 – 3-5 ratios; 4 – 6-10 ratios; 5 – more than 10 ratios | Comparability | Annual report |
| Timeliness | | | | |
| T1 | How many days did it take for the auditor to sign the auditors' report after bookyear end? | Natural logarithm of amount of days 1 – 1-1.99; 2 – 2-2.99; 3 – 3-3.99; 4 – 4-4.99; 5 – 5-5.99 | Timeliness | Auditors' report |

Source: own processing after van Beest, Braam and Boelens (2009, pp. 36–40)

Appendix 2. Operational measures utilized for the qualitative characteristics

| Qualitative Characteristics | Item | N | Minimum | Maximum | Mean | Std. Dev. |
|--------------------------------------|------|------------|-------------|-------------|---------------|----------------|
| Relevance | R1 | 306 | 1 | 5 | 3.23 | 1.157 |
| | R2 | 306 | 2 | 5 | 3.42 | 0.976 |
| | R3 | 306 | 1 | 4 | 1.88 | 0.497 |
| | R4 | 306 | 1 | 5 | 3.40 | 0.919 |
| Relevance Score | | 306 | 1.50 | 4.25 | 2.9820 | 0.55338 |
| Faithful representation | F1 | 306 | 1 | 4 | 3.44 | 0.897 |
| | F2 | 306 | 1 | 4 | 2.62 | 0.673 |
| | F3 | 306 | 2 | 5 | 3.72 | 0.747 |
| | F4 | 306 | 2 | 5 | 3.73 | 0.509 |
| | F5 | 306 | 1 | 5 | 2.86 | 1.131 |
| Faithful representation Score | | 306 | 1.8 | 4.2 | 3.273 | 0.4684 |
| Understandability | U1 | 306 | 2 | 5 | 3.47 | 1.012 |
| | U2 | 306 | 1 | 3 | 2.59 | 0.548 |
| | U3 | 306 | 1 | 5 | 2.14 | 1.371 |
| | U4 | 306 | 1 | 5 | 3.45 | 0.995 |
| | U5 | 306 | 1 | 5 | 2.34 | 1.281 |

| Qualitative Characteristics | Item | N | Minimum | Maximum | Mean | Std. Dev. |
|--------------------------------|------|------------|-------------|-------------|--------------|---------------|
| Understandability Score | | 306 | 1.6 | 4.4 | 2.799 | 0.5705 |
| Comparability | C1 | 306 | 1 | 4 | 2.75 | 0.741 |
| | C2 | 306 | 1 | 5 | 3.06 | 0.486 |
| | C3 | 306 | 1 | 5 | 1.32 | 0.800 |
| | C4 | 306 | 2 | 4 | 2.01 | 0.114 |
| | C5 | 306 | 2 | 4 | 2.56 | 0.523 |
| | C6 | 306 | 4 | 5 | 4.98 | 0.139 |
| Comparability Score | | 306 | 2.33 | 4.00 | 2.78 | 0.30 |
| Timeliness | T1 | 306 | 2 | 4 | 3.79 | 0.441 |
| Timeliness Score | | 306 | 2 | 4 | 3.79 | 0.441 |

Source: own processing using SPSS 23.0

Appendix 3. Financial reporting quality scores classified by accounting standards

| Quality measure | Accounting Standard | N | Mean | Std. Deviation |
|--------------------------------|---------------------|-----|---------|----------------|
| FEQC | RAS | 106 | 2.90693 | .346299 |
| | IFRS | 200 | 3.24160 | .318967 |
| FQC | RAS | 106 | 2.87358 | .431785 |
| | IFRS | 200 | 3.26225 | .409774 |
| Relevance | RAS | 106 | 2.8302 | .47252 |
| | IFRS | 200 | 3.0625 | .57685 |
| Faithful representation | RAS | 106 | 2.9170 | .49135 |
| | IFRS | 200 | 3.4620 | .32478 |

Source: own processing using SPSS 23.0

Appendix 4. Quality of financial reporting based on the fundamental and enhancing qualitative characteristics: IFRS versus RAS

| Variables | Model 1 | | | Model 2 | | |
|-----------------------|--|-----------|------|--|-----------|------|
| | FEQC= $\beta_0 + \beta_1 \text{Acc Standards} + \varepsilon$ | | | FEQC= $\beta_0 + \beta_1 \text{Acc Standards} + \beta_2 \text{Industry} + \beta_3 \text{Size} + \varepsilon$ | | |
| | B | St. error | Sig | B | St. error | Sig |
| Constant | 2.914 | .031 | .000 | .416 | .160 | .010 |
| Acc. Standards | .346 | .040 | .000 | .321 | .029 | .000 |
| Industry | | | | .008 | .008 | .327 |
| Size | | | | .131 | .008 | .000 |
| F statistic | | 75.366 | | | 130.864 | |
| Adj. R2 | | 21.60% | | | 59.10% | |

Dependent Variable: FEQC; Models are based only on cases for which Year = 2012

Source: own processing using SPSS 23.0

Appendix 5. Quality of financial reporting based on the fundamental qualitative characteristics: IFRS versus RAS

| Variables | Model 1 | | | Model 2 | | |
|----------------|--|-----------|------|--|-----------|------|
| | FQC= $\beta_0 + \beta_1 \text{Acc Standards} + \epsilon$ | | | FQC= $\beta_0 + \beta_1 \text{Acc Standards} + \beta_2 \text{Industry} + \beta_3 \text{Size} + \epsilon$ | | |
| | B | St. error | Sig | B | St. error | Sig |
| Constant | 2.882 | .040 | .000 | -.190 | .209 | .363 |
| Acc. Standards | .416 | .051 | .000 | .384 | .038 | .000 |
| Industry | | | | .007 | .011 | .481 |
| Size | | | | .161 | .011 | .000 |
| F statistic | 67.725 | | | 115.424 | | |
| Adj. R2 | 19.80% | | | 56.90% | | |

Dependent Variable: FQC; Models are based only on cases for which Year \sim 2012

Source: own processing using SPSS 23.0

Appendix 6. Relevance: IFRS versus RAS

| Variables | Model 1 | | | Model 2 | | |
|----------------|---|-----------|------|---|-----------|------|
| | Relevance = $\beta_0 + \beta_1 \text{Acc Standards} + \epsilon$ | | | Relevance = $\beta_0 + \beta_1 \text{Acc Standards} + \beta_2 \text{Industry} + \beta_3 \text{Size} + \epsilon$ | | |
| | B | St. error | Sig | B | St. error | Sig |
| Constant | 2.840 | .051 | .000 | -.459 | .298 | .125 |
| Acc. Standards | .272 | .065 | .000 | .239 | .054 | .000 |
| Industry | | | | .011 | .015 | .458 |
| Size | | | | .173 | .015 | .000 |
| F statistic | 17.727 | | | 50.343 | | |
| Adj. R2 | 5.80% | | | 35.40% | | |

Dependent Variable: Relevance; Models are based only on cases for which Year \sim 2012

Source: own processing using SPSS 23.0

Appendix 7. Faithful representation: IFRS versus RAS

| Variables | Model 1 | | | Model 2 | | |
|----------------|---|-----------|------|---|-----------|------|
| | Faithful rep. = $\beta_0 + \beta_1 \text{Acc Standards} + \epsilon$ | | | Faithful rep. = $\beta_0 + \beta_1 \text{Acc Standards} + \beta_2 \text{Industry} + \beta_3 \text{Size} + \epsilon$ | | |
| | B | St. error | Sig | B | St. error | Sig |
| Constant | 2.924 | .038 | .000 | .079 | .206 | .701 |
| Acc. Standards | .559 | .049 | .000 | .530 | .037 | .000 |
| Industry | | | | .004 | .010 | .724 |
| Size | | | | .150 | .011 | .000 |
| F statistic | 132.781 | | | 142.057 | | |
| Adj. R2 | 32.80% | | | 61.00% | | |

Dependent Variable: Faithful rep; Models are based only on cases for which Year \sim 2012

Source: own processing using SPSS 23.0

Appendix 8. Robustness check for the quality of financial reporting based on the fundamental and enhancing qualitative characteristics

| Variables | Model 1 50:50 | | | Model 2 67:33 | | | Model 3 75:25 | | | Model 4 80:20 | | |
|----------------|---|----------|------|------------------|----------|------|------------------|----------|------|------------------|----------|------|
| | FEQC= $\beta_0 + \beta_1 \text{Acc Standards} + \beta_2 \text{Industry} + \beta_3 \text{Size} + \epsilon$ | | | | | | | | | | | |
| | B | St. err. | Sig | B | St. err. | Sig | B | St. err. | Sig | B | St. err. | Sig |
| Constant | .728 | .145 | .000 | .416 | .160 | .010 | .269 | .170 | .115 | .177 | .177 | .318 |
| Acc. Standards | .288 | .026 | .000 | .321 | .029 | .000 | .336 | .031 | .000 | .346 | .032 | .000 |
| Industry | .008 | .007 | .262 | .008 | .008 | .327 | .008 | .009 | .363 | .008 | .009 | .387 |
| Size | .115 | .008 | .000 | .131 | .008 | .000 | .138 | .009 | .000 | .143 | .009 | .000 |
| F statistic | 125.619 | | | 130.864 | | | 128.956 | | | 126.884 | | |
| Adj. R2 | 58.10% | | | 59.10% | | | 59.20% | | | 58.30% | | |

Dependent Variable: FEQC; Models are based only on cases for which Year = 2012

Source: own processing using SPSS 23.0

PERCEPTIONS OFFERED BY THE PATIENT REGARDING THE QUALITY OF MEDICAL SERVICES

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Abstract

The Health System assesses the quality of healthcare facilities through the working procedures and interprofessional teams involved in the use of care plans for hospitalized patients, applying best practice. Assessing the quality of healthcare is important to understanding the performance of a healthcare system that uses the principles of complex assessment and team management.

Assessments can provide an important picture of the quality of health care services by determining whether they meet or exceed expectations. Healthcare quality perspectives are designed as an attitude towards healthcare, with the tendency to respond favorably or unfavorably to when they are accessed by the beneficiaries. Patient attitudes to the quality of care is the best way to measure. Patient satisfaction is commonly used to understand this perspective by assessing their experience in receiving healthcare and their perception of care, although they tend to be more concerned with the quality of healthcare. Increasing evidence has suggested an association between the quality of medical services and patient satisfaction. However, the assessment of patient perception of delivery of health services has been a permanent challenge.

Keywords: *health services; quality assessment; patient satisfaction; care plan; performance.*

JEL Classification: I12, I18

1. INTRODUCTION

The general concept of quality brings together social, philosophical, economic and technical directions. As a general definition, “Quality of Products and Services” is given by the synthesis of the main properties, which expresses the degree of utility in meeting a need. According to the International Standard ISO 9001/2008 (International Organisation for Standardisation, 2008), quality is the “measure in which an ensemble of intrinsic characteristics meets the requirements” in order to obtain the customer’s sustainable satisfaction, responding to his needs and expectations, in the environment of an organization that undertakes to improve its efficiency and effectiveness.

In the current context of constraining financial resources and controlling health spending, quality is central to regulating health systems, introducing mechanisms for resource allocation and health services delivery. The interest for

the quality of health services is very high for more and more actors interested in the health care system: professionals, healthcare units, patients, payers, politicians. The universal purpose of a health care system is to provide adequate access to quality care at a reasonable price (Braithwaite *et al.*, 2017).

Quality is a very difficult concept to define because of its multidimensional character. There are many definitions that define how quality depends on the person being asked (patient, physician, assistant, insurer or other actor in the health care system).

According to the World Health Organization (2000), “the quality of health services is the level of attainment of the intrinsic goals of health systems to improve health and capacity to respond to the general expectations of the population.” Quality medical care is that care that meets the patient’s real needs, is available and affordable, responds to the patient’s reasonable expectations, enables effective coordination between staff and the health care unit, relies on a high level of management knowledge education, prevention, diagnosis and treatment services and is provided in an environment that provides physical safety to the patient.

Patient satisfaction is a component of quality of care assessment and can be considered as a result of care.

The notion of “satisfaction” is subjective and predominantly qualitative, meaning that the patient has expectations related to the technical-material, psychosocial, material and intellectual endowment. Thus, we can distinguish certain aspects of patient satisfaction that must be taken into account: the medical care to which he or she has access and in relation to which he is informed, the facilities for food and accommodation, the atmosphere in the medical unit where he receives health care, nurses, the amount of food received, the schedule of visits.

All these aspects are highlighted by the patient when asked about the quality of the services he benefited from.

2. CURRENT STATE OF KNOWLEDGE

Quality assessment should be based on a conceptual and operational definition of “quality of healthcare”. Many problems are present at this fundamental level, because the quality of care is a remarkably difficult concept to define. Perhaps the most well-known definition is that offered by Lee and Jones (Sheps, 1955) in the form of eight “articles of belief”, some of which are declared as attributes or properties of the care process and others as goals or objectives of that process.

It identifies the need to use the staff according to their professional training for complex activities, the development of the computer system for the relocation of activities, the hiring of personnel for the avoidance of professional errors by quantitative overloading. Emphasis should be placed on informing

employees about applicable legislation in their field of activity (Oprea *et al.*, 2015).

Feedback is potentially effective in improving quality of care. However, reporting only does not guarantee that performance data is used as input for a systematic quality improvement (QI) (Maartje *et al.*, 2011).

The literature on quality of health systems is very extensive and, at the same time, difficult to systematize.

Depending on the disciplinary prototype, quality can be understood in various ways by using different terms, labels and models. If it seems to be concluded that there is no consensus on how to define the quality of care and that the lack of a common systematic framework is to a considerable extent due to the diversity of the language used to describe this concept (Legido-Quigley *et al.*, 2008).

Consequently, different definitions may be acceptable depending on their destination and the nature and extent of the responsibilities of the person who defines them (Donabedian, 1988). Lalonde (1974) defined health care as the combined operation of public health and personal health services. Therefore, a health care system is a set of activities and actors whose main purpose is to improve health by providing public and personal health services.

According to International Labour Organization (2001), the quality of care can be defined as the extent to which the health service for individuals and populations increases the probability of desired health outcomes and is in line with current professional knowledge (Ibrahim, 2001).

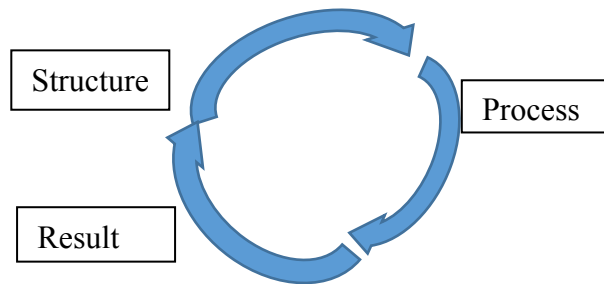
The UK Department of Health (1997) describes in a very original way the quality of care, making things fit for the right people at the right time and doing things for the first time, while the Council of Europe (International Labour Organization, 2001) states that the quality of care is the degree to which the released treatment increases the patient's chances of achieving the desired results and diminishes the chances of unwanted results, given the current state of knowledge.

Quality is an essential factor in defining and evaluating a health institution, as well as an indispensable competition tool between the private and the public, providing such services. Consequently, given the importance of the argument, numerous studies and analyzes have been conducted over the years by various researchers and organizations around the world to identify the key indicators used to assess the quality of hospital services and to find the most appropriate method of their choice (Kalaja, 2015).

These "quality indicators" have been designated as high-quality medical care measurements of critical importance to patient well-being, as well as to society and the global economy and are becoming important in many EU Member States (Kalaja, 2015).

However, a widely accepted and useful method for the classification of health care quality indicators (Figure 1) is the approach originally conceived by Donabedian (1980), who describes the indicators as the structure, process or outcome in nature. These dimensions are also used to assess the quality of care in a particular country.

Figure 1. Quality of Health Care Indicators



Source: (Donabedian, 1988)

Structure indicators are indicators of characteristics or inputs for health care. These can be the conditions for providing a certain quality of healthcare, but these are not enough. Their presence does not ensure adequate processes or satisfactory results from the health system.

Process indicators are measures to provide appropriate health care to the relevant population at risk, if adequacy should be based on clinical evidence of the effectiveness of the process in question and “in line with current professional knowledge” of concern with process indicators is the extent to which these measures are related to the desired clinical results (Committee on Quality of Health Care in America, 2001). These are some concerns that indicate that process indicators are more vulnerable to play than to outcome or structural measures. However, process measures represent the closest approach to actual healthcare provided and are the most clinical of the three types of indicators (Mattke *et al.*, 2006).

Result indicators attempt to represent health improvement measures that can be attributed to healthcare. The main challenge of outcome indicators is that they can be influenced by other factors, but by the quality of care, such as age, severity of disease and socio-economic status. For this, it is important to have sufficient evidence that the quality of healthcare contributes independently to the outcomes, and the factors influencing the outcomes should be properly accounted for by risk adjustment (OCDE, 2006).

The medical aspects of care include three dimensions, namely, technical, outcomes and interpersonal. The technical dimension of the quality of health

care includes the knowledge, skills and judgment of the care provider and the medical facilities available (Baltussen *et al.*, 2002; Donabedian, 1988; Grönroos, 1994). The quality outcome dimension includes effective, efficient, equitable care, timely, safe and patient-centered (World Health Organization, 2000), presented in Table 1.

Table 1. Dimensions of quality care

| The most commonly used dimensions | Sizes less used |
|---|---|
| Efficacy: Achievement Achieved results, considering the right delivery of healthcare evidence-based services only to those who could benefit or the degree to which the resulting results results without error. | Acceptability: refers to the compliance with wishes, wishes and realistic expectations of healthcare users and their families. Because personal experiences of healthcare have a strong effect on their future use and response to healthcare. |
| Safety: Health care grades avoiding, preventing and alleviating negative outcomes or injuries from health care processes inherently related to effectiveness, although distinct from this in the focus on preventing unintended adverse events for patients. | Adequacy: is the extent to which healthcare is relevant to clinical needs, taking into account the best evidence. This dimension is most often presented as part of effectiveness. |
| Patient-centered response capacity: The extent to which a system actually functions by placing the patient / user at the healthcare delivery center and is often evaluated in terms of patient experience in the health and health care sector that should characterize the clinician-patient relationship. | Competence: The degree of health system staff has training and assessment, treatment and communication skills with their clients. There are many potential aspects of competence, including technical competence and cultural competence. This dimension, in terms of evaluation, can be included in effectiveness. |
| Accessibility: The ease with which health services are achieved. Access can be physical, financial or psychological; requires health services to be available a priori. | Continuity of the extent to which healthcare for specified users over time is coordinated between providers and institutions. |
| Equity: defines the extent to which the system handles properly with all those involved in distribution. | Time: the extent to which patients are able to get prompt assistance both in timely access to care) and coordination of care (once under care, the system facilitates the movement of people around the world through providers and care phases). |

Source: (Donabedian, 1980)

Performance indicators are a popular mechanism for measuring the quality of healthcare to facilitate both quality improvement and system management.

Measuring performance is not an end in itself. Why should public managers measure performance? Because they can find such measures useful in achieving eight specific managerial goals. As part of the global management strategy, public managers can use performance measures to evaluate, control, budget, motivate, promote, celebrate, learn and improve (Behn, 2003).

3. CONCLUSIONS

In many developing countries, where the basic need is to live, people often forget the quality of services. There is an identical behavior in the health system. They provide the necessary needs for patients.

Health is a challenge for all nations, and effective public health systems are essential to providing care to patients and to putting in place measures that promote health and disease prevention. Raising awareness of variations in the quality of healthcare in geographic areas has helped to improve the quality of a better understanding of promising strategies for meeting and raising benchmarks for care.

Performance appraisals are a central component in the management of public organizations. The predominant pattern of how both public managers and citizens evaluate performance suggests that performance judgment judgments are based on a performance comparison with some adapted standards such as expectations or goals.

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MODERN TRENDS OF UNFAIR COMPETITION ON THE INTERNET SPACE

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Abstract

The article approaches world trends of reorientation of TV and outdoor advertising towards Internet. However, in the process of on-line space occupation, unfair competitors continue to commit unfair competition acts, which are often manifested by inadequate advertising. At the same time, in the article there are elucidated the particularities of unfair competition acts identified in the on-line space, being presented as well the case law of the competition authority from Republic of Moldova. The article contains as well the argumentation of the necessity of the on-line advertising regulation, analyzing the existing law and presenting the data of the World Intellectual Property Organization (2004), which denote a numeric growth of cases of infringement of trademarks right holders in the on-line domain.

Keywords: *advertising; unfair competition; on-line space; trademark; case.*

JEL Classification: K29

1. INTRODUCTION

Every year, the internet space is used more and more for the purpose of promoting goods and services. Thousands of companies try to attract the multimillionaire on-line public.

Thus, in the Western Europe the internet space has a medium market share of 34.9 % on the advertising market, registering a significant growth in the last 5 years (from 21 % in 2011). The highest market share detained by the digital market is registered in Great Britain – 52.7 % followed by Denmark – 50.8 %.

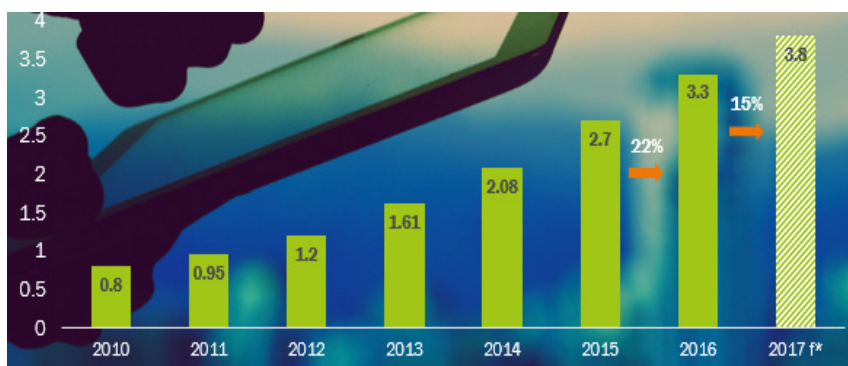
Countries from Middle and Eastern Europe have a lower market share, the highest one being registered in Russia (37.8 %), Poland (33.3 %) and Hungary (32.1%).

In Romania, the market share of the digital market is similar to the one of Moldova, representing 15 % of the advertising market, while in the Ukraine it raised to 27 %.

In Romania, in the last years, Internet advertising has risen by approximately 20 % each year. In the developed countries, the annual rise of the income from internet is considerably smaller (12 % in the Western Europe, 9 % in the North America), the digital advertising market being already mature and having a considerable market share on the advertising market.

The level of costs on the online advertising 2010-2017 (Figure 1), according to the data of the Association of Advertising Agencies from Moldova.

Figure 1. Level of costs on the online advertising for 2010-2017



In the Republic of Moldova, as it happened in many other developing countries, the rise of budgets is motivated by the rise of Internet coverage and, at the same time, it is a result of the migration of audience from TV to Internet.

The segment of digital market, which encountered the biggest growth in the last year is represented by social networks, which have risen continuously from 38 % internet users in 2013 to 48 % in 2017. The advertising by means of social networks offers the opportunity to get closer to the advertising consumer by applying certain criteria dealing with region, gender, age and preferences, a fact which represents a great advantage in comparison to other types of advertising.

Big advertising agents transfer the budgets from TV to the digital environment, this one being as profitable as TV advertising, for certain segments (mostly for youth) more profitable, the cost for a contact being smaller.

In the Republic of Moldova, the highest market share of advertising budgets is detained by the international provider Google – 33 % of the market.

Despite the success of the on-line advertising market, this domain is not sufficiently regulated. The market players, using the legislative gaps and tending to rise their sales begin to resort to unfair actions. In the on-line domain, the unfair competitors undertake such actions as: illegal use of other's trademarks in their own advertising, discrediting of the competitors and hijacking of clientele. These actions have been qualified as unfair competitions acts since signing the Paris Convention in 1883, in the redaction of 1900. Respectively, these actions can be found in national law of all the signatory countries of this Convention.

2. THE DISCREDITING OF THE COMPETITOR IN THE ON-LINE DOMAIN

According to the explanatory dictionary, to discredit means to cause to lose or to lose credit, consideration, other's trust, to compromise and it comes from the french word "discréditer". In literature (The explanatory dictionary of the Romanian language), "discrediting" is also called "disparagement". The law (Competition Law of the Republic of Moldova no. 183/2012) itself presents the word of discrediting as defamation, endangering of reputation or credibility. Defamation means the action of unjust telling something bad about someone, to tell false things about someone. Reputation is an opinion, a public appreciation, favorable or unfavorable about someone or something; the way in which somebody is known or appreciated; recognition, fame, celebrity.

The law no. 64 from 23rd of April 2010 concerning the freedom of expression operates with the word "defamation", defining it as the action of spreading false information that harms the honor, dignity and/or professional reputation of the person.

According to the opinion of the doctrinaire Octavian Căpățână, disparagement, as an unfair competition act, means the act which supposes the communication or spreading of deprecatory or comparative statements made by an interested person (the aggressive economic agent) against a competitor from the market, with the purpose of reducing its reputation or discrediting its undertaking or products (Căpățână, 1996). WIPO defines discrediting (disparagement) as a spread of any false information regarding the competitor which can affect its goodwill. As well as deception, discrediting tries to attract clients with false information. But unlike deception, this is not done by false statements about own product, but about the competitor, its good or services. Therefore, discrediting always implies a direct attack on an undertaking, but its consequences overcome this objective. Considering that the information about the competitor or its products are false, the consumer is susceptible to suffer as well. According to the opinion of some authors, disparagement (discrediting) consists in affirmation or spread in any form, for a competition purpose, of data concerning another undertaking, susceptible of bringing a harm to its reputation (Eminescu, 1995). By disparagement is also understood the committing of an act, pointing to the good

reputation of a competitor, of its undertaking, products and/or services (Copetchi and Martin, 2015). The French legislation specifies that disparagement includes all the actions with the purpose of depreciation or discrediting of the industry, commerce or products of a certain competitor; disparagement can result as well from a simple comparison or from a simple hint (Cotuțuiu and Sabău, 2008).

In our opinion, by disparagement should be understood the unfair competition act of spreading false information, fact which endangers the activity of the competitor.

In the Republic of Moldova, discrediting can be realized in two ways, according to the provisions of art. 15 from Competition Law no. 183/2012:

- Indirectly – spreading by an undertaking of false information concerning its activity and/or it's products;
- Directly- spreading by an undertaking of false information concerning the activity and/or products of a competitor.

Both ways suppose an active and intentional conduct of spreading false information by the author of this act. The spreading consists of certain actions that imply the result of delivering to the public or to determined persons of some information. This action can be realized by means of advertising, methods, bearers and means of audiovisual communication and other types used for transmission of information.

As an eloquent example of indirect discrediting can be used unfair competition acts, qualified by Decision of Competition Council Plenary no. 49 from 22nd of October 2016. Thus, there was ascertained that 10 undertakings have spread false information (mostly by means of web pages, social networks or www.booking.com platform) concerning the services that they provide – they have assigned a majored number of stars to their accommodation unit and/or have given themselves the title of hotels. This fact was giving them advantage in relation to other competitors and has misled the consumers, hijacking the competitors in this way. At the same time, by these actions, the competitors have been discredited. By means of an arbitrary assigning to their structures a certain type (hotel, motel, villa and/or a number of stars, there is produced a distortion in perception and distinction between these levels of classification. As a consequence, by effect of the comparison realized by consumers, it could be questioned the quality of services provided by the hotels of 4 authentic stars and not only of these.

Any distortion of this association affects the general image of the accommodation services provision market, such that the absence of certainty in the authenticity of the information spread concerning the accommodation structures can raise doubts concerning the level of classification and, respectively, concerning the quality of the services provided by them. As a consequence, there can be endangered the reputation and credibility of all the participants on this

market in face of both national and foreign consumers, fact which can affect the image of the Republic of Moldova on the international touristic arena.

In the practice of the national authority for competition, there have been investigated several cases of unfair competition actions, manifested by spread of denigrating information (direct discrediting) about the competitor. Thus, we specify the cases Bilargo, Student Travel and STM Acord.

In case of “Bilargo-Prim” Limited Liability Company, solved by Decision no. CN-07 from the 18th of February 2016, there has been placed in the internet space a video material by which is realized a comparison with the competing undertaking product concerning the content of polyurethane foam sold by Comarsini-Grup Limited Liability Company. The fals character couldn’t be tested, reason from which the investigation has stopped and the action of the plaintiff have been qualified as dishonest advertising.

Speaking about Student Travel Limited Liability Company and STM Acord Limited Liability Company cases, solved by Decisions no. 24/17-77 from 25th of October 2018 and no. 25/17-78 from the same date, respectively, the information has been spread by the complained undertaking Center for American Exchange Programs Limited Liability Company as regards the activity of the first ones. The spreading of information has taken place by means of the web page administered by the complained. In case of Student Travel LLC, the investigation was stopped due to the fact that there was not found enough evidence in sense of determination of the false character of the statements of Center for American Exchange Programs LLC, and in the case of STM Acord LLC, the investigation was stopped because of the fact that the last one has retracted its complaint.

3. MISAPPROPRIATION OF CUSTOMERS IN INTERNET

Art. 18 from the Competition Law no. 183/2012 regulates the unfair competition act named “Misappropriation of competitor’s customers”. In this sense, it is mentioned the fact that the misappropriation of competitor’s customers realized by undertakings by misleading the customers concerning the nature, mode and place of manufacture, the main characteristics, including use, the quantity of products, price or mode of calculation of the price is forbidden. This unfair competition act is regulated by the Romanian and Russian law as well, but with some differences.

Romania

According to the provisions of art. 2 par. (2), letter b) from the Law on combating unfair competition of Romania no. 11 from 29th of January 1991, there are forbidden the following unfair competition acts: b) misappropriation of customers of an undertaking by a former or a current employee/representative or by another person by use of certain trade secrets, for the protection of which this undertaking has taken reasonable measures and the disclosure of which can

affect the interests of that undertaking. Thus, we observe that the regulations of Republic of Moldova differ from those of Romania. The first indicator is the subject that misappropriates the customers: competing undertakings in Republic of Moldova and the employee or any other person in Romania. Decision no. 1430/2003 from the 6th of March 2003, the Supreme Court of Justice of Romania ascertained the misappropriation of customers in the following situation: the defendants, natural persons, have been employees of the society that was the plaintiff. Their main task was the distribution of abrasive products Hermes, but, starting with september 1999, they quitted and continued to sell the same products to the same beneficiaries, exploiting the commercial realations of the undertaking they have been employed at by misappropriating the customers. In this way, the fiscal value of the plaintiff has decreased in comparison to the one of the defendants, which has increased significantly. In the Republic of Moldova, such a qualification would be possible if only there existed the factor of misleading the customer concerning the product, an error generated by the author of the misappropriation.

Analyzing the legal provisions of Romania discussed above, we can observe that a qualifying element of misappropriation of customers is the use of the trade secret. In case this element is not present, we can not talk about the misappropriation of customers. In the Republic of Moldova, the misappropriation of customers doesn't suppose the use of the trade secret, because there exists another separate unfair competition act – the illegal obtaining and/or use of the trade secret of the competitor. In the light of these specifications, we consider the national legal provisions more efficient than those from Romania, because in the Republic of Moldova, it is followed as well the purpose of consumer protection against erroneous information offered by undertakings. In Romania, the misappropriation of customers supposes as well the situation when the clients consciously and voluntarily migrate from one undertaking to another having as a point of reference a certain employee who in spite of his/her personal and professional qualities can maintain a circle of consumers around him/her. In the Republic of Moldova, however, migration of the clientele is not a qualifying element of unfair competition, because of the fact that the consumers are free to decide the undertaking with which he/she establishes relations. Only the migration of the consumers from one competitor to another, as a consequence of misleading, can be qualified as a misappropriation of the consumers.

Russia

Art. 14 par. (1) pt. 2) from the Law on the protection of competition from the Russian Federation no. 135-F3 from 26th of July 2006, regulates the action of misappropriation of consumers as it follows: the misleading regarding to nature, mode and place of production, consuming properties, quality and quantity of products or regarding to the producers of products. This ensemble of qualifying elements has a larger sphere of application, and, therefore, in

comparison to the regulations of Republic of Moldova and Romania, more actions of the subjects can be qualified as misappropriation of consumers, because of the fact that in Russian Federation there is not a established the necessity of existence or the possibility of occurrence of the effect of misappropriation of consumers which supposes the migration of consumers from one competitor to another.

The gravity of the misappropriation of consumers flows from the fact that the clientele to which the competitor addresses is affected. The use of methods of misappropriation of satisfied consumers denotes the incapacity of an economic subject to affirm itself on a certain market of products/services, to attract a certain segment of consumers, to be able to enjoy trust and loyalty from the client. These can not be obtained immediately, but only by a putting efforts a certain period of time. The legal obtaining of the clients and their trust can be realised only by a strong endeavor of the economic agent manifested by: quality and characteristics of the product/service, price, the way in which it is delivered to the public, advertising, pack, efficiency.

Competitions law doesn't define the notion of misappropriation of consumers. It only presents the methods of realisation of this unfair competition act. The notion of clientele includes the consumers as well. According to the provisions of art. 4 from the Competition law, the consumer is the direct or indirect user of products, inclusively a producer who uses products for processing, wholesaler, retailer or final consumer. At the same time, according to the provisions of art. 1 from Law on the protection of consumers no. 105 from 13th of March 2003, the consumers is any natural person who plans to order or to buy, or effectively orders, buys or uses products, services for necessities that don't deal with the entrepreneurial or professional activity. Highlighting these elements, we observe that Competition law provides a larger spectrum of subjects that can be consumers. In this way, both natural and legal persons can be consumers. The Law on the protections of consumers, however, restrains this spectrum only to natural persons. In this case, we consider necessary to retain the larger definition offered by the Competition law, because of the fact that it is specific to competition law.

A case of misappropriation of consumers by means of social networks and by on-line booking platforms has been recently investigated by Competition and Markets Authority from Great Britain. Thus, the mentioned authority has imposed provisional measures to those 6 platform that activate in the domain of on-line booking. These measures consists in: removal of all the unfair acts practised by these platforms: erroneous informations regarding to the number of places available in accomodation structures, regarding to the booking price and regarding to the quality of certain structures in comparison to other ones.

4. CONFUSION CREATION IN THE ON-LINE DOMAIN

According to the explanatory dictionary of the romanian language (Romanian Academy, Institute of Linguistics “Torgu Iordan”, 2009), confusion (from the latin *confusio*) derives from the verb to confuse. The verb to confuse is explained as to consider a person or an object as other one, to resemble, to form one whole, to merge.

The regulation of confusion is very rigorous. Thus, any acts, made by any means, which are likely to create confusion and prejudice the legitimate interests of the owner, shall be prohibited. It is clear the legislator’s intention to create a rule that is applicable to the present and the future, and the actions and means by which confusion can be created evolve rapidly, from simple advertising texts to the setting of certain online programs. In the light of the rule cited, it appears that confusion is a component of formal unfair competition. It is present from the moment of putting into practice actions that are likely to create confusion. In order to qualify as confusion, it is not necessary to produce certain concrete damages; it is sufficient that the action taken presupposes a confusion effect and may prejudice the legitimate interests of the holders of intellectual property. The detrimental consequences of confusion will be taken into account in setting the fine (Gorincioi and Creciun, 2016).

In the sense of Competition Law 183/2012, the act which which is susceptible to create confusion is punishable. In this context, it is necessary for the qualification only to be justified and to find that the competitor’s actions are of such nature as they may create confusion. This finding is made by the Plenum of the Competition Council. Whether confusion has occurred or not can only be ascertained by questioning consumers of products that claim to be mistaken. The probation of confusion can be done both by the Competition Council and by the complainant. This finding, however, will have an impact not only on the qualification but on the amount of the sanction.

With regard to the qualification of the concept of “confusing facts” and those circumstances that are likely to create confusion, in practice, unobtrusive approaches are found.

According to the Competition Council Plenum Decision no. CN-16 of April 14, 2016, violated art. 19 par. (1) lit. a) of the Competition Law by the “Online Broker of Insurance” LLC as a result of the wholly and partly illegal, use of the “rapidasig” trademark owned by MGP Broker LLC, in advertising, through the online advertising program “AdWords” and the Google search engine. “Use of the “rapidasig” trademark by the “Online Broker de Asigurare” LLC is illegal, wholly and in part and is liable to create confusion with the “rapidasig” trademark lawfully used by the rightholder, “MGP Broker” LLC”.

Another case of unfair competition in the online field was found by the Decision of the Plenum of the Competition Council no. CN-57 of 03.09.2015. The company “Eurolumina” LLC claimed that on 04.07.2014 it was found that

“Volta” LLC registered the domain name www.1000kv.md, which is similar to the trademark “1000kw centru comercial”, the name of the shopping center “1000kw” and the name of the domain name www.1000kw.md, which he owns. As a result of the investigation, the competition authority established that “VOLTA” LLC, by creating the web page www.1000kv.md, partially used the trademark “1000kw centru comercial”, creating confusion with the trademark registered and used legally by the company “EUROLUMINA” LLC. At the same time, “Eurolumina” LLC had a domain name similar to its own brand, namely: www.1000kw.md. As a consequence, there has been ascertained the violation of the provisions of art. 19 par. (1) letter. a) of the Competition Law by the company “Volta” LLC through the illegal use of the trademark “1000 KW shopping center”, belonging to “Eurolumina” LLC, and imposed a fine in the amount of 905252.91 lei.

The decision was appealed to the Chisinau Court of Appeal, which dismissed civil action as groundless. The court held that the claimant puts forward contradictory arguments by claiming that the applicant complains of the wrongful act, alleging that the contested decision is unlawful in that regard, and, on the other hand, claims that the breach is minor and would not be sanctioned, also due to the low visitation of www.1000kv.md and the lack of evidence regarding the damage caused to the petitioner – a situation which indicates that the applicant himself admits committing a violation of the Competition Law imputed to him and for whom the sanction was applied. The decision of the Chisinau Court of Appeal remained irrevocable by unattainability. This leads us to the idea of an enterprising awareness of unfair behavior.

Another relevant case in this regard is the case of “Daybegin” LLC. Thus, the last violation of the provisions of art. 19 par. (1) letter. a) of the Competition Law through the partial use of the domain name “www.babyboom.md”, a trademark belonging to the company “Everything for children”, used also as a domain name in the form www.baby-boom.md.

Thus, in the abovementioned cases (“Volta” Joint-Stock Company to “Daybegin” LLC), the so-called “squatting” phenomenon – the illegal capture of vacant spaces or territories – took place. In the domain name or trademark name, often notorious, a write-up is expected to be admitted.

From the point of view of the phenomenon of unfair competition, one of the greatest dangers is cyber-squatting (capturing domain names). The essence of this type of squatting is the registration of signs, phrases, etc., which are not currently registered as trademarks or domain names in a country, but are already objects of intellectual property in another country. The purpose of these actions is the subsequent sale of those intellectual property objects already registered as trademarks or domain names to the persons concerned. As a rule, interested persons are trademark or domain owners well-known in other states, or those

who categorically want to acquire a trademark or domain already registered for their business.

In 2016, trademark owners filed a record 3,036 applications for dispute settlement with the WIPO with the alleged bad faith through the Uniform Dispute Resolution Policy Uniform Domain Name Dispute Resolution Policy (UDRP), which represents a 10% increase over 2015 (Government of the Republic of Moldova, 2016). This phenomenon, known as cybersquatting, is due to the emergence of over 1200 generic top-level domains (gTLDs) operational at present.

In the process of investigating cases of breach of competition law, the competition authority faces a number of issues, such as: the failure to obtain information from external search engines (such as Google), often – the impossibility of identifying the person holding the page web site even on .md Domain Nowadays, the acquisition of domains in the Republic of Moldova can be done on-line, on the Moldata site, without the need to submit any information regarding the owner, be it a person physical or legal person.

5. CONCLUSIONS

The main purpose of unfair competition acts is to obtain the clientele, which is mostly captured through advertising campaigns. The low price per contact and the variety of creative concepts available result in the online advertising market.

More and more businesses are choosing the online environment to the detriment of the TV market and out of home. Thus, the on-line advertising market is continuously growing, both in terms of market access and in terms of financial amounts.

An important issue in the Moldovan Internet advertising market is the lack of verification of the content distributed through local websites, which creates the prerequisites for emerging competitive issues in the specific market.

Immediate adoption of the Advertising Law of the Republic of Moldova in the field of Internet advertising is necessary to protect and stimulate competition within the country.

Per a contrario, the lack of such regulation would contribute to the numerical increase of the cases of unfair competition identified in the Internet.

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BENEFICIARIES' PERCEPTION ON SPECIALIZED FINANCIAL-ACCOUNTING SERVICES IN ROMANIA VS. THE NORTH-EAST REGION

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Abstract

The aim of this paper is to analyze the perception of the specialized financial-accounting services beneficiaries in Romania comparative with the perception of the specialized financial-accounting services beneficiaries in the North-East Romanian region. Using Principal Component Analysis method and Independent Samples Tests on a sample of 285 questionnaires we examined the perception of the specialized financial-accounting services costumers in Romania versus the perception of the specialized financial-accounting services costumers in the North-East region. Our results suggest that there are some differences but also similarities in perception regarding opinions of the specialized financial-accounting services beneficiaries in Romania versus specialized financial-accounting services beneficiaries in the North-East Romanian region. We consider that our analysis contributes to the economic literature and could be useful for the financial-accounting services providers in improving their strategies in accordance with the beneficiaries' necessities.

Keywords: *financial-accounting services; beneficiaries' perception.*

JEL Classification: M3; D22

1. INTRODUCTION

The size, the amplitude and the actual knowledge of the phenomena and processes specific to financial-accounting field required the carrying out of marketing researches, considering in particular the financial-accounting service providers in relations with clients, the perception and the ways of satisfying the requirements of the beneficiary organizations of such services.

This marketing research aims to capture both qualitative aspects and quantitative aspects, representative at country level as well as at the level of the North-East region of Romania. By analysing the perception of the specialized financial-accounting services beneficiaries in Romania versus the perception of the specialized financial-accounting services beneficiaries in the North-East Romanian region using a sample of 285 questionnaires, this paper delivers valuable information regarding the perception of beneficiaries of the specialized financial-accounting services that could be useful for the financial-accounting

services providers in improving their strategies in accordance with the beneficiaries' necessities.

This study is organized as follows: Section 2 reviews the literature; Section 3 presents the method; Section 4 delivers the results; and Section 5 provides conclusions.

2. LITERATURE REVIEW

Ibrahim, Joseph and Ibeh (2006) analysed using 135 questionnaires the key factors of the electronic services quality perception in United Kingdom banking sectors. They also evaluated the costumers' perception regarding their banks' actual performance. Their findings suggest that there are six composite dimensions of electronic services quality.

Rozita *et al.* (2014) analysed using 169 questionnaires the influence of the service quality costumers' perception regarding Gong Badak Sport Complex, Terengganu. Their results showed that customer satisfaction is founded on the outstanding and successful services.

Parasuraman, Zeithaml and Berry (1994) argue that the profit strategy of a service provider company relies in excellent services through the quality services that provides added value. Furthermore, delivering excellent services can be viewed as a winning strategy (Berry, Parasuraman and Zeithaml, 1994). for services providers in general and specific for specialized financial-accounting services providers.

Methorst *et al.* (2017) studied the differences in farmers' perceptions and prospects for farm development using a sample of 79 questionnaires regarding dairy farmers. Their results showed that a subjective approach towards opportunity identification in farm development represents an important issue.

Renko, Shrader and Simon (2012) argue that the perception of an individual is based on what the individual knows, what he thinks he knows and what he does not know and that understanding the perception of a business can lead to identification of opportunities in early stages of strategic decision-making process.

Liang, Wang and Dawes Farquhar (2009) analysed the costumers' perception regarding financial services using a sample of 396 questionnaires from the loans department, 431 from the deposits department, and 216 from the credit cards department from Taiwan XYZ Bank customers. Their findings suggest that costumers' perception has a positive impact on financial performance for the financial services provider and that costumers purchase financial services with dissimilar benefits. Further studies (Hennig-Thurau and Klee, 1997; Odekerken-Schroder, De Wulf and Schumacher, 2003; De Wulf, Odekerken-Schröder and Iacobucci, 2001) argued that customer satisfaction, trust and commitment represents an important influence on costumers' loyalty behaviour.

3. METHOD

Methodologically, we gathered field information through questionnaire (Mazman, Usluel and Cevik, 2009). Planning, preparation and achievement of field research aimed at collecting and obtaining a significant and sufficient quantity of accurate, clear and relevant information regarding the specialized financial-accounting services beneficiaries' behaviour.

The target population is the beneficiary organizations of specialized financial-accounting services, at national and North-East region level of Romania.

Initially we used probabilistic sampling procedure to form our sample. The sampling was intended to ensure quantitative representativeness which, in addition to the sampling method, we included the estimation of the sample size that was determined depending on the desired confidence level, the maximum permissible accuracy/error and the proportion, according to the formula (Kitchenham and Pfleeger, 2002):

$$N = \frac{Z^2[P(1-10)]}{R^2} \quad . \quad (1)$$

Where:

N – the size of the sample required;

Z – the z value of the desired confidence level, the option being 95%;

P – the proportion of employees believed to respond;

R- the accuracy or maximum permissible error

The proportion of the beneficiaries of specialized financial-accounting services that answered to the questionnaire was 83.33%, i.e. from 12 of the organizations that received the link to the online questionnaire, 10 beneficiaries responded, thus, the proportion believed to respond was considered at 75% level and (p-1) was considered to be 25%, lower than in the pretesting stage, as the involvement of organizations is lower. The value of Z for a 95% confidence level is 1.96 (Kitchenham and Pfleeger, 2002); the allowed margin of error was considered to be +/- 5%. Therefore, our formula becomes:

$$N = \frac{1.96^2[0.75(1-0.75)]}{(0.05)^2} = 288 \quad (2)$$

As our formula states, the size of the research sample would be 288 respondents. As a result of these analyses, it was taken into consideration that after the launch of the field research and the sending of the questionnaire, a representative number of answers could be collected, having the possibility, in the developed application, to view online the situation of the completed questionnaires and their condition. Therefore, a total of 153079 emails were sent, out of which 15303 emails were received and 11428 emails were opened, representing an opening rate of 7.46%. A total of 1728 subjects did not open the e-mail, 11428 open emails and only 516 subjects were kind enough to fill in the

questionnaire, out of which 480 questionnaires were filled in, and a total of 36 questionnaires were incomplete. After filtering the responses only 338 questionnaires were valid for our research.

In Table 1 we present the structure of our respondents based on the use of the financial-accounting services.

Table 1. The structure of the respondents

| Do you represent an organization and are a beneficiary of financial and accounting services? | | | | |
|---|-----------|---------|---------------|------------------|
| | Frequency | Percent | Valid Percent | Cumulate Percent |
| YES | 285 | 84.32 | 84.32 | 84.32 |
| NO | 53 | 15.68 | 15.68 | 100.00 |
| Total | 338 | 100.00 | 100.00 | |

Source: author's calculation

As we can see from Table 1, 84.32% of our respondents are represented by organizations that are beneficiaries of financial-accounting services, the rest of our respondents do not represent an organization and are not a beneficiary of financial-accounting services. Referring to the filled-in questionnaires in number 338, 53 questionnaires were incomplete, 285 of them being accessed and finalized, reaching 84.32% of the total number of completed questionnaires. Prior to starting the statistical analysis activity, we validated scale actions included in Q10 representing the opinion on the offer of specialized financial-accounting services. Q10 contains a Likert scale of 34 items and has a Cronbach's Alpha coefficient of 0.937 (above 0.7) representing a very good scale as the economic literature stipulates (Cortina, 1993; Santos and Reynaldo, 1999; Henseler, Ringle and Sinkovics, 2009; Sekaran and Bougie, 2010). We used in our analysis Principal Component Analysis method (Li and Wang, 2014). After conducting Principal Component Analysis method (available in Appendix 1) we noted that there are 3 factors that explain 83.132% of the total variance explained, thus Q10 was validated. These factors are: the special needs of each customer; caring for customers and general quality conditions. Thus, our first hypothesis is:

H.1. There are differences between the perception at national level and North-East region regarding the offer of financial-accounting services.

Our second theme Q33 is represented by the importance given to the professional behaviour norms of the specialist in financial-accounting services. Q33 contains a Likert scale of 5 items and has a Cronbach's Alpha coefficient of

0.950 (greater than 0.7) representing a good scale as the economic literature requires (Cortina, 1993; Santos and Reynaldo, 1999). Principal Component Analysis (available in Appendix 2) indicates the presence of a single factor explaining 83.506% of the variance. This factor is represented by the overall quality of services, including independence, professional competence, confidentiality and compliance as Component Matrix suggests (available in Appendix 2). Therefore, our second hypothesis is:

H.2. There is no difference between the perceived financial-accounting services quality in Romania and in the North-East region.

Our last theme is represented by Q35 that refers to the level of satisfaction with financial-accounting services that the company benefits from. Q35 contains a Likert scale of 16 items and has a Cronbach's Alpha coefficient of 0.967 (greater than 0.7) representing a good scale as the economic literature requires (Cortina, 1993; Santos and Reynaldo, 1999). Principal Component Analysis (available in Appendix 3) indicates the presence of a single factor explaining 64.180% of the variance. This factor is represented by the general satisfaction. Our final hypothesis is:

H.3. There are differences between the perceived general satisfaction of financial-accounting services overall in Romania vs. in the North-East region.

4. RESULTS

In this section we present the results regarding the opinion on the offer of specialized financial-accounting services in Romania and North-East region (available in Table 2), regarding the importance given to the professional behaviour norms of the specialist in financial-accounting services (available in Table 3) and the results regarding to the level of satisfaction with financial-accounting services that the company benefits from (available in Table 4).

Beneficiaries at national level have a better opinion on the offer of specialized financial-accounting services than beneficiaries in the North-East region of Romania. The difference is statistically significant, as evidenced by the T independent test (presented in Table 2). Therefore, our hypothesis *H.1. There are differences between the perception at national level and North-East region regarding the offer of financial-accounting services.*

Table 2. Results regarding the opinion on the offer of specialized financial-accounting services in Romania and North-East region

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|--------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|---------|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| Q10 | Equal variances assumed | .485 | .487 | -3.654 | 520 | .000 | -.405 | .111 | -.623 | -.187 |
| | Equal variances not assumed | | | -3.527 | 126.378 | .001 | -.405 | .115 | -.633 | -.178 |
| Q10.F1 | Equal variances assumed | .636 | .426 | .422 | 489 | .673 | .22137 | .52429 | -.80878 | 1.25152 |
| | Equal variances not assumed | | | .906 | 423.453 | .365 | .22137 | .24431 | -.25884 | .70158 |
| Q10.F2 | Equal variances assumed | 2.352 | .126 | -1.480 | 491 | .140 | -.12746 | .08613 | -.29668 | .04176 |
| | Equal variances not assumed | | | -2.110 | 217.420 | .036 | -.12746 | .06040 | -.24651 | -.00841 |
| Q10.F3 | Equal variances assumed | 8.498 | .004 | -1.671 | 501 | .095 | -.16336 | .09775 | -.35542 | .02869 |
| | Equal variances not assumed | | | -2.378 | 222.303 | .018 | -.16336 | .06868 | -.29872 | -.02801 |

Note: Q10-What is your opinion on the offer of specialized financial-accounting services?; Q10.F1. The special needs of each customer factor; Q10.F2. Caring for customers factor; Q10.F3. General quality conditions factor.

Source: author's calculation

The expectations of beneficiaries in the North-East region do not differ significantly from the expectations of the beneficiaries at national level on the basis of: the special needs of each customer. Regarding the general quality conditions, the expectations at national level are higher than at the level of the region. Furthermore, we present in Table 3 our results regarding the importance given to the professional behaviour norms of the specialist in financial-accounting services.

Table 3. Results regarding the importance given to the professional behaviour norms of the specialist in financial-accounting services

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|--------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|--------|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| Q33.F. | Equal variances assumed | .001 | .978 | -.920 | 474 | .358 | -.58884 | .63987 | -1.84617 | .66850 |
| | Equal variances not assumed | | | -.904 | 124.909 | .368 | -.58884 | .65172 | -1.87868 | .70101 |

Note: Q33.F. Representing the overall quality of services

Source: author's calculation

As Table 3 suggests all the rules are of great importance at both national and regional level. The T-test on the variable resulting from the factorial analysis shows that there are no statistically significant differences between the importance given to this criterium by the overall Romanian companies and those from the North-East region. Therefore, our second hypothesis *H.2. There is no difference between the perceived financial-accounting services quality in Romania and in the North-East region* is confirmed. In addition, we present in Table 4 the results regarding the level of satisfaction with financial-accounting services that the company benefits from.

Table 4. Results regarding the level of satisfaction with financial-accounting services

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|---------|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| Q35.F.M | Equal variances assumed | 3.233 | .073 | -2.426 | 469 | .016 | -.18101 | .07463 | -.32766 | -.03437 |
| | Equal variances not assumed | | | -3.061 | 172.147 | .003 | -.18101 | .05913 | -.29773 | -.06430 |

Note: Q35.F. Mis represented by the general satisfaction

Source: author's calculation

As Table 4 suggests the level of satisfaction with the financial and accounting services of the respondents is high in Romania. overall. but higher in the North-East region (4.5 versus 4.3). The difference is statistically significant. Therefore. our third hypothesis *H.3. There are differences between the perceived general satisfaction of financial-accounting services overall in Romania vs. in the North-East region* is confirmed. The costumers of financial-accounting services are more satisfied with the services in the North-East Romanian region than the overall costumers of financial-accounting services in Romania.

5. CONCLUSIONS

This study aimed to analyse the perception of the specialized financial-accounting services beneficiaries in Romania comparative with the perception of the specialized financial-accounting services beneficiaries in the North-East Romanian region. Our results suggest that there are some differences but also similarities in perception regarding point of view of the specialized financial-accounting services beneficiaries in Romania versus specialized financial-accounting services beneficiaries in the North-East Romanian region. The first difference is that the beneficiaries of specialized financial-accounting services at national level have a better opinion on the offer of specialized financial-accounting services than beneficiaries in the North-East region of Romania. Also. our results suggest that the level of satisfaction with the financial and accounting services of the respondents is higher in the North-East Romanian region than in Romania. overall. Moreover. we found no difference between the perceived overall quality of services in Romania and in the North-East region.

Some limitations of our study consist in collecting and interpreting data. as more data could be accessed further research will be made in this regard.

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Appendixes

Appendix 1. Principal Component Analysis regarding Q10

| Total Variance Explained | | | | | | | | | |
|--------------------------|----------------------|---------------|--------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
| Component | Initial Eigen values | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 9.505 | 55.912 | 55.912 | 9.505 | 55.912 | 55.912 | 9.332 | 54.892 | 54.892 |
| 2 | 3.626 | 21.327 | 77.239 | 3.626 | 21.327 | 77.239 | 3.796 | 22.327 | 77.219 |
| 3 | 1.002 | 5.893 | 83.132 | 1.002 | 5.893 | 83.132 | 1.005 | 5.913 | 83.132 |
| 4 | .810 | 4.764 | 87.896 | | | | | | |
| 5 | .530 | 3.118 | 91.014 | | | | | | |
| 6 | .453 | 2.667 | 93.681 | | | | | | |
| 7 | .377 | 2.219 | 95.900 | | | | | | |
| 8 | .281 | 1.653 | 97.554 | | | | | | |
| 9 | .259 | 1.524 | 99.077 | | | | | | |
| 10 | .110 | .646 | 99.724 | | | | | | |
| 11 | .010 | .061 | 99.785 | | | | | | |
| 12 | .009 | .052 | 99.837 | | | | | | |
| 13 | .007 | .042 | 99.879 | | | | | | |
| 14 | .006 | .037 | 99.916 | | | | | | |
| 15 | .005 | .031 | 99.947 | | | | | | |
| 16 | .005 | .028 | 99.974 | | | | | | |
| 17 | .004 | .026 | 100.000 | | | | | | |

Extraction Method: Principal Component Analysis.

Appendix 2. Principal Component Analysis regarding Q33

Total Variance Explained

| Component | Initial Eigen values | | | Extraction Sums of Squared Loadings | | |
|-----------|----------------------|---------------|--------------|-------------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 4.175 | 83.506 | 83.506 | 4.175 | 83.506 | 83.506 |
| 2 | .484 | 9.676 | 93.183 | | | |
| 3 | .149 | 2.988 | 96.170 | | | |
| 4 | .137 | 2.732 | 98.903 | | | |
| 5 | .055 | 1.097 | 100.000 | | | |

Extraction Method: Principal Component Analysis.

Component Matrix^a

| | Component |
|-------------------------|-----------|
| | 1 |
| Independence | .776 |
| Professional competence | .943 |
| Quality of services | .955 |
| Confidentiality | .941 |
| Compliance | .942 |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix 3. Principal Component Analysis regarding Q35

Total Variance Explained

| Component | Initial Eigen values | | | Extraction Sums of Squared Loadings | | |
|-----------|----------------------|---------------|--------------|-------------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 10.269 | 64.180 | 64.180 | 10.269 | 64.180 | 64.180 |
| 2 | .796 | 4.977 | 69.157 | | | |
| 3 | .774 | 4.841 | 73.998 | | | |
| 4 | .642 | 4.010 | 78.008 | | | |
| 5 | .449 | 2.808 | 80.816 | | | |
| 6 | .426 | 2.664 | 83.481 | | | |
| 7 | .390 | 2.439 | 85.920 | | | |
| 8 | .357 | 2.228 | 88.148 | | | |
| 9 | .332 | 2.073 | 90.221 | | | |
| 10 | .280 | 1.749 | 91.970 | | | |
| 11 | .252 | 1.573 | 93.543 | | | |
| 12 | .248 | 1.551 | 95.093 | | | |

EU FINANCIAL REGULATION AND ADMINISTRATIVE AREA

| Component | Initial Eigen values | | | Extraction Sums of Squared Loadings | | |
|-----------|----------------------|---------------|--------------|-------------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 13 | .226 | 1.413 | 96.506 | | | |
| 14 | .204 | 1.277 | 97.783 | | | |
| 15 | .186 | 1.166 | 98.949 | | | |
| 16 | .168 | 1.051 | 100.000 | | | |

Extraction Method: Principal Component Analysis.

EUROPEAN POLICIES IN THE FIELD OF ENERGY AND RENEWABLE ENERGY SOURCES

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Abstract

At present, the challenges faced by the European Union in the field of energy efficiency and renewable energy sources are caused by increasing dependence on energy imports, limited diversification of renewable sources and their reduced quantity. Also, the high energy price, rising energy demand, the risks faced by the energy space and the threats posed by climate change, raise the question of the development of the energy market from renewable sources at European level. From this point of view, the European energy policy has undertaken a set of measures aimed at capitalizing on renewable energy sources in the context of the energy sector development program. In addition to the five priority objectives of the European Union's energy policy established by the Treaty on the Functioning of the European Union, securing the sustainability of the energy sector has become a priority for the European Commission. This institution is responsible for the promotion of legislative proposals on governance, the organization of the electricity market, energy efficiency and performance, renewable energy and rules applicable to the institutions responsible for implementing legislative measures in the field. In this context, the purpose of the study is to analyze European energy efficiency regulation in the context of strengthening and capitalizing on the renewable energy market.

Keywords: energy; efficiency; renewable energy; European policy; durability; regulation.
JEL Classification: P 37, P 48, L 84

1. INTRODUCTION

Energy market efficiency is decisive in the context in which energy remains a key element for the good functioning and economic development of the

European Union. This need arises from the fact that the EU Member States are faced with significant challenges, such as climatic changes, the rise of an inevitable dependence on imports and higher energy prices, they also must face economic, political and even social issues. The explanation follows from the fact that without a sufficient supply of energy, the actual level of the population welfare cannot be maintained and the created situation would have a direct influence on the development of the European states. In particular, this adverse effect will have a considerable impact on the countries that follow the European integration process.

Moreover, this is a very precarious situation, since at European level there is a massive growth of energy interdependence between the EU Member States. This issue is much more emphasized in countries that lack own energy reserves are confronted with some impediments in the process of access to stable electrical sources.

In this context, the European Union tends to act through and the support of European institutions, aiming to establish a uniform, secure and competitive policy on the supply of energy over a sustainable period. The elaboration of an efficient policy in the energy field is conditioned by a number of factors, and it is primarily influenced by the technical-scientific revolution and the discovery of new ways in which the capitalization of alternative energy sources take place.

2. EVOLUTION OF EUROPEAN POLICIES IN THE FIELD OF ENERGY AND RENEWABLE ENERGY SOURCES

Although the development of the energy sector, energy efficiency and the development of alternative energy resources, reflected the essence of the energy policy of the 21st century, however, the first efforts in this direction were initiated as the European Community was constituted. The need for a common approach to energy were formulated by the Member States, which were founded within the Treaty establishing the European Coal and Steel Community, 1952. By this legal instrument, the energy policy of the 1950s was developed and this was followed by the establishment of a common policy for the nuclear sector through the Treaty of Atomic Energy Economic Communities since 1957, otherwise referred to as the EUROATOM Treaty. With the implementation of these two treaties it was proved that none of these corresponded with the initial expectations of the six founding countries. However, the way of approaching the issue of the EU energy policy integration has proved to be rather a successful one.

Considering the fact that the situation on energy sector was unbalanced, the European Commission in the '60s opted for the development of a common energy policy, a much more efficient and balanced one that can be adjusted to the new social changes. The first directions of the development in this respect were recorded in the memorandum of 1962 on energy policy followed by a

“First orientation to a Common Energy Policy” in 1968. The orientation reflects the fundamental problems of the European Union’s position in energy matters and laid down the European principles in this area, notably established that electricity supply to be ensured at the lowest possible price, taking into account the specific structure of the energy sector (Molle, 2009, p. 212).

In order to achieve the pursued results, various actors have been involved that have played a significant role in the process of elaboration and implementation of decisions in this field. In this regard, the European Council has had and still has a less important role. This institution pursued the coordination of electricity policy between the Member States by creating a common market. This fact was consigned by the adoption in 1972 of a decision on the development of a coordinated energy policy.

Regardless of the measures and actions which have been taken by the European Community through its institutions in order to develop the energy sector, it nevertheless encountered two crises during 1973-1985 which were fundamental for this sector. The crises highlighted the vulnerability faced by the energy field, notably due to uncertainty how to supply the energy, how to establish the industry prices and balance of payments.

The energy instability of this period constituted an impetus for the European Union to revise its further action on energy policy, since it was considered a real failure until the 1980s. The failure was conditioned because in its attempt to implement a common energy policy between the Member States of the European Community, numerous misunderstandings occurred between the elements of the common policy and the policies that were implemented at national level. In this way, the objective of creating a single energy market and the common obligation to work towards improving environmental conditions was indisputable elements of convergence and interdependence between the Member States of the European Union.

The concerns for the elaboration of a common energy policy of the European Union have intensified in the 1990s since the measures adopted by the European Commission on the implementation of a common energy policy have begun to be analyzed. The analysis was initiated in the context in which the energy sector was dominated by national monopolies, and the Commission pursued the gradual abolition thereof. This institution has “exploited international regulations with the aim of finding common solutions for reshaping the energy sector in relation to the objectives of the internal market, environmental policy and foreign policy.” (Romanian Academy, 2015, p. 43)

In this respect, through the European financial support and through the measures implemented by the European Commission, the liberalization of the energy market was achieved, including the mobilization and support of the large industrial users in the energy sector at European level. This was the most obvious case if the European Union set the objective of consolidating the

internal market and environment protection policy, since the reference of energy policy to the single market program was very explicit.

The impetus to correlate the energy policy with the unique European market was given by the General Directorate IV which was responsible for competition policy. In 1991s, the Directorate intensified the attacks against national monopolies and monopolistic practices on the basis of the empowerment conferred by the Article 90 from the Treaty regarding the European Economic Community. This impulse was also supported by the General Directorate XVII responsible for energy policy, including by the other guidelines such as General Directorate XXI for the Unification of Customs Procedures and indirect taxation, General Directorate III on Single Market and Industrial Policy and General Directorate XI responsible for environmental policy. We can say that these general guidelines that took part in the unification and configuration of energy policy have played a key role in establishing the Community's objectives for the development and efficiency of the energy sector for the following reasons:

1. As a result of the actions implemented by these institutions, the energy sector can be said to have been "interrelated" by several areas that are part of common Community policy. In this situation, the European commissioners having priority over the ministers appointed at national level, could supervise and control a certain economic political area;
2. The role of the European Commission is recognized as a very important one since it could accept all the motions with a majority of votes, while the European commissioners are not strictly specialized, but on the contrary they were involved in all other fields of Community policy (Bache, 2009, p. 398).

Subsequently, the opening-up of the energy market was determined by major developments that formed a new legal framework for each of the three directions of European energy policy, namely:

a) *The completeness*. As far as this objective is concerned, the European trend in creating a competitive energy market based on the principles and directions of development of the European Union has been emphasized by the fact that the European market, at that moment, was split up. This objective rests on the basis of a large-scale restructuring in the energy sector, which is concerned with the liberalization of the energy sector.

b) *Ensuring the supply of electricity*. This objective was ensured by the signature of the European Energy Charter which was adopted by the Decision 98/181/EC of the Council and the Commission of September 23, 1997 on the conclusion by the European Communities of the Energy Charter Treaty and the Energy Charter Protocol on energy efficiency and related environmental aspects. This legal instrument aims at emphasizing the energy potential of the countries from central and eastern Europe and ensuring the electricity supplies to the Member States of the European Union. The Protocol on energy efficiency and

related environmental aspects aims to promote energy efficiency policies consistent with sustainable development, to stimulate a more efficient and environmentally friendly use of energy and to encourage cooperation in the field of energy efficiency.

c) *Environmental care*. At European level, this objective was governed by the Treaty of Amsterdam which was adopted on October 2, 1997 and, at the external level, in the protocol that was adopted as a result of the Kyoto Conference where were discussed the problems related to climate change and the need to reduce the high carbon content. This conference took place in the same year, 1997. Thus, the achievement of this target implied the limitation of primary energy consumption and the use of alternative energy sources, as it is now, renewable energy sources.

So, we can say that making the energy market more efficient has been completed in the context in which the national monopolies were reduced, the tax rates on energy imports have been reduced and government interventions on the acquisitions of energy protection were eliminated. All these actions required the development and implementation of new actions, ensuring electricity supply, in the context of economic and political issues between the Member States of the European Union.

While the concept of energy efficiency (or energy optimization) became, at present, one of the main concerns of mankind in the whole world, in the context of global problems, the human society began to realize more than ever the need for a sustainable strategy by increasing the efficiency of energy use and implementing energy efficiency programs taking into account the depletion of fossil fuel reserves on Earth. Today, we speak of a global energy policy and a concerted strategy to reduce harmful emissions into the atmosphere, based on concrete economic and technical solutions for rational use of fossil fuel reserves and valorization of renewable energy resources on a large scale, the so-called “clean” energy or non-conventional energy, as an alternative to the current system of fuel reserves on Earth (Bostan *et al.*, 2015, p. 67).

All these aspects have been discussed since it has been established with certainty that the society is highly dependent on energy. Under these circumstances, energy generation from alternative sources are a way of meeting the energy needs in the context in which they practically have no negative effect on the population. The placing on the energy market of these forms of energy mainly causes the coverage of the risks to which the energy sector is subject: Electricity supply, price reductions, increases in completeness and reduction of air pollution and greenhouse gas emissions.

From this point of view, the European Union has introduced into its policy concerning the efficiency and the development of electricity and objectives with regard to the development of renewable energy sources. This adjective was Initiated with the Adoption of the White Paper on renewable energy sources,

published in 1997. From this year onwards, the European Union set itself the objective of increasing the energy share of renewable sources of 12 % of all its energy sources by 2020. At the same time, the European Council on Renewable Energy (ECRE) has been established for this purpose. *“Parliament’s vote today is an historic opportunity for the Commission to test citizens’ demands for renewable energy. Together with the Parliament, leaders in building and securing legislative proposals for all three sectors must be: for electricity, heating and biofuel. The Commission should focus its attention on eliminating gaps in EU legislation for renewable energy – heating and cooling”*, said Oliver Schafer, policy director of ECRE (Bostan *et al.*, 2015, p. 68).

Although significant increases have been registered in the field, some specialists believe the EU will not be able to accomplish all these objectives. The main reason for not meeting the objectives of renewable energy were outlined in the Commission communication to the European Council and the European Parliament on energy policy for Europe in 2007. So this is the reason for the high costs of producing energy from alternative sources and the lack of a coherent and effective strategic framework for the whole European Union. It is also mentioned that in the framework of energy development and energy efficiency policy and renewable energy sources there lacks a clear, constant and long-term vision of European aspirations with a view to the continuous development of the energy sector and the use of alternative energy sources (European Commission, 2019).

In order to achieve the objectives of the common energy policy, the European Union has implemented the following structural policy measures regarding the process of generation, consumption and marketing of electricity:

- *Stimulating energy production* from alternative and permanent energy sources at European Union level through different development programs and research projects;
- *Restructuring of the supervisory system*, in particular, by providing an exchange of information;
- *Supporting the improvement of trans-European networks*, involving access to electricity and guaranteeing energy supplies;
- *Verification of external effects* because the significant energy consumption adversely affects the environment, the use of alternative energy sources constituting a means of reducing the emissions of noxious gases.

These structural policy measures conditioned the energy union to adopt in 2015 an energy efficiency policy which is based on the following main objectives:

1. ensuring the functioning of the internal energy market and the interconnection of energy networks;
2. ensure the security of energy supply in the Union;

3. promote the development of new forms of renewable energy for better alignment;
4. integration of climate change objectives within the framework of new market organization;
5. promotion of research, innovation and competitiveness. Commission of European Communities, 2007)

Even if these objectives are the subject of a common energy policy in accordance with article 194 of the Treaty on the operation of the European Union, each Member State shall retain the right to establish its own conditions of regulation and exploitation of its energy resources.

In line with these objectives, the current European Union's political agenda adopted on 24th of October 2014 is to reduce the greenhouse gas emissions by 2030, by at least 40%, an increase in energy consumption produced from renewable sources by 27%, and the development of interconnection of electricity networks by at least 15%.

In order to maintain the completeness of the internal energy market and to continue the transition process to clean energy, the European Commission proposed numerous legislative proposals as a result of which the Energy Efficiency Directive was adopted, the Energy Regulations, the Energy Efficiency Regulation and the transparency of the market in energy institutions, the Energy Efficiency Directive, the Directive on promotion of energy use from renewable sources, and other legislative instruments which are to support and promote the European energy efficiency policy and the development of renewable energy sources. In the context of the measures implemented in the energy sector, the European Parliament comes to support action by the European Commission through a set of resolutions. These resolutions prove to be very important because they have set new targets to be met by the European Union in the field of energy efficiency and the use of renewable energy sources by the year 2030.

3. CONCLUSIONS

Finally, we can conclude that the policy on energy efficiency and the development of renewable energy sources is one of the fundamental priorities of the European Union. Increasing the coordination between the Union institutions and the Member States in this field is a new step toward the diversification of economic relations where the aim is to establish a sustainable energetic transparency, coherence and efficiency. These objectives will be maintained and supported only by the development of strategic energy relations. Relations which will allow the possible risks related to the provision and insurance of electricity to be reduced, including through the elimination of risks related to the limitation of the capacity to obtain energy from alternative sources. From this point of view, energy policy must focus on an extra-Community policy, since by means

of exchange of best practice on developing the field, the European Union's infrastructure will be a much more efficient and economically balanced one.

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INFLUENCE FACTORS ON E-PARTICIPATION IN EUROPE

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Abstract

On the background of the appearance and of the proliferation of the new technologies the entire society tends to change its general behaviour almost all over the world. Based on the exquisite advantage of making possible interactions in real time from any distance between different parties, governments also encouraged people to interact with them in an electronic manner, enhancing thus the so-called e-participation. While technology already changed significantly our lives and both the individual and community issues continue to diversify, e-participation seems to become the necessary next step for the development of the society. Starting with the necessity of rapid information of citizens on the community's issues, and continuing with the need for facilitating their fast consultation, based on such information, but also of decision making in due time, all these are reasons for the extensive use of information and communication technologies in citizens participation processes. However, implementing e-participation is depending on the action of several both social and economic factors such as education, availability of technology, level of development etc. and this study is proposing an analysis on the impacts of them on the e-participation.

Keywords: *e-participation; education; information and communication technology; development.*

JEL Classification: C23, H83, O38

1. INTRODUCTION

Latest decades are profoundly marked by the appearance and of the proliferation of more and more new technologies which have led to the change of the general behaviour of people almost all over the world. During this period both individuals, but also companies or institutions, started to use more intensely technology in their activities aiming to save as much time as possible while benefiting of a convenient way of solving their daily problems. However, after starting by finding simpler ways for paying their bills using the information and communication technologies (ICT), individuals discovered also that such means may be useful for almost the entirely other activities they were involved in and somehow significant parts of their lives were transferred on-line, while usefulness has more and more become doubled by the pleasure of interacting in an electronic way with more and more third parties. At the same time, perceiving

the significant advantage of technology that made possible real time interactions from any distance, governments also encouraged people, this time viewed as members of the community, to interact with them in a similar electronic manner, enhancing thus the e-government services and, moreover, the electronic democratic processes so-called e-participation.

Citizens and companies' participation in the decisions regarding the community's life is a necessity and it consists not only in deciding their representatives within the election process, but also in expressing their needs or opinions whenever changes are needed or proposed. However, while the issues to be addressed increase rapidly in numbers and complexity, the information available for the community members increases and becomes hard to be obtained, but also the time for decision making has to be shortened, leading to a difficulty in expressing accurately and reasonably the community's will.

Considering that technology already changed significantly our lives and both the individual and community issues continue to diversify and increase, e-participation seems to be the solution and the necessary next step for the development of the democracy and society. Nowadays citizens acknowledge and feel more intensely their needs for rapid information on the community's issues, for facilitating their fast consultation, based on such information, but also for decision making in due time and therefore the extensive use of information and communication technologies in citizens participation processes becomes the proper answer to these.

However, implementing e-participation is depending on the action of several both social and economic factors that may or may not facilitate the translation from the classic participation processes to those based on the information and communication technology. Therefore, this paper contributes specifically to identifying such influence factors and underline how strong and in which ways they are impacting on e-Participation, while as far as we know there are few papers approaching this subject in the previous literature. In this regard, our study is proposing an analysis on the impacts of several influence factors such as education, availability of technology, level of country's development etc. on implementing e-participation.

2. E-PARTICIPATION SPECIFICITY AND INFLUENCE FACTORS

E-Participation represents a concept that emerged in the recent era on the background of the rapid development and mass adoption of information and communication technologies, especially by the new generations, but also by older people. It represents a mean that facilitates and motivates citizens to participate in decision making processes (Mandarano, Meenar and Steins, 2010), by increasing government transparency and thus people trust and their willingness to involve themselves in the public debates. At the same time, other authors (Grönlund, 2003; Meneses *et al.*, 2017) consider e-participation as the

use of ICTs in democratic processes to generate meaningful interactions across the several stages of political decision making.

According to United Nations (2016), e-participation represents “the process of engaging citizens through ICTs in policy, decision making and service design and delivery so as to make it participatory, inclusive, and deliberative”. Such an idea is suggesting that e-participation can be viewed as a complex translation from the classic ways of citizens participation, implying normally their physical interaction to a different kind of participation, from the distance and supported by electronic tools, but more accessible for most of the citizens. This new approach brings several advantages such as saving time and higher quality and transparency in the participation processes as proven by previous studies (Zheng and Schachter, 2017).

There are several approaches of e-Participation in literature, each of them considering that implementing e-Participation presumes a number of stages of its development. Thus, Macintosh (2004) considers three necessary stages: e-enabling (use of technology to enable participation), e-engaging (use of technology for citizens’ engagement) and e-empowering (use of technology to empower citizens and support active participation). On the other hand, Wimmer (2007) pleads for four levels of e-participation (e-informing, e-consulting, e-collaboration and e-empowering). Moreover, other authors (Gatautis, 2010; Tambouris, Liotas and Tarabanis, 2007) sustain a model of consisting in five levels of e-Participation (e-informing, e-consulting, e-involving, e-collaborating and e-empowering). However, as it can be observed each of these models of implementing e-participation presumes a progressive development towards a last level, e-empowering, which consists in the delegation of final decision-making rights to the public.

From an institutional point of view, based on the principle of leaving nobody behind, but also on the major features of the classic participation, e-participation is perceived by United Nations (2018) as a sumum of electronic public services, developed during three stages, namely e-information, e-consultation and e-decision making. These three stages of e-participation need however to be developed progressively while e-consultation relies on ensuring first quality e-information services and e-decision-making depends on enabling e-information and e-consultation. In the end they will be the components of the hierarchical architecture of e-participation. This is also in line with the ideas of Lee *et al.* (2011) who are considering e-Participation based on a multi-stream policy-making model with three levels of participation: Inform, Consult, Empower.

Considered as a first level of e-Participation in the United Nations approach, e-information offers to people the possibility of getting acces to governmental information through online tools such as: community networks, blogs, web forums, text messages, newsgroups or e-mail lists. Such information, offered

through government websites consists in a large variety of data regarding elected officials, government structure, policies and programmes, points of contact, budget, laws and regulations etc. and in the end helps citizens to be more informed in order to make their choices within the consultation process.

The next level of e-participation, e-consultation uses ICT for consulting the people within the process of crafting new policies, designing new services or projects. It is mainly useful for the government to find out if there are possible negative effects of its proposals and to find solutions for avoiding them, but also to understand the public sentiments on the subjects on debate. Moreover, it creates the necessary premises for an easier and more objective following decision-making process.

The third level of e-participation implies using ICT to allow people to contribute to decision-making processes. In this regard there are well known some examples of implementing e-decision making, such as direct e-voting via secure systems or identifying preferred options and proposals by rating them through social media's Like/Dislike buttons or plus/minus functions. However, as technology advances there appear new software tools which are sustaining more complex systems for online decision making.

Implementing e-Participation is however depending on several influence factors that may either enhance this process or oppose to it. In our opinion, out of the large category of factors that may influence the e-Participation process, there are some technical, economic and social ones expected by us to have credible specific impact on it, such as technology, education, welfare, population specific features, etc.

Literature revealed a limited number of papers approaching directly the subject of the influence factors on e-Participation, even some few studies suggested narrowly some ideas regarding which are the obstacles to be overtaken. In this regard, Ahmed (2006) suggested the need of "taking proactive measures to neutralize socio-economic differences such as education, location, employment, disability, age or gender". This implies at least that education and employment are important factors that enhance the e-Participation process. Education is important, from our point of view, both regarding the necessary knowledge of using the technology, but also regarding the understanding of the need of citizens conscious involvement in the decisions regarding the communities' issues.

At the same time, peoples' welfare makes them normally more trusting and more willingly to contribute to finding new solutions and to involve actively in the decision-making process. In this regard, employment is a prerequisite for reaching the individual and general welfare, along with the general development of the entire country which can be synthesized by indicators as real GDP growth or, more accurately, by real GDP per capita growth. On the contrary, unemployment leads both to personal pessimism and financial issues which are

diverting peoples' attention from the common issues and interests, and therefore is expected to act against e-Participation. In this regard a similar idea is that of

Ahmed (2006) also agrees that innovation in ICT are promoting e-participation. Moreover, according to Ochara and Mawela (2015) and following Klecum (2008), "e-participation depends on access, skills and attitude toward mobile technology use for e-government services". Also, other authors (Panopoulou, Tambouris and Tarabanis, 2009; Krishnan, Teo and Lymm, 2017) found that ICT infrastructure and human capital are positively associated with government's willingness to implement e-participation and e-government maturity. Therefore, these observations are confirming our point of view that technology is a major factor that influences e-Participation. However, beyond this general idea, in our opinion, not only the innovations in technology but the access to ICT and more specifically the access of people to internet represents the key factor for enhancing massively the e-Participation process. At the same time the effective use of internet by the citizens is significantly determining the degree of e-Participation, reflected by the e-participation index (Aström *et al.*, 2012).

On the other hand, human capital but especially human behaviour and involvement in participative actions can be influenced in our opinion also by some specific characteristics of the population. In this regard, population density may act as a specific influence factor on citizens' participation but also on e-participation. A higher density of population should normally lead to an easier connection between citizens, to easier share of ideas and embracement of initiatives, which should lead to a higher participation. However, even this easier direct contact of people may increase their participation, it may also determine them to refuse e-participation while the classic participation seems to be enough. On the contrary, when population density is low the big distance between the inhabitants makes problematic the classic participation, but also makes more attractive and convenient the e-participation.

From a similar point of view, we also consider that the disparities between the urban and the rural population, in terms of many characteristics starting with education, welfare, access to services and especially to technology, but also regarding their of way of life and priorities can play an important role in dimensioning the e-participation. In this respect, it can reasonably be expected that as the proportion of the rural population increases the e-participation dimension should decrease and vice versa.

Based on the above considerations and, as stated in Introduction, since we have found no reference in literature to the subject of factors that may influence the e-Participation process, this makes more important our further empiric analysis, focused on the countries of the European Union.

3. DATA AND METHODOLOGY

We use for our analysis annual data for all the 28 countries, members of European Union: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden and United Kingdom.

We use the e-participation index (EPI) as dependent variable, for which we have gathered the specific data from the United Nations e-Government Surveys. On the other hand, based on the previous observations, we consider the influence factors playing the role of independent variables which are specified in Table 1 and are gathered from World Bank database. At the same time, because the available data from the United Nations Surveys on e-Government were available only for the years 2003, 2004, 2005, 2008, 2010, 2012, 2014, 2016 and 2018 and for the first and the last of these years the data were not complete, we have limited our analysis only to 2004, 2005, 2008, 2010, 2012, 2014 and 2016 years.

Table 1. The independent variables/ influence factors

| Independent variable/ factor | Indicator name | Indicator symbol | Expected influence (+/-) | Source |
|-------------------------------------|--|-------------------------|---------------------------------|---------------------|
| Education | Population by educational attainment level (tertiary 25-64) | Ed3 | + | Eurostat |
| Internet use | Individuals using the Internet (% of population) | Iuse | + | World Bank Databank |
| Internet access | Fixed broadband subscriptions (per 100 people) | FBS | + | World Bank Databank |
| Unemployment | Unemployment, total (% of total labor force) (national estimate) | UNEM | - | World Bank Databank |
| Rhythm of development | Real GDP per capita growth (annual %) | GDPcgr | + | World Bank Databank |
| Population density | Population density (people per sq. km of land area) | Popd | +/- | World Bank Databank |
| Rural population | Rural population (% of total population) | RuralP | - | World Bank Databank |

Source: own projection

We develop further our research by processing the panel of data, for the EU 28 countries, using Pearson correlations, respectively building econometric

models using the Panel Least Squares method and testing them for all the years we mentioned above. By doing this, we expect to find out which factors have significant impact on e-participation and how do they influence it.

4. RESULTS AND COMMENTS

Our first analysis is channeled towards determining the existence of some relevant connections between the E-participation index and the considered influence factors, mentioned above. In this respect, after using Pearson correlations in order to identify possible statistically significant such linkages, on the data sample for the 28 countries of the European Union for the years mentioned before, we reached the results described in Table 2.

Table 2. The correlation matrix of the variables

| Coefficient | | | | | | | |
|--------------------|------------|------------|-------------|------------|-------------|---------------|-------------|
| Probability | EPI | Ed3 | Iuse | FBS | UNEM | GDPcgr | Popd |
| EPI | 1.0000 | | | | | | |
| | | | | | | | |
| Ed3 | 0.5243*** | 1.0000 | | | | | |
| | 0.0000 | | | | | | |
| Iuse | 0.6318*** | 0.6762*** | 1.0000 | | | | |
| | 0.0000 | 0.0000 | | | | | |
| FBS | 0.6250*** | 0.6060*** | 0.8737*** | 1.0000 | | | |
| | 0.0000 | 0.0000 | 0.0000 | | | | |
| UNEM | -0.0536 | -0.0215 | -0.1209* | -0.1040 | 1.0000 | | |
| | 0.4557 | 0.7651 | 0.0914 | 0.1470 | | | |
| GDPcgr | 0.1406** | 0.1853*** | 0.3016*** | 0.4028*** | -0.0634 | 1.0000 | |
| | 0.0493 | 0.0093 | 0.0000 | 0.0000 | 0.3777 | | |
| Popd | 0.1048 | -0.1753 | 0.0477 | 0.2049*** | -0.2290*** | -0.0303 | 1.0000 |
| | 0.1437 | 0.0140** | 0.5069 | 0.0040 | 0.0012 | 0.6729 | |
| RuralP | -0.3688*** | -0.4442*** | -0.4272*** | -0.4868*** | 0.1930*** | 0.2057*** | -0.4908*** |
| | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0067 | 0.0038 | 0.0000 |

Source: own projection

Results in Table 2 are almost all in line with our previous expectations and with the results of the other authors mentioned above. It is remarkable that higher education, but also the level of Internet use and the access to internet are very significantly and positively correlated with the dimension of the e-Participation index. Additionally, we note the quite significant correlation of the real GDP per capita growth with the same index.

On the other hand, the proportion of rural population results to be negatively and significantly correlated with e-Participation index. This reflects a reverse relationship, suggesting that if the proportion of the rural population is increasing this will oppose to the e-Participation process and, on the contrary, if the proportion of rural population would decrease in favor of urban population this would enhance the e-Participation process.

Moreover, even if insignificantly statistic, there are both a positive correlation between population density and the e-Participation index and a negative correlation of unemployment with the same index, which confirm at least in terms of the expected kind of influence our previous expectations.

Deepening our analysis, in order to determine the effective influence of the considered factors on the dependent variable, namely the e-Participation index, we have built and tested a set of pooled OLS models. These models have had the following forms, depending on their type, which may be of fixed effects (Equation 1) or of random effects (Equation 2):

$$EPI_{it} = \alpha_i + \sum(\beta_{it} \times \chi_{it}) + \mu_{it} \quad (1)$$

$$EPI_{it} = \alpha + \sum(\beta_{it} \times \chi_{it}) + \mu_{it} + \varepsilon_{it} \quad (2)$$

Where:

- EPI_{it} represents the dependent variable (e-Participation index);
- X_{it} represent independent variables considered for each model for the specific country i , in year t ;
- β_{it} are the statistic coefficients for the independent variables;
- μ_{it} is the between-error term;
- ε_{it} is the within-error term.

We have tested the proposed models on our data sample, using first simple fixed effects, respectively random effects. Going further, we have also checked the robustness of our models under the circumstances of fixed, respectively random effects. After developing these actions, we have reached the results that are synthetized in Table 3.

Table 3. Results of the proposed model applying different effects

| Independent Variable | Fixed Effects | | Random Effects | | Fixed Effects Robust | | Random Effects Robust | |
|----------------------|---------------|--------|----------------|--------|----------------------|--------|-----------------------|--------|
| | Coef. | Prob. | Coef. | Prob. | Coef. | Prob. | Coef. | Prob. |
| <i>Ed3</i> | 0.0257*** | 0.0000 | 0.0089** | 0.0120 | 0.0257*** | 0.0010 | 0.0089* | 0.0680 |
| <i>Iuse</i> | 0.0054* | 0.0800 | 0.0045** | 0.0300 | 0.0054* | 0.0850 | 0.0045* | 0.0800 |
| <i>FBS</i> | -0.0061 | 0.2100 | 0.0032 | 0.3430 | -0.0061 | 0.2380 | 0.0032 | 0.4780 |
| <i>UNEM</i> | 0.0045 | 0.2970 | 0.0045 | 0.2210 | 0.0045 | 0.3890 | 0.0045 | 0.2940 |
| <i>GDPcgr</i> | 0.0084 | 0.1340 | 0.0102* | 0.0560 | 0.0084* | 0.0930 | 0.0102** | 0.0440 |

| Independent Variable | Fixed Effects | | Random Effects | | Fixed Effects Robust | | Random Effects Robust | |
|----------------------|---------------|--------|----------------|--------|----------------------|--------|-----------------------|--------|
| | Coef. | Prob. | Coef. | Prob. | Coef. | Prob. | Coef. | Prob. |
| <i>Popd</i> | -0.0011 | 0.3210 | 0.0001 | 0.2590 | -0.0011 | 0.2280 | 0.0001 | 0.1900 |
| <i>RuralP</i> | -0.0153 | 0.2630 | -0.0003 | 0.8970 | -0.0153* | 0.0940 | -0.0003 | 0.8970 |
| <i>_cons</i> | 0.1243 | 0.7890 | -0.2122 | 0.1470 | 0.1243 | 0.6710 | -0.2122 | 0.1630 |
| <i>R-squared</i> | 0.4069 | | 0.3647 | | 0.4069 | | 0.3647 | |

Source: own projection

The results from Table 3, show an important reliability of the models both when applying fixed effects (R-squared over 40%) and when using random effects (R-squared over 36%).

Higher education appears to be the most important and statistically significant factor that influences positively the e-Participation process, in all four models, which confirms not only our previous expectations and results, but also the results of most of the previous studies.

At the same time, all results confirm that the level of the Internet use impacts positively and statistically significant on e-Participation, confirming that in order to enhance this process it is a prerequisite to convince and to help people to become acquainted with the Internet technology. In this regard, it should be expected that the more intensely people will use the Internet to solve their daily problems, they will discover the benefits of it and will be easier convinced also to replace the classic participation with e-participation.

We note also that in all robust models and also in the simple random effects one, the rhythm of development, proxied by the real GDP per capita annual growth, appears to have significant positive influence on the e-participation, which also in accordance with our expectations and with the previous determined correlations. At the same time, however, results for unemployment show a peculiar, yet statistically insignificant positive impact.

The proportion of rural population impacts negatively on e-Participation index, but only in the fixed robust fixed effects models it is statistically significant. On the other hand, population density and Internet access show positive but not statistically significant influence on e-Participation only in random effects models.

5. CONCLUSIONS

While technology tends to become more and more part of our life, it appears quite naturally its implication in all our activities and interactions with third parties, including the ones in which we act as members of the community. From the last point of view, all citizens have the right, but also the civic obligation, to contribute to improving the governance aiming to create better life

conditions for the community, meaning to participate to the social life and especially to the decision-making process. These actions can be better supported by the information and communication technologies, which help enhancing people participation and lead to creating new e-Participation processes.

E-Participation has become nowadays a necessity both for the individuals themselves, but especially for the community. However, its development is depending on several influence factors, most of them specific also for the classic od direct participation processes, but also some specific for the new electronic kind of participation. In this regard, we have considered several influence factors, most of them specific ones, and analysed their impact on e-Participation, proxied by its index, in the 28 countries of the European Union, for the period 2004-2016.

Our results have shown that the most important factors that influence positively the e-Participation process are higher education, the level of internet use and the rhythm of development of the country, while the proportion of the rural population proved to have an opposite impact on that process. Therefore, we may conclude that beyond the usual determinants of the participation processes, enhancing e-Participation is depending on growing the proportion of higher educated persons and peoples' welfare and also on improving their acces to information and communication technologies and encouraging them to use such technologies.

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THE PERCEPTION OF COLLABORATION IN THE MUNICIPAL CORPORATIONS OF PUBLIC ADMINISTRATION

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Abstract

The aim of this paper is to present quantitative research conducted at the Tel-Aviv municipal corporations, focusing on the importance of collaboration and what factors affect it among the various administrative personnel and the stakeholders at the municipal corporations at the Tel Aviv municipality.

These perceptions and attitudes of importance regarding the intention to propose a method and model for collaboration in municipal corporations.

The professional literature relates extensively to the need for collaboration in general and in the public sphere. Less significant attention seems to be made in relation to the ways for implementation of these collaborations in general and in the field of municipal corporations in particular.

The study conducted among the managements of the municipal corporations enabled to understand and realize their willingness to accept the process of such collaboration, its importance for them, and their attitude toward the change management that will be required. Additionally, what topics should be focused on while formulating the model proposal (management commitment, trust among partners, willingness to forego resources, openness to change and organizational culture).

The findings from the study show that a large majority of managers in Tel Aviv municipal corporations believe that although such collaborations are almost non-existent, they are important and necessary. They are also willing to forego resources in order to promote collaboration and they emphasize the essential role of the municipality's senior management in initiating and promoting it.

From the findings it can be learned that there is room and significant potential for the proposal of such a model of collaboration. This potential, together with the managers' willingness to forego resources, points out that the model idea for collaboration could be positively accepted among the municipality corporations managements.

Keywords: *collaboration; municipal corporations; partnership; public administration.*

JEL Classification: D74, D85, H77, H83, M14, P41

1. INTRODUCTION

The aim of this paper is to understand the attitude of the corporate officeholders toward the idea of collaboration between municipal corporations.

For that, a quantitative research conducted at the Tel-Aviv municipal corporations, focusing on the importance of collaboration and what factors affect it among the various administrative personnel and the stakeholders at the municipal corporations at the Tel Aviv municipality.

Collaboration between the government (local and/or central) and residents, businesses and the third sector, merges and acquisitions, post-merger integration, integrated public services – have been dealt with in research and the professional literature (McQuaid, 2002; Vigoda, 2002; Van de Walle and Groeneveld, 2011; Kooiman, 1993). Less significant attention has been given to inner-organizational coordination, collaboration between different units in general, and between sub-units on the municipal level, similar to subsidiaries and the parent company – i.e. the municipality – or between the different units themselves. This type of collaboration is mentioned in the professional literature and studies with regard to the need for coordination, reciprocal ties and synergy, anticipated problems, the importance of the E.U. cross border cooperation, benefits of collaboration, boundaries as barrier for corporation and so on (Agranoff and McGuire, 2004; Alford and O'flynn, 2012; Lina and Bedrule-Grigoruta, 2009; Fasel, 2000; Wiberg and Limani, 2015).

Less reference seems to be made in relation to the ways in which these may be achieved, methods of implementation, what are the correct steps to put it into practice – in other words, the model.

In the framework of the process to understand the attitude of the corporate officeholders toward the idea of collaboration between municipal corporations (awareness, willingness, readiness, their role in promoting the topic, etc.), the following questions arise:

- What is the degree of importance attributed to the topic of collaboration?
- What is the responsibility of the various corporate officeholders to promote collaborations?
- Are the corporate officeholders willing to forego resources (whether tangible or intangible) in order to promote the topic of collaboration between municipal corporations?
- Are the corporate officeholders of the opinion that the municipality senior management plays a role in the promotion of collaborations?
- Does collaborative management of the corporate employees contribute to collaboration between municipal corporations?
- Does a corporate culture of innovation and openness to change contribute to the desire for collaboration?

The findings and the conclusions of the research (together with qualitative research and literature review), could be the basis for developing and proposing a model for synergy and collaboration between municipal corporations.

2. LITERATURE REVIEW

Collaboration, coordination and partnership are an integral part of public management and business according to the complexity, division into segments of work processes and professionalism in organizations in general and services units in particular (Collaboration Roundtable, 2001; Koschmann, Kuhn and Pfarrer, 2012; Sullivan and Skelcher, 2017). A unit in an organization cannot be successful over time without partnership and collaboration with other business units (Mesquita, Ragozzino and Reuer, 2017; Tee, Davies and Whyte, 2019).

These types of collaborations between sectors, between organizational units, and between diverse bodies create a synergy. In this context, synergy means creating an organizational behavior and action, which make best use of each one. In this framework of synergy, the individual professional potential integrates to achieve common vision and objectives, which mean that the whole is more than the sum of its parts (Holubicik, 2015; Van Tulder and Keen, 2018).

The current management approach, which combines collaboration, is its natural continuation and response to management methods of the public administration and as a result of learning from the world of business management. The previous management practices (Public Administration – P.A., New Public Administration – N.P.M, and Post New Public Administration), along with their advantages, had several disadvantages. Among these disadvantages can be found – focusing on financial savings in the narrow sense rather than in service to the public, lack of coordination between the units of the organization and the focus on bureaucracy (Bercu, 2012; Christensen *et al.*, 2007; Van de Walle and Hammerschmid, 2011; Vigoda-Gadot, 2003). As a result, management methods developed that relate to the citizen as a customer and place him in the center. As a result, management methods developed that relate to the citizen as a customer and place him in the center (Alford and Hughes, 2008; Osborne, 2010; Osborne, Radnor and Nasi, 2013).

The professional literature refers to collaboration (as to the other related terms: partnership, coordination, cooperation, jointness, synergy, joint teamwork, reciprocal relations, co-opetition, and combination) and defines the benefits, gains, advantages, support work processes and the factors that facilitate and enable collaboration and overcome the obstacles that endanger it. These components include, among others, a supportive organizational environment, senior management commitment, a perception of importance and the need for collaboration, resources, communication, trust between the parties, leadership and capabilities (Ansoff, 1965; Le Pennec and Raufflet, 2018; Siroower, 1997; Tee, Davies and Whyte, 2019; Van Tulder and Keen 2018; Wyrwa, 2018).

The existence and presence of these components in different forms and intensities (depending on the nature of the organization, its areas of activity, its goals and the business/public environment in which it operates), enable the initiation and maintenance of collaborative processes between its various

internal units and external partners. On the other hand, the obstacles to collaboration are the “mirror image” of these components. In their absence, all or some of them (those that are most essential), will not allow the collaboration process. Their absence will prevent the beginning of collaboration, the initiation stage, locating and finding the right partners, defining the vision and goals of the partnership and implementing it accordingly (Olson, 2004; Basso *et al.*, 2019; Gray, 2004; Laegreid *et al.*, 2015).

2.1. Collaboration importance

Working with teams make it possible for employees to be more effective and efficient in their jobs than others who do their work individually (Adams, Roch and Ayman, 2005; Harrison *et al.*, 2003). The employees’ motivation increases due to collaborations and they are more responsible in their work. Collaboration challenges and encourages the employees to think together through brainstorming and empower them to share common objectives that support significant purpose and shared vision. Collaboration adds value to the group of employees working together. Likewise, collaboration supports equality between organizational employees by making it possible for each team member to express his/her position, to participate and to work up their ideas (Bang and Midelfart, 2017; Driskell *et al.*, 2006; Wegge *et al.*, 2012).

By encouraging teams’ members to think about collaborations, these employees could share their skills and abilities and receive feedback from other team members. Working in a team enables to overcome the gaps that could exist by working alone and reinforcing the weak points of each other. Collaborations enable a knowledge dissemination and distribution by knowledge pooling and expertise sharing. This knowledge amalgamation from a diversity sources enables a better process of problem-solving. When different and diverse skills and knowledge are assembled, together with a uniform and experienced group, then a whole larger than the sum of its parts is created (Hagedoorn, Lokshin and Zobel, 2018; McGuire, 2006).

Collaborations resulting from the consolidation of forces, knowledge and skills enable all those involved to see the overall picture. A suitable combination of team members from different and diverse backgrounds enables the existing diversity in such mixed teams to serve as a basis for leveraging differences and identifying new opportunities and ideas for the benefit of the entire group (Cross *et al.*, 2010; De la Sierra, 1995). Collaborations encourage an environment and a culture of learning among team members. Working together provides an opportunity to be exposed to forms of work, ways of thinking and ways of dealing with challenges and allows the participants to improve their skills and learn new abilities. Working in collaboration leads to connections between members of the staff and thus increases their commitment to colleagues and to

the workplace itself (Alter and Hage, 1993; Driskell *et al.*, 2006; Wegge *et al.*, 2012).

2.2. Management commitment

One of the most important and essential elements for creating success collaboration is the commitment of management in general and the commitment of senior management in particular. The very idea of collaboration must be the initiative of the organization's management or accept its commitment unconditionally from the stage of raising the idea of sharing (Bryson, Crosby and Stone, 2006).

This commitment is required throughout all stages of the sharing process – defining the need, identifying potential partners, selecting the optimal partner, creating trust, commitment and communication at the preliminary stage, defining a shared vision and building a set of shared goals and objectives derived from the shared vision. Establishment of joint teams in a highly professional manner, so they would serve the success of the process and avoids internal and external constraints as much as possible

Collaboration is a process of organizational change and sometimes is even threatening. Therefore, management must prepare in advance with a professional program of change management in order to deal with objections that may develop as a result of this change and lead this change process (Austin, 2000; OECD, 2006; Fasel, 2000).

Management's commitment to the process of collaboration will be examined in determining the policy, its dissemination and the declarations behind it, allocating resources accordingly, and assistance and willingness to resolve crises as they arise throughout the collaboration process. In addition, management commitment will be examined at the timing of crisis resolution and resolving conflicts between the work and/or management levels of the partnership in a way that strives to reach the goals of collaboration, realize its vision and find the commonalities between the parties.

Since collaboration involves many factors and stakeholders with different and sometimes conflicting interests, the commitment of management and its leadership is the framework that enables the continuation of the process rather than its failure. Senior management must show Leadership in order to harnessing all those involved in the process. Such harnessing is carried out on an ongoing and day-to-day basis, by giving a personal example to all the stakeholders, support and commitment for the goals and objectives that are set jointly (Collaboration Roundtable, 2001; Fasel, 2000).

Proper leadership of the sharing process must build and maintain cross-organizational work teams in accordance with the defined work processes and overcome traditional organizational bureaucracy to prevent undermining of the collaboration goals. Such leadership and committed management, understands

that joint work teams have organizational power to advance organizational goals, achieve shared objectives, promote efficiency and effectiveness and empowers both middle level management and employees, and contributes to their direct work (Collaboration Roundtable, 2001; Mattessich, Murray-Close and Monsey, 2008; Wanna, 2008).

2.3. Supporting organizational culture

Organizational culture that supports and facilitates collaboration arises from the policies and behavior of the organization's management and is not possible without its support as described above. Organizational culture includes vision, norms, concepts and values that underlie the work of an organization and serves as a normative framework for its ongoing conduct (De la Sierra, 1995; Gray, 1989; Mattessich, Murray-Close and Monsey, 2008).

Organizational culture enables the growth and development of the organization and, as such, enables processes of change that are committed to any organization that is not stagnant, including processes of collaboration. In the context of collaborations, organizational culture includes additional components such as encouraging cooperation and sharing, open and diverse communication channels, dissemination and distribution of information and knowledge, peer learning, willingness to accept changes, innovation, reward and recognition for ideas and initiatives and non-punishment in the event of failures resulting from these initiatives (Alford and O'flynn, 2012; Faulkner and Tallman, 2005).

Innovation is defined as the capacity of an organization to absorb new ideas or methods of action, including service, product, or work methods. Organizational culture that supports this and enables innovation, will probably also facilitate collaboration processes. Collaborations, and the changes involved, can certainly be considered organizational innovation as they meet this definition. Hence, an organization perceived by others and by itself as having innovative approaches can more easily cope with the challenges involved in adopting and implementing collaborations (Hernandez-Espallardo, Osorio-Tinoco and Rodriguez-Orejuela, 2018; Smorodinskaya *et al.*, 2017).

As many internal and external effective communication channels as possible are part of an organizational culture that supports collaboration. Communication channels between teams within the organization and partners allow information to flow freely. Open communication creates an atmosphere and culture of transparency that is absolutely essential in the process of building trust between the different teams, between the employees and the managements at various levels. A culture of open communication prevents misunderstandings that can cause crises and conflicts based on incomplete information and/or conclusions from incorrect or partial information analysis. Organizational culture that supports collaboration enables the creation of many diverse communication channels such as formal and informal networks, regular

meetings between colleagues and managers, regular forums, distribution of meeting summaries, ongoing updates in a variety of technological means, electronic data boards, an internal website and the use of instant messaging software (Austin, 2000; Fasel, 2000; Mattessich, Murray-Close and Monsey, 2008; OECD, 2006; Prescott and Stibbe, 2017).

Sharing information and knowledge between colleagues and work teams creates an infrastructure of learning in general and peer learning in particular, enriching knowledge, learning from the experience of others, learning lessons and disseminating insights for the use of all employees. A policy of reward, appreciation and feedback also creates a culture of willingness to contribute to the organization, willingness to accept changes, daring, new ideas and initiatives. Such a policy encourages the placing of the group/organizational interest before the personal interest. A culture that supports the acceptance of the different and the other encourages openness to a variety of opinions, ideas and the possibility of breakthroughs as a result (Austin, 2000; Hernandez-Espallardo, Osorio-Tinoco and Rodriguez-Orejuela, 2018; NSW, 2013; Tennyson, 2011).

2.4. Resources

On the subject of resources in the context of collaborations there are two aspects. The first is the need to allocate appropriate resources to promote collaboration. The second is the willingness of the employees and the managers to give up from their existing resources in order to facilitate the success of the collaboration.

The resources required for the collaboration include tangible resources (manpower, money, finance, time, materials, etc.) and intangible (authority, time, information, shared vision, organizational attention, clear and explained policy, etc.). Collaboration usually results from the need to supplement these and other resources. Full or partial lack of these resources on one side, and their existence in the other, constitute the basis for the majority of cases in order to create contacts for the purpose of collaboration. The need for sharing resources such as capital, enterprise assets, new markets, technology, a wide circle of customers, reputation, branding, etc. – creates the framework for the joint work and its character (Prescott and Stibbe, 2017; Roussos and Fawcett, 2000).

The partner organization managements must understand that collaborations require resources that need to be allocated in advance and adequately throughout the sharing process. Establishment and institutionalization of the sharing processes take time and the organizations' management must take into account the length of time required and not demand quick and partial results instead of quality. The natural process of building trust, interaction and communication processes between work teams through the assimilation of a new work structure, the study of joint work routines, the acquaintance of other employees and the

acceptance of different opinions – is significant in terms of time and money (Collaboration Roundtable, 2001).

The second aspect of resources refers to the willingness to relinquish one partner's share in order to achieve successful collaborations (Dessalegn *et al.*, 2018; Faulkner and Tallman, 2005). Giving up resources is primarily aimed at giving up ego, giving up temporary personal advancement in favor of advancing the entire team, and giving up personal interests against the interests of the group and the organization as a whole (Gray, 2004; Fink *et al.*, 2013).

The working assumption underlying these concessions is that giving up at an early stage will enable later recognition and reward and promotion on a larger scale, and the group and organizational interests ultimately advance the individual as part of the group no less than in the personal and narrow aspect. Collaboration requires giving up these intangible resources against future benefits and achievements.

The advantages of sharing in the concession stage are only appreciated in the future and within the framework of promises, hopes and aspirations. These achievements will become real only at the successful completion of the sharing process, while the relinquishment is required at the outset. As part of the sharing process, employees and managers are willing to prioritize the interests of the entire group to achieve a common goal and to relinquish personal advantages, change priorities, reduce control levels to enable the benefits, advantages and achievements of the entire group (Almog-Bar and Schmid, 2018; Dessalegn *et al.*, 2018; Falk and Fehr, 2003; Jacobson *et al.*, 2009).

3. RESEARCH

3.1. Hypotheses of the research

Hypothesis 1:

a) The more the managers consider collaboration between the corporations important; they will be more willing to forego resources (such as: finance, equipment, ego, time, etc.) in order to promote collaboration between municipal corporations.

b) As the need of managers for collaboration increases; they will be more willing to forego resources in order to promote collaboration between municipal corporations.

Hypothesis 2:

a) The more the organizational culture in the corporation is opened to changes; there is more willingness among its managers to forego resources.

b) The more the organizational culture encourages innovation; there is more willingness to forego resources.

c) The more the organizational culture supports collaborative management of employees; there is more willingness of managers to forego resources.

Hypothesis 3:

Managers who think that they have more resources at their job (e.g. information, tools essential for their work, feeling of success, etc.), will be more willing to forego resources required for collaboration between corporations.

Hypothesis 4:

a) The importance of collaboration between corporations is different at various roles. At the higher levels of management (Director General and Deputy Director General) the importance given to collaboration will be higher in comparison to middle-level management.

b) Furthermore, the managers at high level of management consider that the responsibility for the process is that of the municipality executive (and less of the managers themselves) compared to middle-level management.

Hypothesis 5:

There is a relationship between the different types of municipality ownership of the corporations (full or part) and the extent of importance given to collaboration between the corporations. When the municipality ownership of the corporation is full, the importance of collaboration increases.

Hypothesis 6:

The better the image of the corporation is in the opinion of its managers; their need for collaboration between corporations reduces.

Hypothesis 7:

As the need for collaboration increases, the managers will want the municipality executive to take more responsibility for the process in comparison to their own responsibility.

Hypothesis 8:

a) The more the organizational culture in the corporation encourages innovation; the need for collaboration on the part of its managers' increases.

b) The more the organizational culture supports collaborative management of employees; the need for collaboration increases.

c) The more the organizational culture is opened to changes; the need for collaboration increases.

Hypothesis 9:

The need of the managers for collaboration between the corporations is different in accordance with the specific area of activity of the corporation. Corporations dealing with leisure time, sport and tourism will have a greater need for collaboration than those involved in education and welfare.

3.2. Method

In order to test the hypotheses stated above, to collect data which will constitute the basis of a comprehensive research to be carried out and to provide a framework of a model for collaboration between the municipal corporations,

research has been conducted among the executive level of the Tel-Aviv municipal corporations.

The Tel-Aviv municipality owns thirty subsidiary corporations. These municipal corporations engage in a diverse and wide variety of areas, including: infrastructure, urban development, tourism, sport, recreation and leisure, conferences, transportation and parking, construction of public buildings, urban renewal, projects execution, commerce and economic initiatives, education and welfare.

3.3. Participants

The participants in this research were ninety senior executives of the municipal corporations, general managers, assistant managers, finance managers, legal advisors, operation managers, etc. (all the target population).

The questionnaire was sent to all the managers in the Tel Aviv-Yafo municipal corporations to enable the researcher to receive replies from as wide a group as possible, as well as the information required. All the managers are thus exposed to the research project enabling them to be linked to the process of collaboration. The reply to the questionnaires by the managers connected them to the process of sharing and collaboration and to understand and be familiar with the terminology used. In addition, the survey and the replies to it is a part of the tools of the change management process which took place in the corporations.

A questionnaire was sent to them by organizational e-mail containing questions concerning present inter-corporation collaboration, extent of importance they attribute to collaboration, necessity of collaboration, extent of responsibility of corporations' senior executives vs. the responsibility of municipality executive. The extent they are willing to forego resources for the purpose of achieving collaboration, organizational attitudes, such as: encouraging innovation, openness to accept changes, etc.

In the process of constructing the questionnaire, attention has been paid to relevant variables. Before sending the questionnaire, a letter was sent with an explanation of the context of the research. The questionnaire included closed questions and one open-ended question.

The questionnaire was sent by organizational e-mail to all the participants via a survey program that guarantees anonymity of the participants. I sent an invitation to 90 managers to participate in this research; 79 managers completed the questionnaire, giving a response rate of 88 percent.

49.4% of the managers are senior managers (Directors General, Deputy Directors General); 50.6% hold other senior positions (e.g. Finance Department Directors, Legal Advisors, Operation Directors, etc.). 40.5% of the respondents are women and 59.4% men. The average years in the corporation of all respondents is 8.9 years (SD = 7.4). The average numbers of years in their

present position is 10.1 years (SD=8.3). The average number of years of the senior managers is 7.4 years (SD=5.5) and the average number of years of other senior positions is 10.3 years (SD=8.7). 39.7% of the managers are active in the area of infrastructure, 25.6% of the managers' work in the corporations dealing with leisure time and sport, 14.1% in corporations dealing with culture, 12.8% in tourism and conferences and the others in education and welfare. 80.5% of the managers work in the corporations fully owned by the municipality and the others in corporations in partly owned by the municipality.

3.4. Measures

All the measures are based on subjective responses of the participants using the "Likert scale" of five levels. The scale is from 1-5 and the possibilities of the answers are from 1 – "to a very slight extent" to 5 – "to a very great extent".

Whenever possible, I used questionnaires that had already appeared in the literature with established reliability. The reliability of the multiple item indexes was estimated using Cronbach's alpha coefficient.

3.4.1. Dependent variable

Willingness to forego resources in order to promote collaboration

As was mentioned, concerning implementation, collaboration consist elements including the ability to cooperate, to grant, to make possible, to give the need and desire for collaboration priority to your own wishes. Therefore, the variable "willingness to forego resources in order to promote collaboration" is a very important variable and was selected to be the dependent variable in this research. In order to measure the willingness to forego resources, I operationalized specific questions such as: willing to forego time, equipment, ego, etc. (Bryman and Bell, 2015, p. 151). Willingness to forego resources in order to promote collaboration was evaluated by 8 items. Internal credibility of the scale (coefficient alpha) was $\alpha = 0.84$.

3.4.2. Independent variables

Collaborative management

Collaborative management is measured by three questions, such as "To what extent does the corporation at which you work include the employees in the decisions making processes related to the corporation". This variable was taken from the organizational climate questionnaire of Brown and Leigh (1996) and was changed to suit this research. The internal reliability of the scale (coefficient alpha) is $\alpha = 0.83$.

Encouraging innovation

Encouraging innovation in the corporations was also taken from the organizational climate questionnaire of Brown and Leigh (1996) and was adjusted to this research. The internal reliability of the scale (coefficient alpha) is

$\alpha = 0.89$. Among the questions were: “To what extent does the corporation at which you work encourage new initiatives” and “To what extent does the corporation at which you work devote time to the consideration of ideas proposed by employees”.

Openness to Change

Openness to change in corporations was evaluated by 3 items. The internal reliability of the scale (coefficient alpha) was $\alpha=0.96$. Questions asked included: “To what extent does the corporation at which you work, processes of change are encouraged” and “My colleagues in the corporation tend to accept change in work processes relatively easily.”

Resources the manager has at his job

This measure – resources the manager has at his job – has been constructed in accordance with Hobfoll’s (1989) model. The questionnaire contains 7 resources, which fall into four categories: objects (e.g., tools for work), conditions (e.g., people I can learn from), personal characteristics (e.g., control over the situation) and energies (e.g., feeling of success). Respondents were asked to indicate how much of each resource they had in their work. Cronbach α for the resources scale was .78.

Data from five additional questions was collected: the extent to which collaborations currently exist between the municipal corporations. How important is collaboration between municipal corporations. To what extent, is there a need for collaborations between municipal corporations? To what extent the manager at the municipal corporation is responsible for the promotion of collaboration between municipal corporations? To what extent the municipality senior management is responsible for the promotion of collaboration between municipal corporations?

Four questions captured data related to the image of the corporation at which the managers work. Finally, one open-ended question provided an opportunity for respondents to offer comments.

3.4.3. Control variables

Control variables were evaluated in the same questionnaire.

Demographic and economic variables are: Gender, Role, Ownership and Area of activity of the corporation – were mapped for each respondent in advance and were controlled by the researcher.

Seniority – the respondents were required to state the number of years of seniority they have in their role and in the corporation in which they are employed.

3.5. The Research Design

After the data has been collected, at the stage of data analysis, the relationship between the variables has been evaluated in accordance with the Spearman coefficient.

In addition, in this research I also used ordinal logistic regression. It is a statistical analysis method that can be used to model the relationship between an ordinal response variable and one or more explanatory variables. An ordinal variable is a categorical variable for which there is a clear ordering of the category levels. The explanatory variables may be either continuous or categorical. I also ran an analysis of independent samples t-tests. The purpose of this analysis is to test the differences of means among the groups.

3.6. Results

Table 1 shows the distribution of managers' response. Table 2 shows the descriptive data of the research variables, their reliability, median and reliability coefficient. Table 3 shows the Spearman coefficients between the research variables.

Table 1. Distribution of Managers' Response

| | Great extent | Moderate extent | Slight extent |
|--|---------------------|------------------------|----------------------|
| Collaborations currently exist between the municipal corporations. | 6.9% | 21.9% | 71/3% |
| The important of collaboration between municipal corporations. | 92.2% | 7.8% | |
| The need for collaborations between municipal corporations. | 87.1% | 11.7% | 1.3% |
| The manager in the corporation is responsible for the promotion of collaboration process between municipal corporations. | 72% | 22.7% | 5.4% |
| The municipality senior management is responsible for the promotion of collaboration process between municipal corporations. | 93.5% | 3.9% | 2.6% |
| There is collaboration between all of the position holders at the corporation. | 61.3% | 32% | 6.7% |
| There is a desire to contribute at my work place. | 93.2% | 6.6% | 0.2% |

Source: computed by author

Table 2. Statistical Characteristics of the Research Variables

| The variable | items | median | Reliability coefficient | Number of subjects |
|--------------------------------------|-------|--------|-------------------------|--------------------|
| Willingness to forego Resources | 8 | 3.43 | 0.84 | 75 |
| Collaborative Management | 3 | 3.67 | 0.83 | 75 |
| Encouraging Innovation | 3 | 4.33 | 0.89 | 75 |
| Openness to change | 3 | 3.04 | 0.96 | 75 |
| Resources the manager has at his job | 7 | 3.86 | 0.78 | 74 |

Source: computed by author

Hypothesis 1a proposed that the more the managers understand that collaboration between corporations is important; they are more willing to forego resources (e.g. information, equipment, ego, etc.). As shown Table 3, there is a significant relationship between the importance of collaboration and the managers willingness to forego resources ($r=.25$, $p<.05$ – where r is the Spearman coefficient). Thus, **hypothesis 1a has been confirmed**.

Hypothesis 1b proposed that when the need for collaboration increases, the willingness of managers to forego resources (e.g. finance, equipment, ego, etc.) will increase, too. As shown in the Table 3, it is apparent that there is a significant relationship between the need for collaboration and the willingness to forego resources ($r=.34$, $p<.001$). Thus, **hypothesis 1b has been confirmed**.

Hypothesis 2a proposed that the more the organizational culture in the corporation is opened to changes; the willingness to forego resources will increase. According to Table 3, it appears that there is a significant relationship between openness to changes in corporation and their managers willingness to forego resources ($r=.33$, $p<.001$). Thus, **hypothesis 2a has been confirmed**.

Hypothesis 2b proposed that the more the organization culture encourages innovation, there will be an increase in the willingness to forego resources. As shown in Table 3, it appears that there isn't a significant relationship between encouraging innovation and the willingness to forego resources ($r=.15$ n.s). Thus, **hypothesis 2b has been refuted**.

Hypothesis 2c proposed that the more the management of a corporation is a collaborative management of employees; the managers will increase their willingness to forego resources. In Table 3, it shows that there isn't a significant relationship between collaborative management and the willingness to forego resources ($r=.22$, n.s.). Thus, **hypothesis 2c has been refuted**.

Table 3. Relationships between the Research Variables

| # | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|--------|--------|--------|-------|-------|--------|--------|--------|-------|----|
| 1. Resources forego | - | | | | | | | | | |
| 2. Collaboration importance | 0.25* | - | | | | | | | | |
| 3. Need for collaboration | 0.34** | 0.68** | - | | | | | | | |
| 4. Corporation managers responsibility | 0.17 | 0.25* | 0.41** | - | | | | | | |
| 5. Municipality managers responsibility | -0.11 | 0.18 | 0.29* | 0.05 | - | | | | | |
| 6. Collaborative management | 0.22 | 0.17 | 0.32** | 0.26* | 0.01 | - | | | | |
| 7. Innovation | 0.15 | 0.25* | 0.42** | 0.23 | 0.19 | 0.73** | - | | | |
| 8. Openness to change | 0.33** | 0.01 | 0.29* | 0.13 | 0.02 | 0.62** | 0.66** | - | | |
| 9. Resources | 0.28* | 0.18 | 0.15 | 0.22 | -0.15 | 0.52** | 0.49** | 0.38** | - | |
| 10. Corporation image | -0.02 | 0.11 | 0.11 | -0.09 | 0.00 | 0.39** | 0.46** | 0.33** | 0.30* | - |

P < .05 * and P < .001 ** are the levels of significance. For example, if there is 5% level of significance or less, it means that there is sufficient evidence that the null hypothesis is false (Henkel, 1976).

Source: computed by author

Hypothesis 3 proposed that the more managers realize that they have resources at their work (e.g. resources essential for their work, feelings of success, etc.); they will be more willing to forego resources required for collaboration (e.g., ego, time, etc.). Table 3 shows that there is a significant relationship between the perception of resources that managers have at their jobs and their willingness to forego resources in order to promote collaboration ($r=.28$, $p<.05$). Thus, **hypothesis 3 has been confirmed**.

In order to examine the effect of the independent variables: collaborative management, encouraging innovation, openness to change and resources the manager has at his job on the likelihood of the **manager's willingness to forego resources** in order to promote collaboration, we used the ordinal logistic regression (see Table 4).

Table 4. Results of the Ordinal Logistics Regression

| Independent variables | ordered log-odds (logit) regression coefficients |
|-------------------------------------|--|
| Gender | -1.534* (0.489) |
| Encouraging innovation | 0.078 (0.384) |
| Collaborative management | -0.073 (0.398) |
| Openness to Change | 0.221 (0.304) |
| resources the manager has | 1.234* (0.505) |
| (pseudo R ²) Nagelkerke | 0.281 |
| -2 log likelihood | 138.848* |
| χ^2 | 22.197 |
| df | 5 |
| N | 79 |
| p< 0.05* | |

Source: computed by author

In this analysis, for a one unit increase in the predictor, the response variable level is expected to change by its respective regression coefficient in the ordered log-odds scale while the other variables in the model are held constant. Regarding gender – this is the ordered log-odds estimate of comparing females to males on expected levels of willingness to forego resources. The ordered logit for females being in a higher category is -1.534 less than males when the other variables in the model are held constant. That means, that if manager is a male, then the possibility to change category of foregoing resources will increase. As to the resources a manager has, a one unit increase in this variable would result

in a 1.234 unit increase in the ordered log-odds of being in a higher willingness to forego resources category while the other variables in the model are held constant. In other words, the resources he/she has increase significantly the degree of willingness to forego resources in order to achieve collaboration. All the other variables are not significant. Moreover, the regression model is statistically significant and explains the 28.1% of the variation in foregoing resources. Thus, the regression also shows that **hypothesis 3 has been confirmed**.

Hypothesis 4a proposed that at various levels of management, the importance of collaboration between corporations will differ. In the higher levels of management (Director General, Deputy Director General), the importance of collaboration will be higher in comparison with other managers (middle-level management) in the corporation. I carried out t-test and the comparison is not significant ($F=0.08$, n.s). There is no difference among the managers in relation to the importance of collaboration. Thus, **the hypothesis was rejected**.

Hypothesis 4b proposed that there is a connection between the role of a manager in a corporation, and his attitude towards the responsibility over the process. The managers at high level of management think that the responsibility over the process is that of the municipality executive. In contrast to the hypothesis, from the t-test analysis I learn that the senior managers (Director General or Deputy Director General) do not think that the responsibility for the process is that of municipality executive. On the contrary, the middle-level managers in the corporations consider the role of the municipality executive in advancing collaboration as being more significant and important ($F=4.34$, $p<0.05$). Thus, **the hypothesis has been rejected** and the analysis is significant, but in the opposite direction to that expected.

Hypothesis 5 proposed that there is relationship between the type of ownership (full or part) and the attitude toward importance of collaboration between the corporations. The analysis shows that managers in corporations that have full ownership by the municipality, consider that collaboration between corporations is more important as compared to managers in part owned corporations ($F=4.87$, $p<0.05$). Thus, **hypothesis 5 has been confirmed**.

Hypothesis 6 proposed that the better the image of the corporation in the opinion of its managers, their need for collaboration between the corporations reduces. According to the correlation table (Table 3), shows that there is no relationship between the corporation's image in the opinion of its managers and their need for collaboration ($r=.11$, n.s.), thus, **hypothesis 6 has been rejected**.

Hypothesis 7 proposed that as the need for collaboration increases, the managers desire that the municipality executive take more responsibility for the process. According to Table 3, it appears that the more there is need for collaboration there is a greater need for the municipal executive to be involved in advancing collaboration ($r=.029$, $p<0.05$). Therefore, it can be said that **hypothesis 7 has been confirmed**.

Hypothesis 8a proposed that the more the organizational culture encourages innovation, the need of managers for collaboration increases. According to table 3, it appears that there is a significant relationship between innovation and the managers' need for collaboration ($r=42$, $p<.001$). Thus, **hypothesis 8a has been confirmed**.

Hypothesis 8b proposed that the more organizational culture supports collaborative management of employees; there will be an increase in the need of the managers for collaboration. According to Table 3 it appears that there is significant relationship between collaborative management and the need for collaboration between the corporations ($r=.32$, $p<.001$). Therefore, **hypothesis 8b has been confirmed**.

Hypothesis 8c proposed that the more organizational culture is opened to changes, the managers' need for collaboration increases. According to Table 3, the relationship is significant ($r=.29$, $p<.05$). Thus, **hypothesis 8c has been confirmed**.

Hypothesis 9 proposed that managers' need for collaboration will change according to the areas of activity of each corporation. The variance analysis shows that there are differences between the areas of activity of the corporations regarding the need for collaboration. Those corporations involved in the areas of leisure time and sport (Mean=4.58 SD=0.51) consider that there is more need for collaboration than corporations active in the areas of education and welfare (Mean=3.67 SD=0.52) ($F=2.55$, $p<0.05$). Furthermore, the managers active in the areas of tourism and conferences also consider that there is more need for collaboration, and they are followed by managers in the areas of infrastructure and culture. Thus, it can be said that **hypothesis 9 has been confirmed** and that there is a difference between the need for collaboration in accordance with the areas of activity of each corporation.

4. FINDINGS

The results indicate the following findings:

- A corporate manager's significant majority (92%) believe in the importance of collaboration between municipal corporations. A similar percentage of managers (87%) thought that such collaboration is required. On the other hand, a low amount of managers (less than 30%) estimates that there are actual collaborations in practice (only 6.9% think that there is a lot of collaboration and 21.9% think there are medium-level partnerships).
- There is no difference at all between the different management levels about their perception of the importance or the need of collaborations.
- Almost all managers (93%) note to a very great extent/great extent that they will be prepared to contribute to collaboration in their place of work and that they have enough resources for it.

- The managements of corporations attach high importance to the management responsibility and role in the sharing process. There is a clear difference between the part of the municipal corporation managers for promoting collaboration and the function, combination and obligation of the senior management in the municipality.

- More than 70% of the managers think that the corporation management has a very significant role to advance and foster the partnership.

- The responsibility and the accountability of the senior management in the municipality is most important for the implementation of the process of collaboration between the municipality corporations (93.5%).

- More than half of the managers (60%) think that collaborations in practice exist within the corporations.

- The involvement and the contribution of the senior management of the Tel-Aviv municipality are of high importance to the advancement of collaborations. In contrast to the high senior management at the municipality corporations, the middle level management executives assign great importance to this contribution.

- The managers consider that it is right to forego resources (such as ego, finance, and more indispensable resources.) to promote collaboration between municipal corporations.

- Analysis of the independent variables' effects (collaborative employee management, innovation, the amount of resources that the managers have at their and the level of openness to change) on the dependent variable – the readiness and willingness to forego resources in order to achieve collaboration in municipal corporations, presents the following:

- a) The variable “perception of the resources held by the manager” (such as a feeling of success and tools essential for work) has a major effect on willingness to forego resources in order to implement collaboration between municipal corporations; this effect is significant and greater than that of any other independent variables in this survey;

- b) Therefore, as the managers feel that they have sufficient resources (such as, tools, information, a feeling of success, recognition of accomplishments), they will be more willing to forego other resources (such as, ego, equipment or finance) in order to get collaboration in municipal corporations.

- There is a strong relationship between the corporation organizational culture which encourages collaborative management, openness to change and innovation, to the managers' willingness for collaborations between corporations.

- Managers at those municipality corporations which are fully owned by the municipality are more obligated to the issue of collaboration as compared with to managers in partially owned corporations.

There is difference in the willingness for collaborations between corporations in diverse areas of activity. The greatest need for collaboration was in corporations in the field of sports and leisure. A moderate need to collaborate was in domains of tourism, culture, conferences and infrastructure corporations. The lesser level was in education and welfare corporations.

5. DISCUSSIONS

For the purpose of estimating and examining the findings from the quantitative research, they can be classified into several groups:

- The need for collaboration.
- The importance of collaboration.
- Management commitment to the sharing process.
- Supporting organizational culture.
- Existing of resources.

The survey results show that managers understand to a large extent the importance and need for collaboration. In the literature reviewed in this study, reinforcement can be seen in these parameters by emphasizing the advantages of sharing and the benefits that emerge from it. The literature relates to advantages in collaboration such as breaking into new markets; building new joint capabilities; technology sharing; reduce competition; estimating competition threats in research and development; resource sharing; economies of scale; knowledge sharing; access to capabilities; opportunities to learn, adopt and to develop skills (Alter and Hage, 1993; De la Sierra, 1995; Collaboration Roundtable, 2001).

The managers' response about the importance and need for collaboration, can be explained by the advantages and benefits presented in the literature. Corporate executives understand from their experience and the business and organizational environment in which they operate, that collaboration has the potential to improve work processes and business results. In addition, the managers' response can be explained by the changes in the management theories and adjustment as well as revolutions in technology that surrounds them with the issue of collaboration, communication between people, companies and organizations – as mentioned at the beginning of the study.

The management commitment in general and senior management in particular is mentioned in the literature as one of the factors that enable collaboration and as one of the most important success factors. Without senior management commitment to the process, the chances of successful collaboration are almost nonexistent. This commitment begins from the initiation of collaboration, through its promotion to its very existence.

The commitment of senior management is reflected by a policy statement; resource allocation; involvement in the decision-making process; leadership;

crisis and dispute resolution; recognition and reward (Austin, 2000; OECD, 2006; Fasel, 2000; Collaboration Roundtable, 2001).

The commitment of management in general and the municipality's management in particular, mentioned in the literature, receives support in response to the survey and its results. This relationship will be reflected in the model proposal and the management actions for support and promotion will be accepted by the managers of the corporations as a required and logical part of the process.

The organizational culture as a parameter in the process of collaboration is mentioned in several contexts in the literature reviewed (De la Sierra, 1995; Faulkner and Tallman, 2005; Gray, 1989; NSW, 2013; Collaboration Roundtable, 2001, Vigoda-Gadot, 2003):

- Organizational culture must receive the proper attention when selecting partners.
- The organizational culture is mentioned as one of the facilitators for collaboration to take place and to exist on an ongoing basis.
- Organizational culture makes it possible to accept changes and adaptations of new ideas beyond the constant and regular patterns of the organization.
- An organizational culture that does not know how to accept and deal with processes of participation and change can in some cases be an obstacle and does not enable collaboration.

Organizational culture is the infrastructure and platform on which growth and development of collaboration is possible. There is a parallel between the literature and the managers' answers regarding the importance of the organizational culture and its place in the success of the collaboration.

Organizational culture includes the vision, norms, perceptions and values on which the organization is based. Organizational culture has a significant direct and indirect impact on the organization's ability to achieve its goals. Therefore, a supportive organizational culture enables collaboration, whether in the directives and behavior of managers and employees, or in the allocation of appropriate resources. Such organizational culture will facilitate the success of the concept of collaboration and the operative actions that result from it.

On the subject of resources, the literature mentions the resources required for collaboration (such as organizational attention, manpower, finance, time). This refers to the resources that partners need to invest in the process of sharing and implementing the partnership projects themselves. Special emphasis is placed on the fact that stakeholders must be aware of and take into account the investment of time required to promote collaboration activities and also for the duration of time until sharing results will be achieved (Prescott and Stibbe, 2017; Collaboration Roundtable, 2001; Tennyson, 2011).

On the other hand, the managers note that they are willing to give up and forego resources in order to achieve collaboration. There are significant interrelationships between willingness to give up resources and the importance of sharing, openness to changes in the corporation and their existing resources.

The managers' answers show that as part of their willingness to forego resources, they are prepared to give up ego in order to promote collaboration. The literature shows that the ego is one of the main obstacles to collaboration between people and sometimes it is the factor that impairs interaction between people in general and co-operation specifically (Gray, 2004; Fink *et al*, 2013).

The findings on this subject do not match what is stated in the literature (and common sense as well). The explanation for this may be that those who respond to the survey in general and managers in particular, will not be willing to declare that they have ego and/or ego is a factor that interferes with communication and collaboration. The ego is perceived as a negative factor and most respondents define themselves without ego at all, although in practice the situation is quite different from our experience and familiarity with human nature.

6. CONCLUSIONS

The data which emerges from the findings shows that on the one hand, collaboration is important and necessary, and on the other hand, the number of collaborations in practice is very low. This finding of need and importance versus the lack of collaborations points to existing and unexploited potential. Therefore, it can be learned that there is room and considerable potential to offer a model of collaboration.

This potential, along with the finding that managers are willing to contribute to their workplace and that they have the resources to do so, points out that the idea of a model for collaboration could be accepted positively.

We can learn that there is a need for collaboration and that it is important, and that no significant collaboration exists, but there is a willingness among the municipal corporation directors to promote issues. The aggregate of these four topics gives the assessment that the idea of a model of collaboration has potential and belief that there is a place for its realization between the municipal corporations in the city of Tel Aviv-Yafo.

In order to enable the collaboration and partnership to begin, to set out and to achieve the expected results, an enabler and supportive organizational environment is required. This organizational environment includes the following elements: vision, goals and objectives, commitment of senior management, recognition and reward, remuneration, training, etc.

After (or at the same time) achieving familiarity and acquaintance between corporations and preparing a supportive organizational environment, some mechanisms are needed to identify issues around which collaboration can be

created. These mechanisms need to be permanent, ongoing and operating on a regular basis in order to offer long-term partnerships and collaboration.

In the process of designing and formulation of the model proposal, it is necessary to consider and take into account all that collaboration enablers – roles and responsibilities, resources, communication, commitment, accountability, trust and abilities.

It is also necessary to prepare accordingly and take into account, to the extent possible, the possible obstacles – lack of trust, cultural and organizational differences, conflicts of priorities and interests, fear of change, gaps in vision and goals, lack of management commitment, lack of clear definitions, failure to allocate resources, lack of communication in general and interpersonal communication in particular.

The municipal environment includes characteristics that are advantageous for initiating and promoting collaboration. Managers and employees operating in such municipal environments are naturally committed to the senior municipal management. The municipality, being a hierarchical administrative body, dictates work routines and procedures that express this commitment.

It will be appropriate to begin the implementation of collaborations between corporations in the area of sports and leisure – where the need is greater; to continue with the areas of tourism, conferences, culture and infrastructure; and to end with the education and welfare corporations.

In the context of the ego, we do not have to get the managers' answers about the ego as they exist. In this area, we must rely on the literature and common sense, and consider how to deal with the ego in the process of building and implementing the proposed model for collaboration. The model and its actual implementation should find ways to bypass reduce and/or remove the ego in order to enable the cooperation to succeed.

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THE REPORT OF FINDING AND SANCTIONING THE CONTRAVENTION. PROBLEMS REGARDING THE LEGAL NATURE AND THE NULLITY REGIME

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Abstract

The contravention finding report is the authentic document drawn up by a public agent that establishes the commission of an offense and identifies the offender. When the finding agent also has the competence to apply the contraventional sanction, through the contravention finding report, the contraventional sanction shall also be applied.

The issue of the legal nature of the report of finding and sanctioning the contravention is a controversial topic in the Romanian legal doctrine. The majority of authors view this report as a unilateral administrative act of an individual nature, this opinion being resonant with the jurisprudence of the Supreme Court and of the Constitutional Administrative Court. Other authors consider the report of finding and sanctioning the contravention as a civil procedural act or an act of a mixed legal nature.

Another controversial issue is that regarding the grounds of nullity of the report of finding and sanctioning the contravention. In the circumstances in which the majority opinion considers this report to be a unilateral administrative act of an individual nature, the question of nullity is circumscribed to the general legal regime of nullity in administrative law. In particular, the Government Ordinance no. 2/2001 on the legal regime of contraventions distinguishes between the relative nullity and the absolute nullity of the report of finding and sanctioning the contravention. Although criticized by some authors, this distinction is also recognized in the jurisprudence, the High Court of Cassation and Justice ruling several decisions in order to determine the limits and content of the grounds for nullity of the report of finding and sanctioning the contravention.

The article analyses, in a critical perspective, these controversial issues in relation to the main doctrinal approaches and the jurisprudence trends in this field.

Keywords: *report; finding the contravention; legal nature; nullity causes.*

JEL Classification: K4

1. INTRODUCTION

The administrative-contraventional liability is the main form of administrative accountability, which occurs only in the case of committing an act expressly qualified by a normative act as a contravention (Petrescu, 2009, p. 587). The framework normative act that currently regulates the administrative-

contraventional liability is the Government Ordinance (G.O.) no. 2/2001 on the legal regime of contraventions (published in the “Official Gazette of Romania”, Part I, No. 410 of July 25, 2001), as subsequently amended and supplemented.

According to the provisions of article 1 from G.O. no. 2/2001, “a contravention is the deed committed with guilt, established and sanctioned by law, ordinance, by decision of the Government or, as the case may be, by a decision of the local council of the commune, city, municipality or district of Bucharest Municipality, of the county council or of the General Council of Bucharest Municipality”.

The lawfulness of contraventional sanctioning is one of the aspects of the principle of lawfulness in civil matters. This means the possibility of applying the contravention sanctions established by normative acts, as well as the drafting and issuing of those civil normative acts in compliance with the observance of the clauses stipulated by the legislator (Vedinaş, 2015, p. 308).

The doctrine emphasized that the principle of lawfulness in contravention matters involves two aspects: a) *the lawfulness of contravention*, according to which the contravention is established by laws, Government Ordinances, Government decisions and other normative acts provided by law; b) *the lawfulness of the sanctioning of the contravention*, which means the possibility of applying the sanctions of contravention established by normative acts, as well as the drafting and issuing of those civil normative acts, observing the stipulations stipulated by the legislator (Vedinaş, 2015, p. 308; Catană, 2017, p. 420).

2. FINDING THE CONTRAVENTION

The finding of a contravention involves all the activities carried out in order to identify an act of contravention and the person who committed it, the filling in of the act establishing the contraventional responsibility, and the application of the sanction. A narrow sense of the notion of contravention must be accepted, which means “only the actual finding of an illicit civil contravention and of the responsible person, not including the application of the sanction” (Grigorescu, 2017, p. 123).

According to Article 15 paragraph (1) from G.O. no. 2/2001, “the contravention shall be established by a report concluded by the persons specified in the normative act that establishes and sanctions the contravention, generally referred to as finding agents”. If a person commits several contraventions found at the same time by the same finding agent, a single report shall be concluded (Măţă, 2019, p. 280)

The finding and application of contraventional sanctions must respect the following principles: a) the principle of the lawfulness of contraventional sanctions; b) the principle of establishing contraventional sanctions compatible with the moral-juridical conception of the society; c) the principle of

individualisation of contraventional sanctions; d) the principle of the personality of the contraventional sanctions; e) the principle of the uniqueness of the application of contraventional sanctions (Hotca, 2012, p. 109).

The finding agent is the body or person responsible for establishing the commission of the contravention in a particular area of activity, so that he/she exercises through his/her office a part of the public authority. As a rule, the finding agent is a natural person, but may also be a collegial body, as is the case with the National Audiovisual Council (Apostol Tofan, 2015, p. 405).

Some finding agents have a general competence within the meaning that their ability is not the result of a special normative act, while others have a special competence, ascertaining and sanctioning contraventions expressly stipulated in special normative acts. According to article 15 paragraph (2) from G.O. no. 2/2001, the following may be finding agents: a) Mayors; b) special officers and non-commissioned officers within the Ministry of Home Affairs; c) the persons empowered for this purpose by ministers and other heads of central public administration authorities, by prefects, presidents of the county councils, mayors, by the general mayor of Bucharest Municipality, as well as by other persons under special laws.

For example, the mayor has general competence, while officers and non-commissioned officers within the Ministry of Home Affairs have special jurisdiction over contraventions regarding: “defence of public order; the traffic on public roads; general trade rules; selling, circulating and transporting food and non-food products, cigarettes and alcoholic beverages; other fields of activity established by law or by Government decision “(G.O. no. 2/2001, article 15 paragraph (3)).

Regardless of the competence of the finding agents, they generally carry out the following activities: they check whether it is competent to find and sanction the offense committed; identify the perpetrator; explain to the perpetrator the committed deed, its severity and the sanction that may be applied to him/her; verify whether material damage has been caused by the contravention or the seizure measure is imposed; establish the legal framing of the deed; fill in the contravention finding report form (Alexandru, Cărauşan and Bucur, 2009, p. 431; Măță, 2019, p. 281).

The rules of proficiency with regard to the finding agents are rules of public order, so that “the non-observance of the competence is sanctioned with the absolute nullity of the report, which can be claimed *ex officio* by the court” (Ursuța, 2010, pp. 116- 117).

3. THE REPORT OF FINDING AND SANCTIONING THE CONTRAVENTION

3.1. Content and legal nature

The report of finding and sanctioning the contravention is an official and authentic document. It is drawn up by a public agent as a representative of the state or of the local community and produces legal effects without the need for any other formality of approval or confirmation (Vedinaş, 2015, p. 317). Any report is drawn up according to a standard model set out in the normative acts according to the specific nature of the sanctioned offense (Măță, 2019, p. 282).

The contraventional report must necessarily include the following elements provided by article 16 paragraph (1) from G.O. no. 2/2001:

- a) date and place where it is concluded;
- b) last name, first name, the quality and the institution to which the finding agent is a member;
- c) last name, first name, domicile and personal identification number of the offender;
- d) a description of the contravention deed, indicating the date, time and place where it was committed, as well as showing all the circumstances that may serve to assess the seriousness of the deed and to assess the possible damage caused;
- e) indication of the normative act establishing and sanctioning the contravention;
- f) the indication of the insurance company, in case the deed caused the occurrence of a traffic accident;
- g) the possibility to pay, within 15 days from the date of handing over or communicating the report, half of the minimum fine provided by the normative act;
- h) the term of appeal and the court to which the complaint is filed.

If the offender is a foreign national, a person without a nationality or a Romanian citizen residing abroad, the following data shall be mentioned: the series and number of the passport or of other document of crossing the state border, the date of its issuance and the issuing state (G.O. no. 2/2001, article 16 paragraph (1¹)). Other additional information is required when the offender is a minor, such as the identification data of the parents or of the legal guardians must also be recorded in the report.

Any change in the content of the contravention finding record, in the form of a subsequent erasure or addition, must be certified by the finding agent under signature.

The report shall be signed on each page by the finding agent and by the offender. The signature of the finding agent shall be by hand on the printed form of the report, even in cases where the finding of contravention is made by means

of approved technical means, and the finding report shall be concluded in the absence of the offender after its identification on the basis of the data provided from a computer identification system for individuals, as it can be electronically generated and signed (Măță, 2019, p. 284).

The legal nature of the contraventional report is a subject of controversy, in the context of the tendencies of autonomy of the contraventional right in relation to administrative law (Ursuța, 2018, p. 94). The main opinions expressed were within the meaning of qualification of this document as: a) a procedural contraventional act; b) a unilateral administrative act of sanctioning; c) an administrative act that distinguishes the illicit act and the offender; d) an administrative act of authority; e) an act of mixed legal nature, being both an administrative act and an act of contraventional procedure (Apostol Tofan, 2015, p. 405).

The majority opinion in the doctrine, to which we agree, is that the contravention report is a unilateral administrative act of individual character (Măță, 2019, pp. 281-282). By its content, the contraventional report corresponds to all the features specific to the typical administrative act, being an administrative act that is issued by a public authority and is subjected to a regime of public law (Vedinaș, 2018, p. 470).

We point out that the authors who attribute another legal nature to the contraventional report do not deny that this document is an administrative act. For example, the contraventional report is accepted as an administrative act, but which presents “certain specific characteristics” because “we cannot ignore the fact that it is in essence the act of finding a contravention, a distinct form of the illicit” (Ursuța, 2010, p. 221). The opinion that states that the report is a procedural act of contravention, emphasized that this is a procedural act because “through this act part of the activity of contraventional liability takes place, similar to the activity of criminal liability” (Hotca, 2012, p. 294).

An additional argument regarding the qualification of the legal nature of the contraventional report is also the constant jurisprudence of the courts and of the Constitutional Court.

For example, by Decision no. 6/2015 of the High Court of Cassation and Justice – The competent body to judge the appeal in the interest of the law (published in the Official Gazette of Romania, Part I, No. 199 of March 25, 2015), the Supreme Court held that: “the contraventional report, materializing a manifestation of unilateral will of a public authority (through the persons acting as finding agents), is a unilateral administrative act of an individual character, issued under the public power, in order to produce legal effects”. At the same time, the Constitutional Court stressed, in the recitals of Decision no. 349/2003 (published in the “Official Gazette of Romania”, Part I, No. 780 of November 6, 2003) the following: “the drafted report has, until it is definitive, the character of an administrative act of finding. The guilt and liability of the offender appear at

this stage of the contravention procedure as elements established by the authorized administrative body on the basis of its own findings and the evidence identified by it in determining the existence and circumstance of committing antisocial deeds”.

3.2. Nullity causes

The contraventional report that does not comply with the conditions of legality, form and substance is nullified. The legislator distinguished between causes of relative nullity and causes of absolute nullity, but the lack of rigor of regulation has generated controversy in doctrine and uneven practice (for examples of judicial practice on nullity cases see Pap, 2017, pp. 50-66). The practical interest is determined by the fact that the grounds for relative nullity may be invoked only by the person the interest of whom was harmed when issuing the contested act. Instead, cases of absolute nullity can also be detected *ex officio* by the court in charge of verifying the legality of the report of finding and sanctioning the contravention.

The lack of the elements provided in article 16 paragraph (1) from G.O. no. 2/2001 is sanctioned with relative nullity. With regard to the requirement of describing the contravention in the contravention finding report, by Decision no. 13/2018 of the High Court of Cassation and Justice – The competent body to judge the appeal in the interest of the law (published in the Official Gazette of Romania, Part I, No. 541 of June 29, 2018) stated that “the insufficient description of the deed is equivalent to the non-fulfilment of the description of the contraventional deed and draws the relative nullity of the contravention finding report, according to the provisions of article 16 of the Government Ordinance no. 2/2001”.

Another cause of relative invalidity of the contraventional report that has attracted contradictory solutions in court practice is the non-observance of the provisions regarding the recording of the offender’s objections. At the time of conclusion of the report, the finding agent is obliged to inform the offender of the right to object to the content of the finding document. If these exist, these are recorded separately in the report at the “Other Mentions” heading (Măță, 2019, p. 283) and G.O. no. 2/2001 stipulates in the article 16 paragraph (7) that the failure to comply with the provisions on the recording of the offender’s objections entails the sanction of invalidity of the report. Decision no. XXII / 2007 of the High Court of Cassation and Justice – The United Sections (published in the “Official Gazette of Romania”, Part I, No. 833 of December 5, 2007) allowed the appeal in the interest of the law declared by the Prosecutor General of the Prosecutor’s Office attached to the High Court of Cassation and Justice and it was established that “the failure to comply with the requirements of article 16 paragraph (7) of the mentioned normative act entails the relative nullity of the contravention finding record”.

The cases that lead to the absolute nullity of the contravention finding record are the following: “The lack of one of the mentions on the last name and first name of the finding agent, the last name and first name of the offender, the personal identification number for the persons who have assigned such a code, and in case of the legal person, the lack of name and of its seat, of the deed committed and of the date of its committal or of the finding agent’s signature” (G.O. no. 2/2001, art. 17).

In addition to these absolute nullity cases, we consider that cases of virtual absolute nullity are also possible, resulting implicitly from the imperative nature of the breached legal norms. The following should be considered in this category: lack of sanction; lack of competence of the finding agent; the existence of any cause that excludes the contraventional character of the deed; the occurrence of causes that exclude contraventional liability; the application of two contraventional sanctions for a single contravention (Hotca, 2012, pp. 347-349).

4. CONCLUSIONS

The analysis of the general normative framework on the legal regime of contraventions as well as the judicial practice in the matter of the lawfulness of the contraventional report highlights a series of critical opinions and proposals of *lex ferenda*.

A first observation is the one about the legal nature of the report of finding and sanctioning where the framework law on contravention does not specify this. The lack of rigor of the legislature is also observable with regard to the nullity regime, with the supreme court issuing several decisions regarding the classification of the grounds for nullity of the report of finding and sanctioning the contravention.

The majority opinion expressed in the doctrine is within the meaning of the essential modification of the general normative framework on contraventional liability for the purpose of adopting appropriate solutions in line with the issues raised in the doctrine and case law. In this context, it is argued that it is necessary to adopt a Code of Contraventions, in which alongside the substantial part there is also a procedural part in which the main dilemmas concerning the legal nature of the contravention process and the causes of its nullity are exhausted.

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THE LEGAL STATUS OF THE INSOLVENCY INSTITUTION IN THE LIGHT OF THE COMPANY'S RESTRUCTURING PLAN

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Abstract

In recent years, international insolvency laws have been constantly renewed, with two major imbalances: the pressure of legislative harmonization and adaptation to national specificities. The tendency to harmonize the field of insolvency is the result of both institutional cooperation at international or regional level and informal compliance pressures from other partner countries.

A number of international institutions (IMF, World Bank, UNCITRAL, European Commission, etc.) have defined recommendations, conventions, consultation mechanisms or other cooperation arrangements in recent years to establish common practices in insolvency proceedings. These institutional mechanisms have directly addressed the field of insolvency, but also indirectly, through regulations or related agreements, in areas such as competition policy.

The area where an advanced harmonization exercise has been achieved has been the one of cross-border insolvency cooperation. In this case, both at the European Union and at the international level, there were mandatory and voluntary regulations that strengthened the international cooperation platform on insolvency in the light of the company's restructuring plan.

The purpose of our study is to analyze the nature and characteristics of the legal status of the insolvency institution in the light of the company's restructuring plan.

Key words: *insolvency; debtor; restructuring; reorganization; process; legal framework.*

JEL Classification: K15

1. INTRODUCTION

The purpose of this article is not to establish a new academic definition of restructuring but rather to seek to address a set of difficulties in managing their occurrence and their consequences. Two points, especially will be discussed. That concerning the intentionality of the restructurings, these being able to be included in some cases as voluntary, in others as constraints, the possible

categorization signaling in any case a conceptual difficulty. And that concerning the finiteness, or time-limits, of restructuring, companies, and especially groups of companies, being, in the same opinion of their representatives in the workshops, now engaged in dynamics of continuous change. These questions, formal as they may appear, are nonetheless decisive, since they testify to the difficulty of understanding the nature of restructuring and, consequently, raise the question of the faculty of apprehending in general an object around of which this article proposes to seek action.

2. RECAPITALIZE AND TREAT THE CAUSES

The company in difficulty may need a restructuring. Who says difficulties, says financial impacts, even social. The problems arising from a bad strategy or a bad execution of it, can be read directly in the accounts. To redress the situation, it may be necessary to act on two levels:

The first is to secure the company by recapitalizing it. The solutions are many, it is often a question of selling a portion of the capital and bringing in new shareholders.

The second level of action is the treatment of causes that have brought the company into the situation it is. A diagnosis of the situation must be made to identify them. An action plan will then be conducted.

Possible causes are poor organization, market or customer dependency, high staff costs, and so on. It should be noted that it is necessary to look for the root causes. For example: too high personnel costs hide bad decisions made at one time or another. It makes sense to carry out the diagnosis upstream of the financial recapitalization, because new financing needs will surely appear.

3. SOCIAL AND LEGAL CONSEQUENCES

The reorganization of a company can result in geographical and / or professional changes. This fall within different legal frameworks, including dismissal for economic reasons when the restructuring leads to the departure of employees belonging to the professional categories affected (Reactive Executive, 2019).

Sometimes, when business objectives are not achieved, or the internal dialogue is facing great difficulties, the manager may choose to restructure. When it comes to a crisis, it's often a necessity. In this situation the leader can hardly be confronted alone, as the leader is the pilot of the company, and he must stay the course (Reactive Executive, 2019). From a theoretical point of view, the stages of corporate restructuring are:

a) Awakening phase

The first step is that of awareness. It is about identifying and understanding the need for change for the company, noting the imbalance between the structure and its environment. Once the problem is identified, it is necessary to quickly

organize an audit of the company and all of its services. This is how we prepare the company for its transition.

To succeed in this step one must have enough perspective to be perfectly objective in the conclusions that one draws from the audit. Difficult to perform for a person who is part of the company. The transition manager ensures a global, fast and impartial analysis of the company. This then makes it possible to take the appropriate measures for the restructuring.

b) Announcement

When decisions are made and the action plan is defined, it is the stage of announcement. It is this step that marks the starting point of the change process. That's why it's important to be careful on both sides, internally and externally.

The employees may be surprised, moved, and the communication about restructuring is a decisive aspect of the process. It will also affect all external actors such as customers, suppliers, partners, etc. It's important to reassure everyone that the restructuring will bring positive benefits to the company.

c) Disintegration phase

This stage is that of the transition itself, as it is about disintegration, because it is the moment when the organization destroys itself and gives way to a new form of organization. The whole structure is jostled, and the decisions taken during the development of the action plan are there to cause the least possible stress. Disintegration comes to an end when no more landmarks of the old organization exist.

d) Reconstruction phase

This step happens when all the changes are in place. Employees learn to make their mark in the new organization that has just been born. Often, it's about finding new positions with new assignments, and sometimes it's about layoffs. Internally, this translates into either a membership in the new structure or a rejection of it. Some adjustments may still be needed at this stage of the process, so the restructuring is not yet complete.

e) Integration phase

The last step marks the anchoring of the new structure in the environment. The new roots of the company are consolidating, and the actions undertaken from the first stage are endorsed. At this point, management is looking more than ever towards the future and the first results of this restructuring.

According to the Insolvency Law of the Republic of Moldova (Law no. 149/2012), restructuring is an insolvency procedure that applies to the debtor in order to pay its debts, which provides for the drafting, approval, implementation and observance of a restructuring plan. The procedure in itself consists in the realization of a set of financial, organizational, operational and legal measures aimed at the financial and economic remedy of the enterprise based on capitalization, reorganization, change of the asset structure and modification of the production process, as well as other measures that do not contravene the

legislation in force. As a general rule, the restructuring procedure will apply if the debtor has realistic chances of recovering his / her economic situation through measures such as: liquidation of some assets that are in the patrimony, restructuring of the activities, dismissal of some employees, closure of some sub-work of the debtor, denouncing onerous contracts for the debtor, etc.

The thought of spreading a helping hand to traders in good faith, on the verge of bankruptcy, is not new. The doctrine considers such measures to be both in the interest of the creditors as well as of the whole society (The National Institute of Justice and the Union of Authorized Administrators from Moldova, 2017). Without going too far in history, we recall the “letters of repit”, by which – according to the provisions of the French Order of 1673 on trade – the king pledges to the creditors of the merchants who had shown, by submitting the balance sheet, that they can no longer deal with their commercial debts, proving honesty. Such possibilities were offered by the French Trade Code of 1807 and the laws inspired by it, as well as the Italian Code of Commerce of 1882, the model of the 1887 Commercial Code of Rome, which contains the moratorium (Commercial Code from 1887, Romania) and the concordat.

Thus, the process of restructuring existing in each of the systems of European law under different names, such as judicial reorganization in Romanian law, or rectification in French law (*redressement*) is defined in national law – art. 2 in Law on insolvency no. 149/2012 of the Republic of Moldova as “*the procedure applied to the debtor (...) in order to pay its debts*” (Law no. 149/2012). The procedure will be based on a creditor-approved debt settlement program. In Moldovan law the notion of “*reorganization*” is defined in art. 204 of the Civil Code of the Republic of Moldova (Law 1107/2002) as the possible operation to be accomplished by merging, dismantling or transformation. In order to define the procedure by which the debtor is given the chance to recover, insolvency proceedings or outside the insolvency proceedings, but under the control of the competent court, Law on insolvency no. 149/2012 of the Republic of Moldova uses the notion of “*restructuring*”. Next, we will use the term used by the national legislator for reference to the procedure governed by Law no. 149/2012 and the notion of reorganization when referring to the same institution regulated in different European legal systems.

The term “*reorganization*” comes from the French word “*reorganiser*” which means to restructure, organize on new bases, to re-order. Broadly, reorganization or restructuring means the operation or set of measures or operations by which an entity reconfigures its organizational structure.

The normative act before 2012 on insolvency in the Republic of Moldova, namely Law no. 632 of 14.11.2001 (Law no. 632/2001) regulated a procedure of the plan, which in fact represented a continuation of the procedure of the Law on bankruptcy no. 851-XII of 3.01.1992. Under these rules, the borrowers could be either the restructuring procedure or the winding-up procedure. Thus, it is only

in the normative act of the Republic of Moldova – Law on bankruptcy no.786 of 1996 that restructuring is defined as a “*way of realizing a complex of measures negotiated by the parties to the bankruptcy process and approved by the court, which aims to execute the claims of the creditors in the circumstances of the reorganization of the debtor and / or the taking over of the debtor’s debts by the successors of rights in accordance with the legislation in force*”.

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According to the opinion of Natalia Staver (2019), this procedure of the Law on bankruptcy no. 851– XIII of 3.01.1992 did not actually have any practical applicability, an opinion expressed in the paper “*The History of the Insolvency Proceedings and the Law Applicable to the International Business Sale Agreement*”.

Thus, in the legislation of other developed economies, it is permissible to include in the recovery plan measures aimed at relieving the payment of obligations to the state budget during this procedure, or granting credits or possibilities to finance the debtor’s activity (Dăianu, Pîslaru and Voinea, 2004). The Greek law system (European Commission, 2019) on restructuring provides, through the Insolvency Law, the possibility of replacing managers by assigning the management and administration of the debtor to its creditors in accordance with Articles 44 and 45 of the Insolvency Law. If the company is managed and administrated, any enforcement or interim measures as well as bankruptcy

statements will be banned after submission of the restructuring request. The management committee will be the one responsible for managing the company, credit verification, it is also the one who can decide on the increase of the share capital and can distribute the shareholder certificates.

Three years after filing the application, creditors reaching a share of 3/5 of the total mass will be able to request the dissolution of the company or its special liquidation. The creditors or even the debtor may request that the debtor be placed under the restructuring procedure by the decision of the relevant ministry, in which case the Reorganization Agency of Societies is appointed as provisional administrator and an agreement with the creditors is thus drafted. An immediate effect of the procedure will be to suspend the limitation of the right to claim debts, to suspend payment of overdue debt, enforcement measures, and interest flow. The agreement between shareholders, creditors and the Reorganization Agency of Societies is without prejudice to guarantees, mortgages, pledges or other special privileges.

In France, in the case of redress (*redressement*), the plan will be validated by the court after a period of observation that can not exceed one year (Loi no. 85-98/1985), a rule similar to that of the Romanian Insolvency Code (Law no. 85/2014). Thus, the administrator of the procedure designated by the court is the one who assists the debtor in the management activity. The creditors will, however, declare the claims of a representative appointed by the tribunal – who will be the representative of the creditors (*representant des creanciers*). He will check the receivables, deciding whether or not to accept them. The solution to be included in the plan specifically addresses the possibilities of continuation of the activity or the modalities of the divestiture of the assets.

The tribunal will decide the method of restructuring, and it can be extended for a maximum of 10 years. Once the plan has been adopted, the limitation of the debtor's rights ceases. In circumstances where the plan will not be respected, any creditor may denounce it, in which case a new insolvency procedure will be opened. Regarding the situation of creditors, we can say that French law does not make it easier for them to immediately recover claims, with the emphasis on saving the enterprise. Creditors have the right, when they have a real security, to sell the asset, retain its warranty in the event of resale, or claim the property right on the property. However, these rights only apply to the reorganization or winding-up proceedings, in the event of liquidation not valid, as only the liquidator will be able to resort to the sale of the goods. This capitalization takes place within three months from the date of the opening of the bankruptcy procedure. After this period individual creditors will be able to take individual enforcement measures if their claims were declared in the balance sheet liability. Of course, tax and wage claims will take precedence over secured claims, and chirographic creditors will be paid after claims have been settled during the procedure and after paying privileged creditors (Ilana, 2017).

The EU Member States' legislation contains different rules on reorganization plans, as we have seen in the examples above, differentiations regarding the procedural quality of the proposal, verification, adoption, modification or content of these recovery plans. For example, under German law, the plan may be proposed by the debtor or the liquidator and, in addition, the creditors' meeting may instruct the liquidator to prepare a plan. Under Polish law, the plan may be submitted by the debtor, the supervising body, the liquidator or the creditor who submitted the initial proposals for the arrangement. According to French procedures only the debtor can draw up a plan.

In Germany the procedures are governed by the *Insolvenzordnung* Law (Law of 1994). Once the state of insolvency is declared, which is either at the debtor's request or at the request of the creditors, several alternatives are provided for defining the debtor's activity. It is thus possible to understand the debtor with his creditors out of court. However, the mandatory condition is that the reorganization plan is approved by all creditors. This procedure applies equally to all creditors, without any preference, to any of the individual creditors.

Of course, both the debtor and the creditors will be able to put an end to the negotiations, they will be able to trigger court insolvency proceedings. The second procedure is the plan-based organization (*Insolvenzplan*). The judicial reorganization plan must first of all be approved by the competent court. From the point of view of form, the German law provides for few restrictions, but the claims must be classified as guaranteed and chirograph, so that the vote is given on classes. Finally, the court will decide whether or not to confirm the plan. The Understanding of Assets is the third way the borrower can continue to work. This procedure implies that the debtor in difficulty has the right to sell its assets in whole or in part to a buyer willing to continue its business. Only the signatories of the asset deal will decide which of these will be transferred to the buyer. Therefore, the supreme authority that decides on the continuation of the debtor's activity will be no more than the creditors' meeting.

And in Italian practice, court proceedings are governed by which the debtor tries to avoid insolvency. The disadvantage of these procedures is that if the insolvency proceedings are opened, the payments made during the preliminary proceedings will be returned. This extraordinary, judicial procedure has two stages.

The first stage, which is mandatory, involves recognition of the state of insolvency by the competent court. Then there will be a period of observation of no more than two months in which the court will decide whether the opening of the extraordinary administration procedure, which will lead to a reorganization, or if it is not justified, in the latter case, would occur in bankruptcy.

The second step will only take place if the reorganization is confirmed. Thus, this stage is no longer mandatory, being supervised by the Ministry of

Industries, who will appoint an extraordinary commissioner for the reorganization plan. Once the plan has been approved by the Ministry, the Commissioner will have the task of supervising the plan. Therefore, creditors are not required to vote on the plan for the recognition of the procedure. Their powers are thus limited to those relating to the opening of proceedings and require the Court to recognize their claims.

For another example, companies may request reorganization under Swedish law (rekonstruktion), under the Reorganization of Enterprises Act (Act no. 764/1996). The debtor may also resort to the restructuring procedure if he is unable to pay, that state of obvious insolvency, but also the state of imminent insolvency. Such are the situations of obvious insolvency and the imminent situation. Also, there must be good reasons to believe that the reorganization can achieve its objective, but it is very important that the borrower should be in the capacity of a solicitor of the reorganization or have agreed to the reorganization request. Both bankruptcy and reorganization in Swedish law allow the conclusion of an agreement with creditors under which only part of the debt is to be paid. Such an agreement or payment plan may be voluntary, but may also be ordered by the court, in which case the agreement is binding on all creditors, what is called the public concordat.

The application for reorganization of the company in Swedish law is filed by the debtor or the creditor who holds an outstanding claim. The court rules on the reorganization and appoints an administrator whose task it is to verify whether there are conditions for the continuation of the business and whether an agreement with the creditors can be reached. Under the reorganization procedure, the debtor will still have the right to dispose of his own assets. However, the debtor is not allowed to pay debts, assume new commitments, or transfer ownership of the assets of essential importance without the administrator's consent. During the course of the procedure, the assets can not be divided into creditors. At the same time, the debtor can not be declared bankrupt, this being possible when there are special reasons for believing that creditors' rights will be seriously prejudiced. The reorganization procedure lasts three months and can be extended by three months. However, if the concordat procedures are not successfully completed, the reorganization procedure may not take more than one year. Both commercial companies and individuals can voluntarily conclude agreements with creditors to reduce their debt. Such agreements are not specifically regulated by law but are treated in the same way as other types of agreements.

In the United Kingdom (The Insolvency Act 1986), the reorganization of the company can be accomplished with or without the involvement of the court, in the latter case an informal reorganization. This can be done either through a contractual agreement between the debtor and his creditors or through an agreement between the debtor, the shareholders and the lender. This procedure

involves drawing up a plan by the debtor's management, which may include deferrals or reductions of debt, or capital restructurings. Another form of informal restructuring is that of a compromise agreement between the debtor and his creditors, the debtor choosing the categories of creditors to whom they apply. The administrator will thus distribute to preferential creditors, to creditors secured with or without the court's consent, being given greater powers over the debtor's assets.

The restructuring procedure is addressed in all the legal systems of that category of debtors for which there are chances of financial rehabilitation, thus giving the protection of debtors, on the one hand, the possibility of continuing their activity and, on the other hand, the protection also reflects the creditors who may have an extra chance to recover their claims (Ilana, 2017).

The restructuring procedure is governed by Law 149/2012 on insolvency in the Republic of Moldova, which is defined in the first article as "one of the insolvency proceedings for the debtor, which involves the drawing up, approval, implementation and observance of a plan a complex set of measures for the financial and economic remedy of the debtor and the payment of his debts under the debt settlement program" (Article 2 of Law 149/2012).

In art. 182 of Law 149/2012 completes the definition of the procedure, adding its characteristics and its purpose as a "process of achieving a set of financial, organizational, operational and legal measures aimed at the financial and economic remedy of the enterprise on capitalization, reorganization, change in the asset structure and modification of the production process as well as other measures that do not contravene the legislation in force " , including together or separately:

a) Operational and / or financial restructuring of the debtor, which involves redimensioning the activity, renegotiating contractual relations, even changing the main object of activity.

b) Corporate restructuring by modifying the share capital structure, which involves the merger procedure or the issuance of securities or the conversion of debt into securities. On the way the plan is implemented, described in b), N. Craiu (2014) raises the question of the impossibility of implementing art. 190 para. 5 lit. h) and i), especially if the plan is submitted by the administrator of the procedure. The modification of the debtor's constitutive act, regardless of the form of organization, SRL, SA, is possible only with the consent of the capital holders.

c) Restriction of activity through the liquidation of some assets from the debtor's patrimony;

d) Any other actions not prohibited by the legislation in force.

This procedure comprises four moments or steps described in the first paragraph. of art. 182 of the Moldovan Insolvency Law, respectively: drawing up the plan, approving the plan (the creditors' votes through the constitutive

assembly may be acceptance or rejection of the plan, in which case the debtor will go bankrupt), its implementation and supervision, and the final moment of analysis the observance or failure of the plan, as the case may be (Ilana, 2017).

One thing that is at least interesting by the way of regulation is that the restructuring procedure can also intervene against a debtor who is in a simplified bankruptcy procedure. In other words, if after the simplified procedure of bankruptcy has been applied, it is clear that the debtor would have viable operational capacities that would enable his solvency to be recovered, the insolvency court at the request of the liquidator, order the cessation of the bankruptcy procedure and the restructuring procedure. In Romanian law there is no such possibility, that after the completion of a bankruptcy that ends only with liquidation, the debtor returns to activity.

Therefore, the principle of the priority of the restructuring refers in fact to the European tendencies in the matter, which give priority to giving the borrowers a chance to try an efficient and effective recovery of the business compared to the liquidation of its assets through bankruptcy. We can say that the highlighting of this principle results from the analysis of the purpose of Law 149/2012, which, even if it does not explicitly give a priority, is deduced from the text in the art. 1: *“The purpose of this law is to establish the legal framework for the establishment of a collective procedure for the settlement of creditors’ claims against the debtor’s assets by applying the restructuring procedure or the bankruptcy procedure and by distributing the finished product.”*

In conclusion we consider that this principle of the priority of the restructuring is not reflected in the current national legislation on insolvency of the Republic of Moldova, so that the Restructuring Plan is to include the prospects for recovery in relation to the possibilities and specificities of the debtor’s activity, the available financial means and the demand of the market towards the debtor’s offer and will include measures consistent with the interests of creditors and members or associates / shareholders as well as with public order, including the manner of selection, appointment and replacement of directors and directors.

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Section IV

EU PUBLIC SPENDING AND CONTROL

DECENTRALIZED HEALTH FINANCING – COMPARATIVE APPROACH AND EFFECTS IN SELECTED EU COUNTRIES

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Abstract

During the last decades, the role of local authorities in elaboration and implementation public policies has been increased more and more, on a background of the progressively accepting some principles and values as decentralization and subsidiarity in governance systems. In this context, it becomes important the analyses of the effects of local authorities' involvement in various domains, in particular the ones which were considered in a traditional perspective as belonging to central government competencies, this sustaining the improvement of actual practices. From this point of view, we conducted an analysis, referring to the effects of health financing at local level. Using the empirical data for selected EU countries, we identified some connections between local health expenditures and life expectancy as health outcomes, which further have traces in the GDP of a nation. This represent a way to be further researched, presuming that a rigorous econometric analyse is likely to confirm that the transfer of public competencies from central to local level could be valuable as far as the role of the local authorities is clearly defined and stable. Having our presumption confirmed we will draw conclusions and recommendations in matter of public policies which could be useful both for policy makers and for other specialists interested of the domain, too.

Keywords: *local health expenditure; life expectancy; local budgets; economic growth and development.*

JEL Classification: H72, H75, I15

1. INTRODUCTION

Public health expenditure is expected to improve or to preserve the general health state of a nation, this public task being traditionally assumed by central governments. In this context, during the last decades public sector assumed more and more competencies, especially through local budgets. Thus, public needs in matter of health care are nowadays in a great measure in charge of local budgets.

Our research approach derives from these bases and also from the consideration that health is a basic human right recognized at international level and it represents a major concern for a lot of international organizations. In this sense, World Bank Group has committed a plan in order to help national governments in achieving universal health coverage (UCH) by 2030.

We propose an analysis for 18 selected countries of the EU, for 2000-2016 periods. For some countries we found that local budgets spent higher amounts than central budget for health domain. In their cases we may draw a link between local health expenditure with the higher life expectancy and the higher GDP per capita. For other countries, we couldn't draw such visible connections, because they have multilevel local administrations which are not counted in our study as all. Also, some countries still experiencing the transition process and public decentralization need to be completed. In the end, we conclude that the volume of local health expenditure is not the only important, but their efficiency under administrative and technical aspects of the respective expenditure.

Our study is organised as follows: in the first section we present some aspects from the extant literature with regard to the impact of health expenditure on life expectancy and further on economy and their causal reverse, too. Also, in the below literature review we point out some health determinants. In section two we present the local health expenditure and their evolution across 2000-2016 and the central health expenditure too, for comparison to local level and evaluation. In section three, our analysis is focussed on identifying some connection between local health expenditure, life expectancy and economic growth in a given context of decentralized health financing. Finally, we proposed further research and landmarks and pointed separately the main conclusions of our study.

2. LITERATURE REVIEW

In a general vision and accordingly to the theory, it is expected that public health spending positively determines the general health status of the individuals of a state. Further, an improved health state of individuals leads to a longer life expectancy, representing a premise for a more productive economy. A recent study (Van Baal *et al.*, 2013) shows that public spending exerts a positive impact on health expectancy, but the author states that it is difficult to conclude whether marginal increases of public spending stimulate or not the growth of life expectancy. Anyanwu and Erhijakpor (2009) conducted a study for Africa, revealing that public health spending has a powerful impact on health outcomes. Similar results were found by Wolfe and Gabay (1987) and Hitiris and Ponsett (1992).

Self and Grabowski (2003) found that for less developed countries public expenditure for health could have some positive result on health outcome, but for wealthier countries these does not necessary have significant positive results.

Along with these, in another study (Gupta, Verhoeven and Tiongson, 2003) it is analysed the connection between public spending on health and the health state of the poor, referring to 70 developing countries. Public health spending is an important determinant on the health state of the poor, and is a little large determinant of the non-poor health state, as it expected to be. However, accordingly to the paper, public spending for health is not alone enough to improve the general health state of a nation.

Analogous, in another study (Berger and Messer, 2002) for 20 US countries, it is established that the public financing of health has effects on lowering mortality rate in developed countries, where mortality rate representing also an outcome health. Similar, Isa and Ouattara (2005) conducted a study where divided expenditures health care on public and private expenditures and the sample into developing and developed countries. Their results show a significant impact of public expenditures for low-income countries, where an increase of 1% of these, would reduce mortality rate by 0.16%. Instead, for high-income countries, public health expenditure has an insignificant impact in reduction of mortality rate.

In a study for US, Babazono and Hillman (1994) revealed that public expenditures for health care have a significant and positive impact on health outcomes, especially for women than for man, due to some expenditure for preventing programs, for instance breast cancer screening and cervical cancer screening. Consistently, Mays and Smith (2011) conducted also a study on United States case in the context of local disparities of population health. They revealed that rising public spending for local health activities is likely to produce a reduction of disparities between communities in matter of population health. Positive influence of public spending for life expectancy was also found by Collins and Klein (1980) and Hadley (1982).

From another perspective, there are papers claiming a non-linear relationship between life expectancy and economic growth, Wilkinson (2002). The authors support the idea that after the level of income per capita achieve a certain level (threshold level), further increases will not affect life expectancy, as the relation between this and standard of living will disappear. Similar points of view are to be found also at Kelley and Schmidt (1995) and at An and Jeon (2006).

On the other side, there are papers admitting that public spending has not such significant impact on life expectancy or others health outcome. Musgrove (1996) revealed similar results, his study showing that life expectancy does not depend on the public spending for health care. There are countries where the public spending for health care consist in large amounts, but not always it is obtained a longer life. In the same time, there are countries managing spending smaller amounts for health care and the respective population could enjoy a longer life. In a research for Indonesia (Skoufias *et al.*, 2011), it is evidenced

that the district government expenditures for health does not have substantial role in determining the status of the health services provided there. Similar results were obtained by Akin, Hutchinson and Strumpf (2001) and Inchauste, (2009). Consistently, on the line of decentralization health financing, Uchimura and Jütting (2009) disclosed that the decentralization financing of health for China's counties with a more substantial fiscal decentralization rate lead to a lower infant mortality rate. Similar, Robalino *et al.* (2001) and Asfaw *et al.* (2007) revealed through their research that fiscal decentralization lead to lower mortality rate, considered also a health outcome.

The extant literature related to life expectancy, is referring also to the determinants of it. Accordingly to Toader *et al.* (2017) the main determinants of life expectancy are social and economic environments, physical and personal factors, the features and the behaviours of individuals and other related the health system of a country like the structure, diversity and quality of health services, public or/and private financing of the health expenditure. More restrictive, Forbes and McGregor (1984) argued that life expectancy is influenced by unemployment which affects income of individuals and mortality rate. Income per capita appears to be a great determinant of life expectancy and in researches of Guralnik *et al.* (1993), Anand and Ravallion (1993) and Musgrove (1996). Likewise, Rogers and Wofford (1989) revealed six determinants factors of life expectancy for 95 developing countries: urbanization, agriculture, illiteracy rate, access for drinking water, average calories per person and doctors per population. For contrary, in other paper (Kabir, 2008) is stated that socio-economic factors as income per capita, level of education, expenditures on health, urbanization and access to drinking water cannot be considered determinants for life expectancy in developing country. Instead, democracy appears as essential factor in shaping the longevity of life, as individuals are aware about their right and social needs – Gerring *et al.* (2005), Navarro *et al.* (2006). However, if democracy is to positively determine life expectancy by ensuring individual with proper rights and social needs, this exclude the judgement of Kabir (2008) and socio-economic factors are meant to be important determinants for life expectancy especially in developing countries, in personal view. Rather, it is like that the socio-economic factors would not influence life expectancy in developed countries, giving an overcome level of GDP per capita proper for developed countries (Wilkinson, 2002). This approach is similar to the one of Self and Grabowski (2003) and Isa and Ouattara (2005). In a recent paper, Shahbaz *et al.* (2015), it is confirmed once again that illiteracy rate represents determinant factor of life expectancy besides the food supply. In the same time, certain inputs indicators like doctor per population and hospital per population are considered also important determinants of life expectancy (Grubaugh and Santerre, 1994).

Recent studies (Poli *et al.*, 2019) invoke some psychological factors determining life expectancy, like diets and eating styles. This is in line with Matthews (1989) who argued that health outcomes are determinate by a series of socio-demographic and psychological factors like food, education, ability to face stress situations.

As stated previously, a longer life expectancy of individuals represents a premise for a more productive economy. In line with this judgement, Barro and Sala-I-Martin (1995) showed that life expectancy could be significant factor for the economic growth. An interesting point of view belongs to De la Croix and Licandro (1999) who argued that the relation between life expectancy and economic growth is strongly affected by the decision of households when to leave the school in order to start working. The judgement of the two authors is that the decision moment is determined by the life expectancy, so in the countries where the life expectancy would be major, people will study more and their work would be more productive. Another study, also confirm that increasing life expectancy accelerates economic growth and the secondary school enrolment ratio, but if negatively affects the fertility. Other studies, Barro (1991), Easterly and Bruno (1999) confirm similar results, where life expectancy is a determinant factor in economic development.

On the other side, Acemoglu and Johnson (2007) found that an increase in life expectancy have a too small positive effect on gross domestic product, but the authors claims for improving the general health state as a condition for economic growth. This is in line with, Gallup and Sachs (2001) who argued that if malaria in sub-Saharia Africa did not exist, the GDP per capita growth rate would increase by 2.6% a year. Here, the authors claim that life expectancy is less important in front of a fight against diseases affecting in mass. So first, public authorities must conceive public policies on alleviate such diseases and malaria if the case, which may have or not (immediately) effects on the long life expectancy.

Further, concerning the relationship between life expectancy and economic growth it very important to remark the reverse causality between the two variables. Bokhari, Gai and Gottret (2007) show that in developing countries government health spending could be a very important factor in determining the life expectancy but in the same time economic growth could have an important contribution in raising life expectancy. Consistently, Shahbaz *et al.* (2015) confirmed a bidirectional relationship between public spending and economic misery index, where misery index represents the sum of the inflation and unemployment for Pakistan's case between 1972 and 2012.

Going back on the rationale line of our proposal research it is to be remarked that a longer life expectancy in its turn, also could affect public health spending by increasing them. Accordingly to Van Baal *et al.* (2013) an increased longevity may create additional health care demand as people live longer. At any

rate, the reverse causality can follow two paths. First, having a longer life contributing to economic growth this will lead finally to an increase in public spending for health care. Second, a longer life means aging population in a first phase, at least until the distribution by age will equilibrate again. A bigger aging population will determine thus an increase in public spending for health care. The subject of reverse causality between public spending was subject to debate for Zweifel, Felder and Meiers (1999), Felder, Werblow and Zweifel (2010), and Van Baal and Wong (2012).

Finally, we believe that public health expenditure may have positive effects on life expectancy and further on economic growth and development, representing a real investment in human capital. In order to obtain the beneficial results, it is more important to acquire the efficiency under administrative and technical aspect of that expenditure, instead of just increasing their amount.

3. LOCAL HEALTH EXPENDITURES IN SELECTED EU COUNTRIES – SOME STYLIZED FACTS

In a traditional way, public expenditure for health is managed (financed) from the central level of government, being comprised in central components of the budgetary system. From a modern perspective, public health care managed to be transferred (along with other public competences) in charge of local budgets, a reason of this change representing the transition to democratic governance process. In this respect, the consistent volume of them is retrieved in the administration of local authorities in detriment of central level of administration. Their values vary from country to country case, in general under the factors as principles of decentralization, local autonomy and subsidiarity, but under the state structure too. In the below tables and figures we show the evolution of them at local level (of municipalities) comparative to central level in nominal values and in relative values as weight in total expenditure in the respective budget for 18 countries of the EU: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Italy, Latvia, Luxembourg, Netherlands, Poland, Portugal, Slovak Republic, Slovenia, Spain and Sweden.

Table 1. Evolution of local health expenditures in EU countries (selection, 2000-2016)

| Year | 2000 | | 2002 | | 2004 | | 2006 | | 2008 | | 2010 | | 2012 | | 2014 | | 2016 | |
|-----------------|--------|------|-------|------|-------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| Country | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 |
| Austria | 3533 | 19.6 | 3914 | 20.8 | 4224 | 21.4 | 4419 | 21.0 | 4940 | 20.9 | 5454 | 21.4 | 5811 | 22.1 | 6325 | 22.3 | 6621 | 22.1 |
| Belgium | 377 | 2.2 | 180 | 1.0 | 156 | 0.8 | 124 | 0.5 | 154 | 0.6 | 120 | 0.5 | 254 | 0.9 | 173 | 0.6 | 153 | 0.5 |
| Czech Republic | 966 | 13.0 | 343 | 3.6 | 1437 | 11.8 | 1735 | 11.5 | 2215 | 11.8 | 2351 | 11.8 | 2385 | 13.1 | 2191 | 12.1 | 2490 | 13.9 |
| Denmark | 11606 | 21.1 | 13114 | 21.2 | 14405 | 21.5 | 16342 | 22.3 | 18780 | 24.2 | 20464 | 23.5 | 21702 | 23.7 | 22451 | 23.9 | 23511 | 24.3 |
| Estonia | 75 | 14.4 | 96 | 11.9 | 136 | 14.6 | 194 | 15.5 | 252 | 14.2 | 234 | 16.2 | 305 | 17.6 | 296 | 16.2 | 311 | 15.7 |
| Finland | 6372 | 26.9 | 7436 | 27.4 | 8409 | 28.1 | 9629 | 29.0 | 10959 | 28.2 | 12176 | 29.1 | 13682 | 29.2 | 14341 | 29.3 | 12872 | 26.4 |
| France | 1055 | 0.7 | 1197 | 0.8 | 1359 | 0.8 | 1550 | 0.8 | 1680 | 0.8 | 1652 | 0.7 | 1784 | 0.7 | 1809 | 0.7 | 1753 | 0.7 |
| Germany | 3828 | 2.5 | 4152 | 2.6 | 4362 | 2.7 | 3766 | 2.2 | 3360 | 1.8 | 3568 | 1.8 | 4515 | 2.2 | 5002 | 2.2 | 4622 | 1.8 |
| Italy | 7 1274 | 41.6 | 82620 | 41.6 | 93678 | 42.6 | 105153 | 44.8 | 112552 | 45.6 | 116646 | 46.2 | 113225 | 47.0 | 113236 | 47.6 | 114432 | 47.6 |
| Latvia | 54 | 8.4 | 70 | 8.4 | 93 | 8.8 | 128 | 7.6 | 309 | 10.8 | 186 | 8.7 | 202 | 9.3 | 221 | 9.4 | 226 | 9.6 |
| Luxembourg | 4 | 0.3 | 4 | 0.2 | 1 | 0.1 | 4 | 0.2 | 2 | 0.1 | 10 | 0.5 | 2 | 0.1 | 20 | 0.8 | 20 | 0.8 |
| Netherlands | 783 | 1.2 | 1008 | 1.4 | 1154 | 1.5 | 1150 | 1.4 | 1302 | 1.4 | 1478 | 1.5 | 1571 | 1.6 | 1579 | 1.7 | 3543 | 3.7 |
| Poland | 3403 | 13.7 | 3850 | 13.5 | 3902 | 14.8 | 5636 | 15.1 | 8360 | 16.2 | 8223 | 15.2 | 7922 | 15.3 | 8396 | 15.1 | 8588 | 15.6 |
| Portugal | 336 | 4.3 | 457 | 4.9 | 688 | 7.1 | 656 | 6.1 | 859 | 6.7 | 789 | 5.9 | 606 | 5.8 | 660 | 6.4 | 656 | 6.3 |
| Slovak Republic | 19 | 2.3 | 29 | 2.2 | 69 | 2.4 | 88 | 2.4 | 100 | 2.4 | 109 | 2.2 | 108 | 2.3 | 117 | 2.3 | 192 | 3.6 |
| Slovenia | 235 | 15.1 | 290 | 14.5 | 293 | 12.5 | 305 | 11.3 | 352 | 10.3 | 370 | 10.4 | 377 | 11.0 | 372 | 10.1 | 406 | 12.3 |
| Spain | 1057 | 2.8 | 774 | 1.8 | 625 | 1.3 | 795 | 1.3 | 999 | 1.4 | 1051 | 1.4 | 816 | 1.3 | 755 | 1.2 | 816 | 1.3 |
| Sweden | 16205 | 25.5 | 17987 | 27.0 | 19351 | 27.3 | 20887 | 27.2 | 22545 | 27.1 | 24254 | 27.5 | 28409 | 27.1 | 29393 | 27.2 | 31077 | 26.7 |

1 – Nominal values of local health expenditure (euro, million).

2 – Percentage of local health expenditure in total local expenditure.

Source: authors calculation based on data from OECD (2019)

At a first view on Table 1, local health expenditure has a general increasing trend for each selected country of the EU. This remark, may show a normal trend, where these sorts of expenditures has increased with total local expenditures on a general background of economies, which by passing time a general increase of prices is recorded. In its turn, general increasing of prices determines higher level of the categories of public expenditures by passing years. On the other side, the growth of local health expenditures is to be also the expression of the public decentralization process, where decision makers looking for transferring the weight centre of such competencies (among the others from various domains) in the responsibilities of locals in trend with specific principles of local autonomy and subsidiarity.

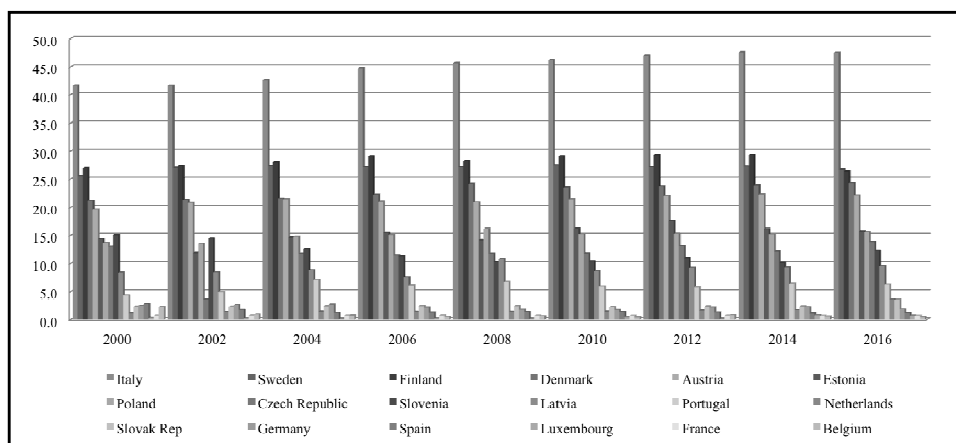
The increasing of local health expenditures may be also a result of expansionary policies of local authorities on a background where health state represents an investment in human capital, so being an important determinant of economic prosperity in a country. In this sense, we must point out that a prospective health care policy is not based on increasing the volume of public health expenditure, but rather increasing their efficiency, optimizing their structure, building efficient health systems. Referring to the efficiency of public health expenditure, we remarked widely and strongly recommending the idea, as a research of OECD showed that increasing efficiency of these expenditures will allow an increase of life expectancy with 2 years in average while increasing the expenditure for health in volume, life expectancy will increase with 3-4 months (OECD, 2010). Further, an optimal structure of public health expenditure should be first conceived from preventing diseases and health affections in general (Tandon *et al.*, 2000; Toader *et al.*, 2017) and controlling the determinants of it (Toader *et al.*, 2017).

According to the nominal level of health expenditure in local budgets from Table 1, we can rank some groups of countries as follows below. Our ranking is drawn pursuing to the volume of these expenditure for year 2016, the most recent from our analysis, therefore closer to the actual reality. The first group delimited by us covers values of local health expenditure higher than 10,000 million euros (Italy, Sweden, Denmark and Finland). The greatest value in this group is hold by local budgets in Italy – 114,432 million euros (and 47.6% in total local health expenditures) and the lower is value is recorded at local budgets in Finland – 12,872 million euros (26.4% in total local health expenditure). As can be seen, Italy case is net differentiating from the rest of the countries, the nominal level of local health expenditures is higher than triple compared to the level of Denmark – 31,077 million euros – the second ranked by nominal value in the year 2016.

The next group of countries is included in the intervals of 10,000 and 5,000 million euros of local health expenditures. This comprises two countries Poland and Austria and also their weight in total local budgets is important – 15.6% and

22.1%. Although, in Poland the nominal level is higher than the one of Austria, the weight in total local expenditures is higher in Austria showing a higher importance and priority in financing this domain and conceiving policies in this respect at local budgets. This remark is retrieved and in other cases, but a large presentation in this sense, is exposed below in the Figure 1.

Figure 1. Evolution of the local health expenditures as percentage in total public local expenditure in EU countries (selection, 2000-2016)



Source: authors calculation based on data from OECD (2019)

With amount of local health expenditure included in intervals of 5,000 and 1,000 million euro in 2016, we have Germany, Netherlands, Czech Republic and France. The values vary from 4,622 million euros in Germany down to 1,753 million euros in France. Instead, if for Germany these have a weight in total local expenditures of 1.8% and in France of 0.7%, for Czech Republic local health expenditures have a nominal value of 2,490 million euros, representing 13.9% in total local expenditures.

The countries with the lowest level of local health expenditures in 2016, below than 1,000 euros, from our selected countries in the analyses are: Spain, Portugal, Slovenia, Estonia, Latvia, Slovak Republic, Belgium and Luxembourg. For this group the nominal values of local health expenditures are varying from 816 million euros in Spain down to 20 million euros in Luxembourg. And in this group we also identify countries for which local health expenditures have important weight in total local expenditures – Slovenia and Estonia – with values of 12.3% in 15.7%.

Some explanation regarding the difference of local health financing between countries will be described below, discussing their weight in local budgets (Figure 1). Measuring them from this perspective, appears to be proper

for our study and also will be drawn a new rank of the countries, more relevant for explaining the heterogeneity in matter of local health financing in EU countries. By and large, the differences between countries referring to volume of local health expenditures are shaped by factors as state structure, decentralization policies regarding the competences of the domain and history of public governing regime.

As stated above, the weight of local health expenditure in total local expenditures reflects better (but not entirely, in our study because of the multi-layered local level retrieved in various countries) the importance given to this domain at local level of a public administration system and thus the enforcement of local authorities in taking decision and drawing policies with respect of improving and preserving the health state of collectivities' members (parts of the respective national collectivity), all in line with the principles of local autonomy and subsidiarity promoted in the actual systems of public governance.

With respect of the relative values of health financing at local level and their rank for year 2016, we have also drawn some groups of states with relatively closed levels. The first group of countries delimited by us is having values higher than 20%. The top country of the rank is Italy as well, where almost half of the local expenditure is directed for the health domain – 47.6% – this value is not very different from the one of the beginning of the period – 41.6% in year 2000, these confirming the importance and the priority given to the financing of the domain from local bases in Italian case. Additionally, as regional state, amounts for public health care are to be found and at the level of the regions representing as well parts of the decentralized health financing. The rest of the countries included in this group are Sweden, Finland, Denmark and Austria, with relative amounts in 2016 varying from 26.7% in Sweden to 22.1% in Austria. The noted countries have similar values although with different state structure as follows: Finland is a unitary state with a single local level, Sweden and Denmark are also unitary states but with two local levels and Austria is a federal state but with a single local level which differentiate it from the other federal states selected in our study (Germany and Belgium, as it will be described below). Their similarities of the weight of health care expenditure in local budgets is given by a strongly employment of principles of local autonomy and subsidiarity in their governance systems.

The next group delimited by us on the predefined rank is formed by countries comprised in the intervals of 20% and 5% level of local health expenditures in total local expenditures. These countries are Estonia, Poland, Czech Republic, Slovenia, Latvia and Portugal, their values varying from 15.7% down to 9.6%. For the cases of Estonia, Poland, Czech Republic, Slovenia and Latvia, the values are still consistently (higher than 10%), but either 9.6% value in Portugal case cannot be neglected. Even down to this percentage, the values from the table reflect the responsibility of local budgets in managing these

competencies meaning and a significant role in drawing policies on the matter. The percentage of local health expenditure in total local expenditure hold by the noted countries for years 2000 and 2016 was: 14.4 and 15.7 in Estonia, 13.7 and 15.6 in Poland, 13 and 13.9 in Czech Republic, 15.1 and 12.3 in Slovenia, 8.4 and 9.6 in Latvia, 4.3 with 6.3 in Portugal. Their little lower financing allocations for health care could be explained by their history, the majority of them, except Portugal, are countries that had experienced the communist regime before 1990 and in some ways they are still experiencing the transition process. Compared to other ex-communist states selected in our study, Poland is to be remarked due to a rapid decentralization process and administrative regionalization, these representing great ways for using local budgets as instruments of local and regional policy for development and economic growth.

The last seven countries from our study have minimum relative values of local health expenditure in total local expenditure lower than 5% for all selected period to analyse. For year 2016 they are ranked as follows: Netherlands with 3.7%, Slovak Republic with 3.6%, Germany with 1.8%, Spain with 1.3%, Luxembourg with 0.8%, France with 0.7% and Belgium with 0.5%. For some of the noted countries the lower percentage can be explained throughout their state structure. Germany and Belgium have a federal state structure, but differencing from Austria, they are organized under two local administrative layers and it is possible that public health care competences being more controlled and managed from the first local level (313 districts in Germany and 10 provinces in Belgium) and not the second (over 12300 municipalities in Germany and 589 municipalities in Belgium). Spain is a quasi-federal state also organized under two local administrative layers – 50 provinces with over 8100 municipalities based on the principles of local autonomy and subsidiarity, in this case also it seems that the last local administrative layer is not an important actor in managing public health care competences. Being unitary states and France and Netherlands have two local administrative layers and in their case it is possible too that public health care competences to be more controlled and managed from some superior structure, particular in France, well known for its centralised administrative tendency. Regarding Luxembourg, the values of local health expenditures (relative and nominal) are explained by its small geographical spread, being more efficient to finance public competencies directly from central level than splitting those to locals, as the cost will be lower in this way. For Slovak Republic the explanations could be based on the fact that it is one of the ex-communist countries and yet could not manage to line up his transition and decentralization process.

The following table (Table 2) in our paper reflects the nominal level of central health expenditure and their weight in total central expenditure for the selected countries across the period of 2000-2016.

Table 2. Evolution of central health expenditure in EU countries (selection, 2000-2016)

| Year | 2000 | | 2002 | | 2004 | | 2006 | | 2008 | | 2010 | | 2012 | | 2014 | | 2016 | |
|-----------------|-------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 |
| Austria | 2209 | 3.0 | 2408.0 | 3.1 | 2869.7 | 3.2 | 3022.4 | 3.3 | 3554.2 | 3.6 | 3942.6 | 3.8 | 4284.5 | 3.9 | 4141.4 | 3.5 | 5227.5 | 4.4 |
| Belgium | 279 | 0.4 | 300.5 | 0.4 | 428.9 | 0.5 | 501.2 | 0.6 | 723.3 | 0.7 | 622.7 | 0.6 | 684.1 | 0.6 | 4117.2 | 3.3 | 4707.8 | 4.0 |
| Czech Republic | 1843 | 9.0 | 3460 | 11.4 | 2717 | 8.9 | 3595 | 9.6 | 4554 | 9.5 | 4995 | 10.1 | 4997 | 9.4 | 4896 | 10.2 | 5492 | 10.7 |
| Denmark | 438 | 0.7 | 612 | 0.9 | 508 | 0.7 | 587 | 0.8 | 714 | 0.8 | 11598 | 11.3 | 12348 | 11.0 | 12496 | 11.3 | 13397 | 12.1 |
| Estonia | 107 | 5.5 | 138 | 5.8 | 155 | 5.5 | 237 | 6.0 | 387 | 6.9 | 340 | 6.7 | 364 | 6.1 | 460 | 7.1 | 489 | 6.6 |
| Finland | 2545 | 7.3 | 2950 | 7.8 | 3765 | 9.2 | 4486 | 10.4 | 5565 | 11.8 | 6097 | 11.5 | 6394 | 11.4 | 6531 | 11.1 | 6431 | 10.8 |
| France | 3259 | 0.9 | 3998 | 1.0 | 4392 | 1.1 | 4441 | 1.1 | 4307 | 0.9 | 5946 | 1.2 | 5052 | 1.0 | 5366 | 1.1 | 7905 | 1.5 |
| Germany | 4380 | 1.8 | 5058 | 1.6 | 4781 | 1.5 | 4687 | 1.4 | 4901 | 1.4 | 5318 | 1.3 | 5598 | 1.5 | 6016 | 1.6 | 6392 | 1.6 |
| Italy | 45055 | 13.4 | 27487 | 7.5 | 20248 | 5.3 | 5533 | 1.3 | 58781 | 13.4 | 76766 | 16.4 | 49712 | 10.5 | 62458 | 13.0 | 66265 | 13.4 |
| Latvia | 222 | 16.2 | 236 | 14.8 | 278 | 12.4 | 644 | 16.9 | 857 | 15.3 | 690 | 14.1 | 777 | 15.8 | 820 | 14.9 | 873 | 15.9 |
| Luxembourg | 119 | 1.9 | 166 | 2.2 | 263 | 3.0 | 297 | 3.0 | 321 | 2.9 | 431 | 3.3 | 289 | 2.0 | 285 | 1.9 | 347 | 2.1 |
| Netherlands | 4532 | 4.1 | 7558 | 5.8 | 10442 | 7.7 | 9237 | 6.3 | 10556 | 6.3 | 17249 | 9.1 | 12386 | 6.9 | 10681 | 6.0 | 11018 | 5.9 |
| Poland | 1659 | 3.7 | 2426 | 4.3 | 2073 | 3.9 | 3380 | 4.8 | 4333 | 4.5 | 4241 | 4.3 | 4607 | 4.8 | 4976 | 5.3 | 5005 | 5.0 |
| Portugal | 7644 | 18.4 | 8810 | 18.8 | 10394 | 19.6 | 11028 | 19.5 | 12056 | 20.2 | 12469 | 17.7 | 10412 | 17.1 | 10082 | 14.7 | 10344 | 16.5 |
| Slovak Republic | 781 | 6.4 | 885 | 7.6 | 716 | 6.2 | 926 | 6.3 | 986 | 6.2 | 1127 | 6.0 | 1188 | 6.1 | 1299 | 6.4 | 1446 | 6.9 |
| Slovenia | 635 | 11.4 | 778 | 11.3 | 904 | 11.2 | 1014 | 11.4 | 1220 | 11.9 | 1383 | 12.4 | 1425 | 13.0 | 1356 | 11.0 | 1527 | 13.3 |
| Spain | 1737 | 1.3 | 1982 | 1.4 | 2209 | 1.4 | 2357 | 1.3 | 2789 | 1.3 | 2927 | 1.3 | 2701 | 1.0 | 2733 | 1.2 | 2828 | 1.3 |
| Sweden | 3059 | 3.4 | 3078 | 3.4 | 3605 | 3.8 | 3812 | 3.7 | 4345 | 4.2 | 4589 | 4.0 | 5272 | 4.1 | 5230 | 3.9 | 5519 | 4.1 |

1 – Nominal values of central health expenditure (euro, million).

2 – Percentage of central health expenditure in total central expenditure.

Source: authors calculation based on data from OECD (2019)

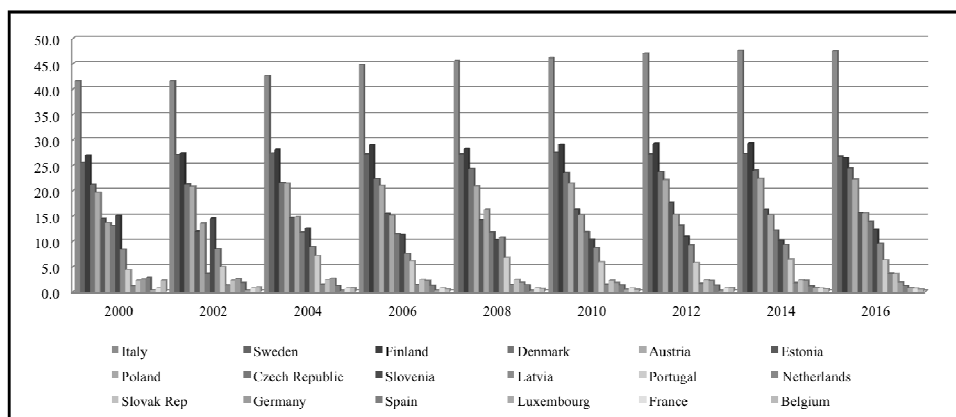
Only for comparison, we exposed and the amounts of central health expenditure and their weight in the respective budget. Overall, there are countries for which this value was always or nearly always lower than one spent from local budgets. Moreover, the maximum nominal level of central health care expenditure (66,265 million euros for Italy 2016) is much lower (at half of) than the maximum of these expenditure recorded at local budgets (114,432 million euro for Italy, 2016). Likewise, the maximum weight of these expenditures in central budgets (20.2% in Portugal, 2008) is much lower than the maximum of the percentage recorded at local budgets (47.6% in Italy, 2016). These confirm the general tendency among the countries of EU selected in our study of decentralization the competences in this domain.

Ranking the nominal values for 2016, we identified four top countries with central health expenditure with nominal values for central health expenditure higher than 10,000 million euros. From top to down the rank for 2016 is as follows: Italy – 66,265 million euros, Denmark – 13,397 million euros, Netherlands – 11,018 million euros and Portugal – 10,344 million euros. In Italy and Denmark cases central government spent lower amounts expressed in million euros than the amounts spent from local authorities in respect of the health domain.

Lower on the rank we have seven countries with central health expenditure between 8,000 and 5,000 million euro in 2016. In this group the maximum was recorded in France – 7,905 million euro and the minimum was recorded in Poland – 5,005 million euro. The rest of the countries with values of central health expenditures between the noted intervals are: Finland, Germany, Sweden, Czech Republic and Austria. For Finland, Sweden, Austria and Poland the amounts from central level where always (in the selected period) smaller than the ones spent at local level.

From the rest of the selected countries, four of them – Belgium, Spain, Slovenia and Slovak Republic – have values of central health expenditure between 5,000 and 1,000 million euros the lasts three – Latvia, Estonia and Luxembourg have values below 900 million euro in 2016. Further in our analyses, we exposed below a figure with the evolution with relative values of central health expenditure expressing their weight in total central expenditure for the countries selected in the study, for years 2000-2016, also for a visible comparison to the expenditure from local budgets.

Figure 2. Evolution of the central health expenditure as percentage in total public central expenditure in EU countries (selection, 2000-2016)



Source: authors calculation based on data from OECD (2019)

As stated above, overall the level of central health expenditure is under the level of local health expenditure, these being confirmed as well in Figure 2. Accordingly to this, it is emphasized once again that in the case of Italy, Denmark, Finland, Poland, Austria and Sweden, the central health expenditure are under the local health expenditure, as their weight in central budgets is under the weight hold by these in local budgets for all selected period in the study. For year 2016, their percentage in the central and local level is as follows: Italy 13.4 and 47.6, Denmark 12.1 and 24.3, Finland 10.8 and 26.4, Poland 5 and 15.6, Austria 4.4 and 22.1 and Sweden 4.1 and 26.7. The largest differences we remark between the two administrative layers is recorded in Italy and in Austria, denoting the depth or intensity of decentralization public competences in matter of health domain from central to local in their governance system. At any rate, this is visible and strong applied as well and in Denmark, Finland, Poland and Sweden (along with principle of local autonomy and subsidiarity).

As for the rest of the selected countries, Portugal, Latvia, Slovenia and Czech Republic have values of the weight of central health expenditures in total central expenditure between 16.5% in Portugal and 10.7% Czech Republic for year 2016. Others eight countries – Slovak Republic, Estonia, Netherlands, Belgium, Luxembourg, Germany, France and Spain – have values under 7%, varying from 6.9% in Slovak Republic to 1.3% in Spain.

As general aspect, the values of health expenditure weight heavier at local budgets, although from our presented data we cannot see for more countries values at locals higher than the one of the central level. As stated above, among our selected countries there are unitary and federal states having two or three local administrative layers (Belgium, Czech Republic, France, Germany, Latvia,

Netherlands, Portugal, Slovak Republic and Spain) that may be managing public health care competences not reflected in the municipalities' budgets. Much than this, some amounts for health financing may be recorded twice and because of the availability data, we have only data series containing the full amounts recorded at central and at local level, without eliminating those double accounted, transferred from the central to local and spent from this level (if the case of any country), by consolidation process. Then, still it is space to research in order to strengthen the fact that the policy in respect of providing public health services is conducted more from local bases (in a framework established from central level). From this point of view, local budgets may be considered a key actor for improving the general health state of a nation, identified with the general health state of his communities.

4. LIFE EXPECTANCY AND ECONOMIC GROWTH IN THE CONTEXT OF DECENTRALIZED HEALTH FINANCING

As Wallace Oates (1999) consecrated, instituting local budgets based on the principles of subsidiarity and local autonomy creates premises in better accomplish public needs, through the proximity between centre of decision and the citizens. On these bases, it makes sense that the context of decentralized health financing creates premises in improving health care outcome in a country, as it tried to argue below. In this respect, in Table 3 we show the life expectancy values for 18 EU countries between 2000 and 2016, as a relevant indicator of health care outcome.

Table 3. Life expectancy indicator in the EU countries (selection, 2000-2016)

| Country | 2000 | 2002 | 2004 | 2006 | 2008 | 2010 | 2012 | 2014 | 2016 |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Spain | 79.30 | 79.80 | 80.40 | 81.10 | 81.50 | 82.40 | 82.50 | 83.30 | 83.50 |
| Italy | 79.90 | 80.40 | 80.90 | 81.40 | 81.70 | 82.20 | 82.40 | 83.20 | 83.40 |
| Luxembourg | 78.00 | 78.10 | 79.20 | 79.40 | 80.70 | 80.80 | 81.50 | 82.30 | 82.70 |
| France | 79.20 | 79.40 | 80.30 | 80.90 | 81.40 | 81.80 | 82.10 | 82.90 | 82.70 |
| Sweden | 79.80 | 80.00 | 80.70 | 81.00 | 81.30 | 81.60 | 81.80 | 82.30 | 82.40 |
| Austria | 78.80 | 79.30 | 79.90 | 80.30 | 81.00 | 81.00 | 81.20 | 81.80 | 81.80 |
| Netherlands | 78.20 | 78.50 | 79.30 | 80.00 | 80.50 | 81.00 | 81.20 | 81.80 | 81.70 |
| Finland | 77.80 | 78.30 | 79.00 | 79.50 | 79.90 | 80.20 | 80.70 | 81.30 | 81.50 |
| Belgium | 77.90 | 78.20 | 79.00 | 79.50 | 79.80 | 80.30 | 80.50 | 81.40 | 81.50 |
| Portugal | 76.80 | 77.40 | 78.40 | 79.00 | 79.50 | 80.10 | 80.60 | 81.30 | 81.30 |
| Slovenia | 76.20 | 76.60 | 77.20 | 78.30 | 79.10 | 79.80 | 80.30 | 81.20 | 81.20 |
| Germany | 78.30 | 78.60 | 79.30 | 79.90 | 80.20 | 80.50 | 80.70 | 81.20 | 81.00 |

| Country | 2000 | 2002 | 2004 | 2006 | 2008 | 2010 | 2012 | 2014 | 2016 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Denmark | 76.90 | 77.10 | 77.80 | 78.40 | 78.80 | 79.30 | 80.20 | 80.70 | 80.90 |
| Czech Republic | 75.10 | 75.40 | 75.90 | 76.70 | 77.30 | 77.70 | 78.10 | 78.90 | 79.10 |
| Poland | 73.80 | 74.50 | 74.90 | 75.30 | 75.60 | 76.40 | 76.90 | 77.80 | 78.00 |
| Estonia | 71.10 | 71.40 | 72.40 | 73.20 | 74.40 | 76.00 | 76.70 | 77.40 | 78.00 |
| Slovak Republic | 73.30 | 73.80 | 74.20 | 74.50 | 74.90 | 75.60 | 76.30 | 77.00 | 77.30 |
| Latvia | : | 70.20 | 70.90 | 70.60 | 72.10 | 73.10 | 74.10 | 74.50 | 74.90 |

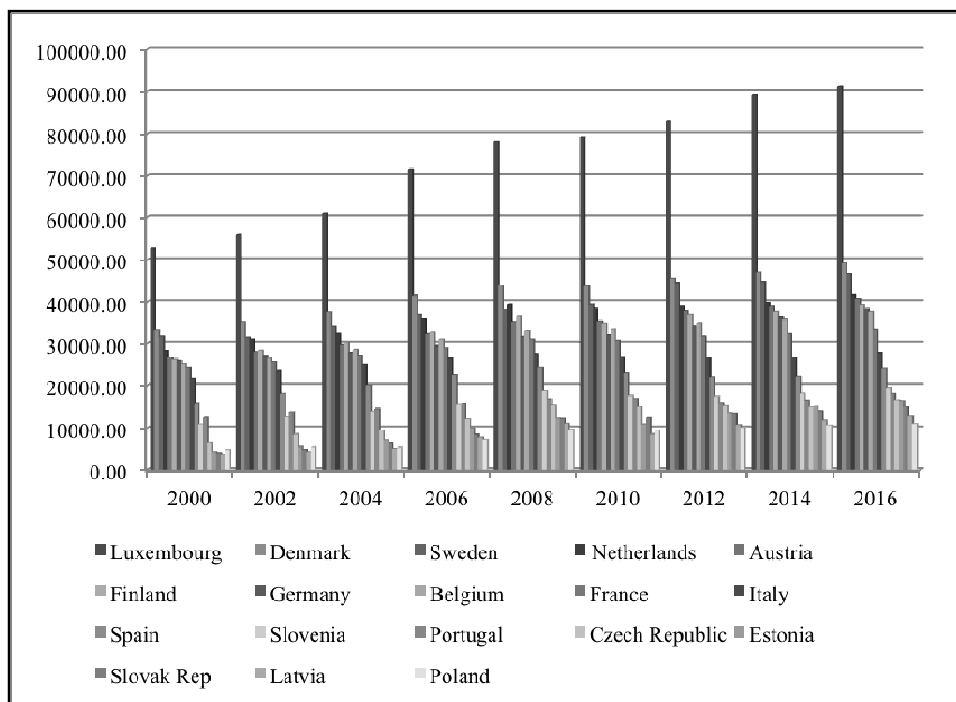
Source: World Bank database (World Bank, 2019)

As a general remark, the selected countries have similar values from a year to another. In this respect, we rearranged the data from large to small in column of the year 2016, in order to draw visible connections between the values of local health expenditures and the value of life expectancy as outcome of local policy health care in a country and then connecting to GDP per capita.

The countries for which life expectancy was nearly always above 80 years old in the last years were: Spain, Italy, Luxembourg, France, Sweden, Austria, Netherland, Finland, Belgium, Portugal, Slovenia, Germany and Denmark, showing consistency of life quality among the analysed period. For Italy, Sweden, Austria, Finland and Denmark, values of life expectancy may be linked with the higher amounts spent from local budgets in matter of health. With regard to the inconsistency of data series for local health expenditures, some traces between these and life expectancy may be identified and in the case of the rest of the states.

Either the values of life expectancy for Czech Republic, Poland, Estonia and Slovak Republic cannot be neglected, in particular in the last period of years (above 75 years old). Only Latvia has values varying from 70.20 in 2002 from 74.90 years old in 2016. And in this cases too, we believe it is space to research and determine a certain connection between local health expenditure and life expectancy.

In the last figure, we present the indicator of GDP per capita in the selected EU countries for the period of 2000-2016 in order to identify some connections between local health expenditures and their impact in economic development and growth.

Figure 3. GDP per capita indicator in EU countries (selection, 2000-2016)

Source: (European Commission, 2019).

According to the Figure 3, Luxembourg is the country with the level of GDP per capita far above of the other countries in the EU, recording levels varying from 52800 euro in 2000 to 91300 euro in 2016. The next country below Luxembourg is Denmark, his level of GDP per capita being 33300 in 2000 and 49200 in 2016, but over time the gap between the two has been increasing at near double of the level of Denmark. With a level of GDP near to Denmark are Sweden, Netherlands, Austria, Finland, Germany and Belgium. The next are France, Italy and Spain. The lower level of GDP per capita is recorded in Poland, Latvia, Slovak Republic, Estonia, Czech Republic, Portugal and Slovenia, except from Portugal; these are the ex-communist countries of Eastern Europe, this being the main reason for which they still are in development process in general.

Lining up the overall data, we will display some countries recording significant level of local in managing weighty health care expenditure at local level of administration, sustaining a high level of life expectancy and acquiring a high level of GDP per capita too. We refer here to Sweden, Finland and Austria, claiming that these exposed above may represent connections in respect of which local budgets represents policy instruments that can be further researched.

The three states recorded similar performance in the exposed domains, but having a different state structure. Sweden and Finland are unitary states, with two, respective one local administrative layer and Austria is a federal state formed by nine federate states.

Denmark also records performance in all domains analysed above, but having a life expectancy in 2016 only little lower than 80 years old, which can be considered still important. These also show evident connections between our data series, setting as well local budgets on a position of development and economic growth policy instruments.

In Poland case, although is promoted local autonomy as a main principle in organising public finances showing in this respect important volume of health expenditure at local level (being the only with this case from the analysed eastern countries) it has a life expectancy lower than 75 years old in 2016 and the lower GDP per capita in 2016 among the 18 EU analysed countries. The case of Poland could be explained trough the history facts, as it is one of the ex-communist countries, experiencing democracy only beginning from 1990 (similar to the other ex-communist countries and comparative to the occidental ones) and the transition process was never simple at all. On the other side, the powerful reform of Poland in matter of decentralisation and regionalisation which represented for it the opening path in absorbing European funds, make us believe that if insisting more in completion the reforming process (building robust local budgets) then will more lighten up the traces of local health expenditure and others categories too in economic development and growth (and in the end in alleviate economic disparities among local/ regional communities).

Italy and Spain are at least controversial cases. Both of them have the highest level of life expectancy in 2016 from the 18 analysed EU countries, but a quite lower GDP per capita (retrieved on a scale between 20000 and 30000 euro). Regarding local health expenditure, although both are regional states, Italy has the higher level of its (compared to central level in Italy and compared to local levels of the rest of the countries) meanwhile Spain has one of the lower levels of local health expenditure, so the expected connection between data series could be harder to see. At any rate, both countries have three local administrative layers meaning that the health expenditure could be also managed and controlled from a superior administrative scale, and not necessary from the level of municipalities, especially in the case of Spain. This leads us to raise further research questions: In a multi-layered local administration, which level spent most in general, which level spent most for capital and which level spent most for current needs? From which local level is better to manage and control the most public decentralized competences and spent the most from them? Or which are the best practices? Answering to these may allow then to draw a more visible path between health care competences from local level and their reflection in economic development and growth.

Estonia, Czech Republic, Slovenia and Latvia along Poland are counted between the ex-communist countries. They manage relative important amounts of health expenditure at local level. All of them still experience a transition process, Estonia and Slovenia has a single local administrative layer and Czech Republic and Latvia has two. In the case of Slovenia life expectancy is above 80 years old, meanwhile for Estonia, Czech Republic and Latvia the indicator has values between 75 and 80 years old, which can be still appealing. The GDP per capita has values for 2016 between 19500 euro (Slovenia) and 12800 euro (Latvia). In our view, similar to Poland, for these countries too, it must insist with completion of the reforming process, so then could establish palpable connection between local health expenditure and economic development and growth.

In order to further complete the analysis, we admit as well another point of view. According to it, from the moment of the acquiring and optimized governance system, with regard to assessment of public competencies between the administrative layers, the volume of local health expenditure counts less in front of the effective manner of spending. We believe that at a precise empirical analysis; will be found clearer connection and positive impact between local health expenditure, life expectancy and economic development and growth for different groups of countries. Thus, must be emphasised that the problem is not only related to the volume of local health expenditures, but also to their efficiency. From this point of view, we anticipate that the efficiency of health financing from local level (also from central level) must be analysed under the aspect of its administration (effective management), but under the aspect of technical efficiency of the respective expenditures as well.

5. FURTHER RESEARCH LANDMARKS

The main further research landmarks regard an empirical research about local health expenditure subcategories and their effect on economic growth and development for different countries. An approach based on the various subcategories of public health expenditure (curative and rehabilitative care – inpatient curative and rehabilitative care, day curative and rehabilitative care, outpatient curative and rehabilitative care and home-based curative and rehabilitative care – long-term care, ancillary services, medical goods, preventive care and governance and health system and financing administration) could be more appropriate because of the different effects overtaken by them, compared to an analysis on global health expenditure where the effects are not so comprehensive, as it is showed in previous studies (Toader *et al.*, 2017). Another two categories of public health are those used in prevention scope and those used for treatment, although having different effects on the health state of individuals, as showed at the first section in our research.

Another further research direction targets a similar analysis for Romania case, knowing the major problems of financing its health system. Romania's health system is financed from the three budgetary components: central budget, local budgets and a special fund at central level – the National Health Insurance Fund – these possibly representing a cause for an ineffective management. Under the ineffective management, the system faces problems with sustainable financing itself, so it is annually financed with enormous amounts transferred from central budgets, although it is grounded on the financing contributively principle. Also the system has visible and notorious problems with efficiency of the respective expenditures.

In the end, our further proposed approaches target a separately following of the effects of public health expenditure subcategories first for some selected country at European level and then solely for Romania. After obtaining certain results, the selected countries at European level, will be ranked and grouped under their effects, assuming efficiency problems with the various health expenditures. Thus, we will be able to formulate and propose solutions in matter of the policy of decentralised health financing in order to preserve and to improve the effects of it with regard to the general health state of individual and with regards to the economic progress for the analysed countries. The approach will be similar for the Romanian case.

6. CONCLUSIONS

On the matter of decentralised health financing we found for 6 of the 18 selected countries that the local spent amounts are over the central spent amounts from year 2000 to 2016. The countries are Italy, Sweden, Finland, Denmark, Austria and Poland. For this country cases, the figures denote the depth or intensity of decentralization public competences in matter of health domain from central to local in their governance system, along with acceptance of local autonomy and subsidiarity principles.

For other countries we couldn't see very large amounts for local health expenditures, because they still experience a transition process (ex-communist states) or because other unitary or federal states has multilevel local administration and the considered data in our study, is only for the first local layer (the lower and the closest to citizens). Much than this, we have data series without eliminating those amounts double accounted, transferred from the central to local and spent from this level (if the case of any country), by consolidation process. Then, still it is space to research in order to strengthen the fact that the policy in respect of providing public health services is conducted more from local bases (in a framework established from central level). From this point of view, local budgets may be considered a key actor for improving the general health state of a nation, identified with the general health state of his communities.

The countries for which life expectancy has a great level of life expectancy are: Spain, Italy, Luxembourg, France, Sweden, Austria, Netherland, Finland, Belgium, Portugal, Slovenia, Germany and Denmark. For Italy, Sweden, Austria, Finland and Denmark, values of life expectancy may be linked with the higher amounts spent from local budgets in matter of health. With regard to the inconsistency of data series for local health expenditures, some traces between these and life expectancy may be identified and in the case of the rest of the states.

In the end, we found some countries recording significant level of local in managing weighty health care expenditure at local level of administration, sustaining a high level of life expectancy and acquiring a high level of GDP per capita too. We refer firstly to Sweden, Finland, Austria and even Denmark (with a life expectancy in 2016 only little lower than 80 years old), claiming that these exposed above may represent connections in respect of which local budgets represents policy instruments, that can be further researched.

Italy and Spain are at least controversial cases. Both of them have the highest level of life expectancy in 2016 from the 18 analysed EU countries, but a quite lower GDP per capita (retrieved on a scale between 20000 and 30000 euro). Regarding local health expenditure, although both are regional states, Italy has the higher level of its (compared to central level in Italy and compared to local levels of the rest of the countries) meanwhile Spain has one of the lower levels of local health expenditure, so the expected connection between data series could be harder to see. At any rate, both countries have three local administrative layers meaning that the health expenditure could be also managed and controlled from a superior administrative scale, and not necessary from the level of municipalities, especially in the case of Spain.

Estonia, Czech Republic, Slovenia and Latvia along Poland are counted between the ex-communist countries, managing though relative important amounts of health expenditure at local level. In our view, similar to the progress of Poland, for these countries too, it must insist with completion of the reforming process (even Poland), so then could establish palpable connection between local health expenditure and economic development and growth.

Finally, after the moment of the acquiring and optimized governance system, with regard to assessment of public competencies between the administrative layers, the volume of local health expenditure is less important in front of the manner of spending them. We believe that at a precise empirical analysis will be found clearer connection and positive impact between local health expenditure, life expectancy and economic development and growth for different categories of countries. Thus, must be emphasised that the problem is not with the volume of local health expenditure, but with their efficiency. From this point of view, we anticipate that the efficiency of health financing from local level (also from central level) must be analysed under the aspect of its

administration (effective management), but under the aspect of technical efficiency of the respective expenditures as well.

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LEASING AND NEW REGULATIONS IN INTERNATIONAL ACCOUNTING

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Abstract

In January 2016, the International Accounting Standards Board (IASB) issued the International Financial Reporting Standard IFRS 16 on “Leases”, replacing IAS 17, previously used. The article presents the new standard, in force since January 1, 2019, and looks at its consequences from a legal point of view.

Keywords: *International Financial Reporting Standard IFRS 16; IAS 17; leasing; financial/operational leases.*

JEL Classification: K22

1. OVERVIEW OF THE SPECIALIZED LITERATURE

Leasing is a creation of the Anglo-American system (Clocotici and Gheorghiu, 2000, p. 23). In the common-law, the enforcement of the privacy of contract does not recognize the existence of an obligational direct legal relation between the user and the supplier (Munteanu, 1982, p. 67).

While the main thesis in the common-law considers that leasing creates a temporary right to use assets, having as effect the fact that the user practically bears all risks that normally fall upon the owner, as it pertains to personal property, in the civilist law system (of the European countries), leasing is part of the obligation law, and the trend is to consider leasing to be a new, complex, modern and original contractual technique.

For this reason, in the civilist legal doctrine, leasing was compared to rent, to sale with payment in installments, to loan, and to loan with special guarantees. Through leasing, it turned out that the general theory of obligations is outperformed by the modern contracting techniques (Cremieux-Israel, 1975, p. 15).

In the French doctrine, the leasing operations are considered to be a complex legal technique, implying the conclusion of a sale contract between the supplier and the leasing company (the lessor) and then of a lease contract

between the leasing company and the user, doubled by a sale promise between the same individuals, upon expiration of the lease duration (Kessedjian, 2013, pp. 381-382, apud Ungureanu, 2018, p. 284.). In other words, leasing is a purchase for the purpose of lease, followed by a lease for the purpose of sale (Căpățină and Ștefănescu, 1987, p. 244; Calais-Auloy, 1971, p. 137; Cremieux-Israel, 1971, p. 212).

In Italy, leasing (*locazione finanziaria*) is defined as „lease of movable and immovable assets, that the lessor acquires, or makes, according to the instructions given by the user, while the user undertakes all risks during the validity of the contract, and has the right to become the owner of the asset received in lease, on condition that he pays the price established when the contract was concluded” (Clocotici and Gheorghiu, 2000, p. 13) (in compliance with art. 17 para. 2 in Law no 183 of 2 April 1986).

In the Romanian legal doctrine, before the entering into force of the G.O. no 51/1997, we find the statement according to which „the leasing contract includes a set of legal act, marked by interdependency among them. It is not juxtaposition, but a unified set, autonomous, combining a sale, a mandate, a lease (Gdaihi, 2014, pp. 70-77) and a unilateral sale promise (Căpățină and Ștefănescu, 1987, p. 247).

For leasing operations, the Romanian doctrine uses the followed terms:

- lessor, considered in the Ordinance no 51/1997 on leasing and leasing operations (FR. *le credit bailleur*);
- user – lessee (FR. *le crédit-preneur*) and;
- supplier (FR. *le fournisseur*).

As trilateral operation, the UNIDROIT Convention defines leasing as the institution in which a party (the lessor) concludes, upon instructions of other party (the user) a contract of supply with a third party (the supplier), through which it acquires a material under the circumstances approved by the user, in the part that regards the user, and concludes a contract of leasing with the user, by which it gives the user the right to use the material in exchange of a rent.

According to G.O. no 51/1997 republished, the leasing operations are those through which a party, the lessor, gives, for a fixed period of time, the right of use over an asset whose owner the lessor is, to the other party, the user, upon the request of the user, in exchange of a regular payment called leasing installment, and at the end of the leasing period of time, the lessor shall have the obligation to respect the right of the user to either buy the asset, to extend the leasing contract, or to terminate the contract.

Jurisprudence has tried a definition of the leasing contract: “(...) the leasing contract means the funding of a productive investment, guaranteed through the right of ownership of the lessor over the asset, and the user shall have the option to buy the asset at the price established when the asset was given in lease, by taking into account the amounts paid as lease (leasing installments)” (Court of

International Commercial Arbitrage or the Romanian Chamber of Trade and Industry, decision no 79 of 28 April 2000).

2. FINDINGS OF THE RESEARCH

2.1. New rules in international accounting

In January 2016, the International Accounting Standard Board (IASB) issued the International Financial Reporting Standard IFRS 16 “Leasing contracts”, which is to replace the provisions of the international accounting standard IAS 17 “Leasing contracts”.

The objective of this IFRS 16 standard is to guarantee that the *lessors and the lessees* provide relevant information, in a way that represents exactly the respective transactions. Based on this information, the users of financial balances can assess the effect that leasing contracts have upon the financial status, financial performance and treasury fluxes of an entity. [1]

IFRS 16 modified significantly the definition of the leasing contract, with impact upon the accounting and the reporting performed by the lessee. According to the IAS 17, a leasing contract was an agreement by which the lessor transfers to the lessee, in exchange of a payment or a series of payments, the right to use an asset over a period of time agreed upon”. According to IFRS 16, the leasing contract is „a contract, or part of a contract, that gives the right to control the use of an asset identified for a certain period of time in exchange of a counter-value”. From the legal point of view, the new definition seems to be sub-lease of the asset given in lease. The phrase „right to control the use of” leaves room for this assumption. In fact, no user can sub-lease the asset without the consent of the lessor.

The idea of control suits the new accounting perspective, namely that it reflects the financial state of the user but in our perception, it does not comply with the legal reality of the contractual relations lessor-user.

According to the new standard applicable in accounting, that is IFRS 16, the classification of the leasing contracts stays relevant only in the context of the accounting of the lessor, the only contracting party that classifies the leasing contracts into financial and operational. A leasing contract is classified as financial leasing if it basically transfers all the risks and the rewards that correspond to the ownership rights over an asset- support.

This manner to differentiate the two forms of leasing partially corresponds to the legal concept, but only for the financial leasing. According to this concept, the contractual risk is borne by the user. In the case of operational leasing, the lessor bears the risk of asset disappearance (according to art.5 letter e in the G.O. no 51/1997 on leasing and leasing companies).

Starting from the definition, the provisions of the new standard are subordinated to an accounting treatment that is unique for the lessee, namely the

recognition, in the balance, of the assets and of the debts corresponding to the rights and obligations that arise from the leasing contracts (Bizon, 2018, p. 3). For the lessor, the new standard does not bring accounting-related changes.

According to the provisions of IFRS 16, a lessee (Militaru, 2013, p. 110) can obtain the ownership deed for an asset-support, before the ownership right is transferred to the lessor and the asset is given in leasing to the lessee. The obtaining of the ownership deed does not determine, as such, the way in which the transaction is defined in the accounting system.

If the lessee controls the asset-support (or obtains the control over the asset-support) before the asset is transferred to the lessor, the transaction becomes a sale and leaseback transaction.

From the legal perspective, in leaseback, the transfer of the ownership from the user to the lessor is only apparent, as at the end of the contract, the user re-becomes owner. The legal mechanism serves the economic interest of the user to procure funds, without giving up the ownership over the asset.

We estimate that the new IFRS 16 standard will have a significant impact especially upon lessee entities that use assets based upon operational leasing in a significant proportion. The financial indicators reported by these entities may change significantly (Bizon, 2018, p. 8) since, under the new model, new assets and debts will be “brought” in the balance. Many lessees will also need time to adjust themselves to the systems that produce and compile enough information to meet the new demands.

We are wondering how this new concept will comply with the fiscal law. While, in the version based upon the IAS 17 standard, the tax-payer of the asset was the user in the financial leasing, he was the lessor in the operational leasing. The solution corresponded to the legal concept, according to which the user was treated as owner, because the purchase option was already expressed, since the conclusion of the financial leasing, while in the case of the operational leasing, the owner remained the lessor.

We are hereby wondering what is the fiscal solution in the case of IFRS 16? Both the user in the financial leasing and the user in the operational leasing will pay taxes? How will the court solve a potential litigation in which the defendant-user refuses to pay in an operational leasing contract by invoking the lack of active capacity, namely the lack of ownership deed?

2.2. Is the statute created by the 2018 Romanian legislation more favorable?

Our days' practice imposed a proposal to modify the wording of the G.O no 51/1997 on leasing and leasing operations. [2] It was adopted on 26 March 2018 by the Romanian Senate [3], but it is still not adopted by the Chamber of Deputies, and for that reason we shall call this initiative a „draft”.

According to this draft, the late payment of the leasing installments, that, in *lege lata*, is sanctioned if it exceeds 2 months, is extended to 3 months in *de lege ferenda*, and afterwards, the following possibilities are given: the asset is either given to the lessor and the lessor can do what he wants, a); or the user gives the asset to the lessor, and within 30 days, he can sell/ buy the asset, by keeping the difference or by paying the difference to the lessor-b).

We consider the provisions of the draft that modifies art 15 in the G.O no 51/1997 not an improvement of the statute of the user but worsening provisions.

After the French model that supports the limited liability of the user (Eyango Djombi, 2016, p. 108), and by extending the giving into payment to the matter of leasing, we are hereby proposing another way to solve the issue. If a user proposes to the lessor, as guarantee of fulfillment of the obligations stipulated in the leasing contract, a pledge contract or a mortgage contract, the loss of the lessor in case of failure to pay the leasing installments shall be limited to the value of the pledged/ mortgaged assets. In other words, by taking over these assets by the lessor, the lessor gives up the amounts owed according to the leasing contract.

We consider this solution to be a happy combination of provisions applicable *de lege lata* in the American law and in the continental/civilist law. The result is the following: as the user who does not meet its contractual obligations cannot, according to the American leasing (Clocotici and Gheorghiu, 2000, pp. 173-177), claim money submitted as guarantee and taken by the lessor, in the civilist law, the asset submitted as guarantee by the user who incurs delays with the leasing payments, cannot be taken back by the user as it is considered as given in payment.

3. CONCLUSIONS

We can see that both in the legal matters and in accounting, changes in regulations are taking place, due to the wide range of leasing operations in business.

It is imperative, therefore, to re-think the leasing philosophy, due to the interventionist trend of the state to levy taxes on profitable sectors, and due to the expansion of the American model of thinking, where the main pillar of the leasing construction starts from the issue of assuring risks regarding the asset that is the object of the contract.

We can notice in section 1 of this study that, in the legal concept promoted by the common-law on leasing, it creates a temporary right over the assets, resulting into the fact that the user of the asset bears practically all the risks that normally fall on the owner. There was only one step from here to the idea of not taking into account the capacity of owner and to force the user – both in financial leasing and in operational leasing –to pay taxes for the asset taken in leasing. A small step for the accounting, a huge step for the philosophical

approach. For that reason, we consider the 2 concepts to be irreconcilable, if we apply the IFRS 16 standard.

NOTES

- [1] According to the International Financial Reporting Standard 16 Leasing contracts.
- [2] The Romanian leasing regulations are given by Ordinance no 51/1997 on leasing operations and leasing companies, republished in the Official Gazette no 9 of 12 January 2000, approved and modified by Law no 90/1998, published in the Official Gazette no 170 of 30 April 1998; Law no 533/2004 to modify and complete the G.O no 51/1997 on leasing operations and leasing companies, published in the Official Gazette no 1135 of 1 December 2004; Law no 287/2006 to modify and complete the G.O. no 51/1997 on the leasing operations and leasing companies, published in the Off. G. no .606 of 13 July 2006.
- [3] See Law no 435/2017 on: <https://www.senat.ro/legis/lista.aspx?nrcls=L435&ancls=2017>, accessed on 24 September 2018.

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EQUITY IN FINANCING THE HEALTH SECTOR –
AN IMPORTANT ASPECT IN REDUCING INEQUALITIES
IN ACCESSING HEALTH SERVICES. ROMANIA
IN THE EUROPEAN CONTEXT

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Abstract

The health sector funding system exists to improve the health of the population. The health system has a basic role in national development, being a promoter of the citizen's health and, implicitly, a supportive and prosperous factor of the whole society. As a result, each state must promote a health care system that ensures equity in access and a balanced health state of the population, which is an essential component of increasing the quality of life, longevity of citizens, as well as national continuity and development. This paper presents an assessment of the importance of equity in financing the health system as well as accessing this sector and population coverage with basic health services, analysing Romania in the context of EU Member States. The percentage of GDP allocated to the healthcare system influenced the degree of access to these services and also equity in funding influences the coverage of the population with basic health services as well as the degree of access to them by the population. The financing modalities of the health sector have the common goal of leading to fairness in accessing these services, as well as improving the quality, efficiency and patient satisfaction, in order to improve the health of the population.

Keywords: *equity; financing; health, access; inequalities.*

JEL Classification: A12, D63, H51, I14

1. INTRODUCTION

It is known that the health of the population is considered a fundamental resource for economic well-being and a factor supporting socio-economic development. In recognition of its importance, the World Health Organization (WHO) provides the fundamental right of every human being to enjoy the highest achievable standard in health services. Also, in this respect, the WHO defines the notion of equity in accessing health services as representing the level of attainment of the intrinsic goals of the health system to improve health and the capacity to respond to the general expectations of the population (World Health Organization, 2014).

In the present study, we propose an analysis of the degree of financing of public health services as well as the equity in accessing this sector. Access to health services (health promotion, prevention, treatment, and rehabilitation) is a fundamental condition for increasing the performance of the economy, as a healthy person is fit for work. This involves, first of all, the proper organization and functioning of the health system, which mainly depends on ensuring adequate funding.

The approach of the topic is motivated by the fact that at present the access of health institutions is directly proportional to the level of the national economy and implicitly to the financing of this sector and represents an essential point in the assessment of the evolution of the health status of the population. An important aspect is a possibility of pursuing the financing of this sector and the coverage of the population with basic health services, which are directly proportional to the economy of each state. The effects of economic and political change on the level of funding for health services are reflected in the possibility of aligning the accelerated pace of expectations of the development of this segment to international economic developments.

Thus, the paper aims to study the percentage of GDP allocated to the healthcare system, access to the health system by the population, but also the coverage of the population with the basic health services in Romania, aspects compared to those existing in the U.E.; the presentation and development of the importance in the equity of financing and access to this sector, respectively the effects of the economic situation on the national medical system, are objectives of this study. Thus, economic growth is the basis for the continuous development of the national health system, and equity in accessing this sector is an important source of the development of society.

2. PROBLEM STATEMENT

The research concerns the identification of Romania's position regarding the level of financing of the health sector, as well as the degree of access and coverage of the population with these services, in the context of EU member states. The effects of healthcare underfunding are multiple, and the dynamic

nature of healthcare development has a strong impact on the economy of each country, as it requires sustained financial support to ensure equity in accessing these services. Also, an important aspect of research refers to the correlation of the percentage of GDP allocated to the health sector and the degree of access to hospital units, assuming that funding largely influences access to any system. The dynamics of evolution and the efficiency of each health unit are largely directly proportional to the level of available financial resources and how they are managed.

3. METHODOLOGY

The research methodology of this study is based on qualitative and quantitative research; Qualitative research of data comprises three main stages, namely (1) the identification of the specialized literature, (2) its selection, (3) the corroboration of the studies and their summary. Quantitative research implied the identification and interpretation of data on the percentage of GDP allocated to the health sector, the degree of access to these services, as well as the coverage of the population with basic medical services, in order to identify the influence of health services financing on availability and access them. Highlighting the unequal distribution of the number of medical and healthcare institutions and the effects of underfunding in the health sector are also objectives of this work. In order to identify the influence of the percentage of GDP allocated to the health sector on the degree of access and coverage of the population with basic medical services, data from official sources were used, namely EUROSTAT and National Institute of Statistics.

4. LITERATURE REVIEW

Equity in health financing is a common concern of many countries. There are various socio-economic and political studies that have generated different perspectives on how to address the issue of the importance of equity in financing this sector. Specialized studies such as those conducted by Hussein and Mujinja (1997), Nyonator and Kutzin (1999), Ridde (2003), Bate and Witter (2003), Chuma and Okungu (2011), Macha *et al.* (2012) found that the direct payment of health services, in addition to mandatory health insurance, reduced the level of equity not only in the financing of healthcare but also in access to basic care. Other studies, for example, Litvack and Bodart (1993), Soucat and Gandaho (1997), Audibert and Mathonnat (2000) found that quality and, implicitly, access to health services improved after tax cuts and the introduction of a mechanism effective tax relief, and vulnerable groups have benefited from free health care. Chuma and Okungu (2011), Mills *et al.* (2012) argue that alternative funding mechanisms aimed at reducing patients' total payments are essential to improving equity in accessing the sector. Recent debates focus on reforms to achieve universal coverage both in funding and in accessing this system. Equity

in health care has been an important topic in studies such as those conducted by Ensor and Savelyeva (1998), Makinen *et al.* (2000), Saltman, Busse and Figueras (2004), Wagstaff and Moreno-Serra (2009), Tangcharoensathien *et al.* (2011), Kwon (2011), Titelman, Cetrángolo and Lucía Acosta (2015), Atun *et al.* (2015) argue that in order to offset the government financing deficit, direct payments have become a common practice, and in this way, equity in accessing public health has declined.

In accordance with Van Doorslaer *et al.* (1999), through a research study that measures equity in health care funding, the European Union has, since the early 1990s, funded roughly equal health projects in member countries, which should have diminished existing inequalities within these services at the country level. In the World Health Report 2000, the WHO has proposed a framework for assessing the performance of the health system where fairness is one of the main habits of the healthcare sector (World Health Organization, 2000). In the 2010 World Health report, equity capital in health financing is considered an important means of achieving universal coverage (World Health Organization, 2010).

5. THE IMPORTANCE OF EQUITY IN HEALTH FINANCING

Equity in health financing refers to the fairness of distributing health-related funds to hospital units so as to encompass the demands of the entire population. Fair funding is a key objective of health systems, and the importance of this is highlighted in health policies, government policies and the work of health economists.

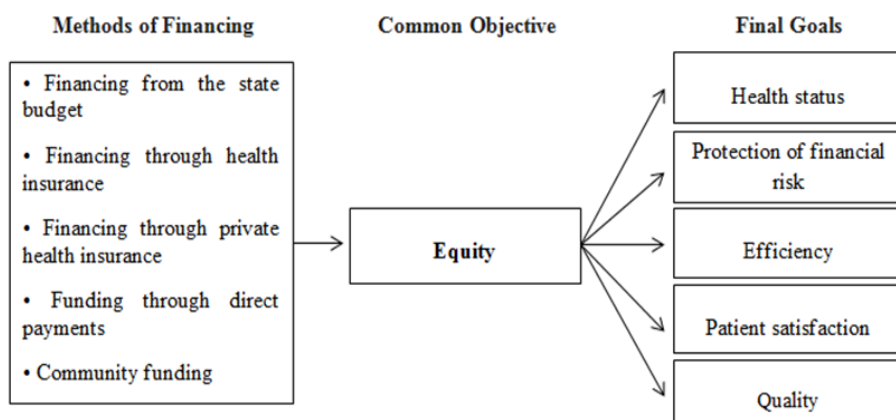
Equity in financing the healthcare sector is conditional on equity in accessing these services. Thus, according to Vlădescu, Ciutan and Mihăilă (2010), an important aspect is represented by equity in revenue generation for this system. Horizontal equity requires equal treatment of individuals with the same income, ie all individuals belonging to the same social classes contribute to equal income formation of the system; vertical equity requires differential treatment of individuals with different incomes, that is, the distribution of the amount of taxes according to the ability of individuals to pay, respectively, those with higher incomes contribute more to the constitution of the income of the system than to those with low incomes (Vlădescu, Ciutan and Mihăilă, 2010). To ensure coverage of the financial risk of the population on a level playing field, it is necessary to meet certain conditions: a high level of pre-financing, the dispersion of risks, the payment of the contribution to those who cannot pay the contribution, the avoidance of the fragmentation of funds and the existence of a purchasing strategy so as to ensure the best coverage of health needs and respond to the expectations of the population (World Health Organization, 2000).

Health Financing Systems in Member States U.E. are constantly subject to change, these states being in constant evolution and change; and, at the same

time, the disease profile and resources needed for their healing and/or amelioration. Although these funding systems differ from country to country, there is a need for a solid health financing mechanism, a well-prepared and adequately-funded workforce, reliable information on which to base decisions and policies, as well as the logistics and technology needed to provide quality services to all categories of people.

Healthcare can be funded in a variety of ways, with the goal of being one, namely maintaining and improving health by ensuring universal access to the system for the population.

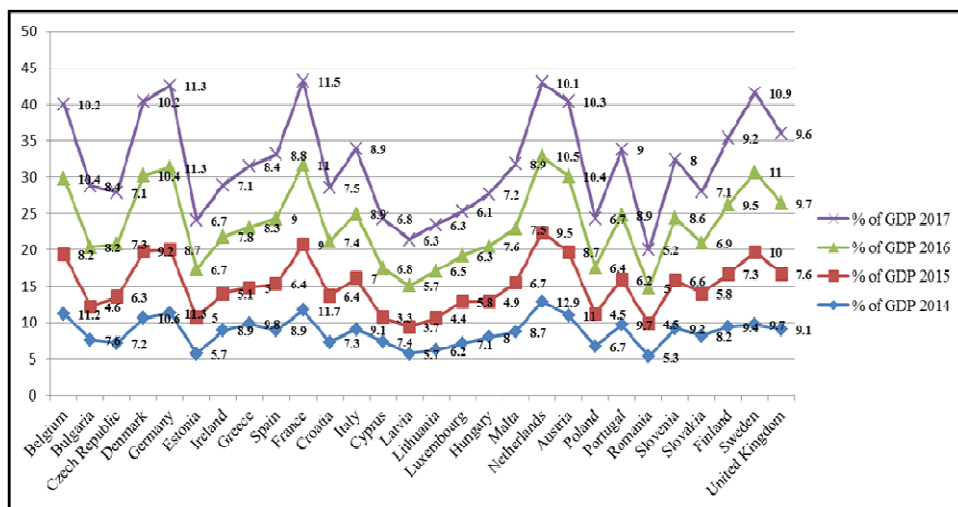
Figure 1. Existing relationships between funding, common objective and final goals



Source: authors'elaboration

Healthcare can be funded in a variety of ways, (Figure 1), namely: (1) Financing from the state budget; (2) Financing by health insurance; (3) Financing by private health insurance; (4) Direct payment financing; (5) Community funding, the aim is to maintain and improve the health status by ensuring universal access of the population to this system. Equity, both in terms of funding and access to health services, leads to a balanced state of health of the population, the protection of the financial risk faced by vulnerable groups in particular, the efficiency of the system, patient satisfaction and growth continuous quality of the services offered, which lead to a good functioning of this sector.

Increasing health sector funding as a percentage of GDP is important in order to increase the incidence of global diseases and hence increase access to this system. It is known that funding for this sector will be higher as a percentage of GDP in developed and lower countries in developing countries (Figure 2).

Figure 2. Percentage of GDP allocated to healthcare in EU countries

Source: authors' elaboration based on data from European Commission (2019a)

Over the period under review, it can be noticed that in most countries the percentage of GDP allocated to the health sector has increased from one year to the next. Developed countries such as Belgium, Germany, Austria, and others allocate a relatively high percentage of health, while in Romania, in 2016 and 2017, it is the last one in the ranking, with a percentage of GDP allocated to the health of 5 and 5.2 percent respectively. Compared with the EU average in this respect, Romania is also well behind. Thus, in 2016, Romania allocated 5% of health compared to the EU average of 8.3%; in 2017, the EU average for this sector was 9.6%, while Romania allocated only 5.2%.

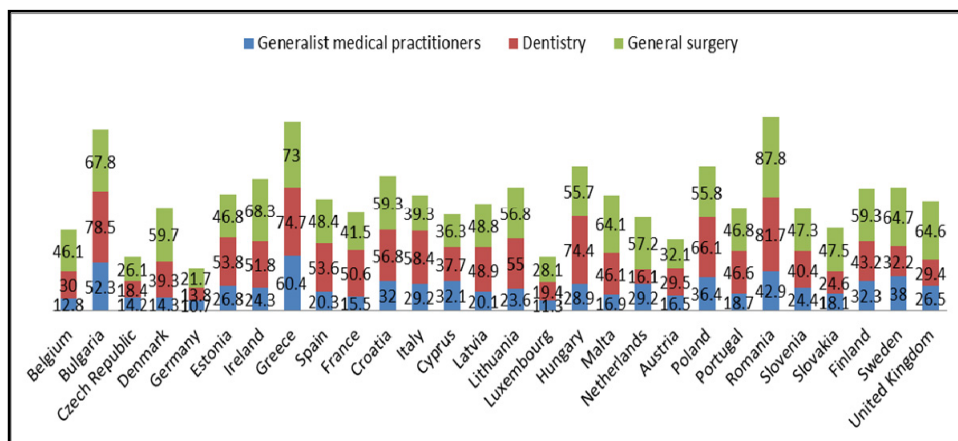
The effects of underfunding on the health sector are multiple. According to the European Commission, in Romania, there is a big problem related to access to health services, especially for the poor, with about 20% of the population. This gap is particularly high in the treatment of chronic diseases, as 42% of poor people claiming to have a chronic illness do not access the health care system, compared with 17% of people with a good financial situation. The real gap is even greater because most poor people with chronic illness are unaware of the need for medical care. Simulations based on the assumption that the need to care for people with a cortical disorder is similar among the wealthy and the poor population estimates that 85% of the poor who require health care do not benefit from it (World Health Organization, 2017). Also, according to the World Health Organization (2017), the coverage of the population with basic health services ranks Romania by 89%, followed by Bulgaria with 88.2% and Cyprus with 83% %. The report shows that developed countries have the power to cover up to 100% of the population with basic health services.

6. INEQUALITIES IN ACCESSING HEALTH SERVICES IN ROMANIA

The disparities in accessing the health sector stem mainly from the lack of financial resources of the population. Another reason is the lack of medical staff and hospital units in the urban environment. The effects of these disparities are reflected in the national economy, by reducing labor force and by agglomeration of the emergency sector.

Government policies at U.E. are aimed at subsidizing services (so, theoretically, there is no co-financing for services) and partially subsidizing a wide variety of pharmaceutical products for the entire population. Thus, poor categories are explicitly exempt from payments, but reality suggests that this policy is not effective in protecting the poor and other vulnerable groups from financial difficulties. According to the World Health Organization (2017), three out of four poor patients pay for the services they receive; 62% of poor people requiring medicines pay for them; the average reimbursement rate for poor categories is the same as for all other income categories, which means that due to the fact that the use of medical services is higher among higher income groups, most of the subsidies benefit the middle class and the rich population category. While in some countries illnesses lead to poverty due to the high cost of medical care incurred by patients in their own pockets in Romania, the main problem is rather the lack of access to it than the high financial costs. A survey based on the data from a 1999-2004 survey measured the impact of healthcare payments on poverty. In 1999, healthcare payments brought 1.2% of the population below the poverty line, while in 2004 they brought 0.4% of the population below this limit (World Health Organization, 2017).

The percentage of people who did not visit a specialist in 2017 (Figure 3) is an increased number. The reason why these areas of the medical system were not accessed was not because of the lack of necessity, but most often because of the lack of possibilities. It is known that people require a routine dental check every 6 months, and the fact that 81.7% of the Romanian population has not accessed this type of consultation is certainly the lack of financial resources. Romania ranks first in the lack of general surgery specialty, secondly in the lack of access to dental practices and third in the failure to attend a general medicine cabinet. The reasons why the population of Romania does not frequently access the general health services are the lack of financial resources, on the one hand, and, on the other hand, the lack of sanitary units and of the medical staff in rural areas, which makes access to the care more difficult health.

Figure 3. Percentage of people who did not visit a specialist physician in 2017

Source: authors' elaboration based on data from European Commission (2019b)

It is easy to observe that most hospital units are in the urban environment (Table 1). Of these, many are in the private system, which means an extra cost to the population. Thus, the uneven distribution of sanitary units can largely determine the access of the population to health care. Another aspect is the low number of hospital units in the public system, which makes access to this system conditional on the financial situation of each individual.

Table 1. Number of healthcare units by area of residence and property form in 2017

| Type of unit | Total | Urban area | | Rural area | |
|--------------------------|-------|---------------|----------------|---------------|----------------|
| | | Public System | Private System | Public System | Private System |
| Hospitals | 576 | 334 | 192 | 33 | 17 |
| General medicine offices | 776 | 16 | 650 | 5 | 105 |
| Family medicine offices | 11055 | 16 | 6558 | 5 | 4476 |
| Pharmacies | 7945 | 370 | 5043 | 29 | 2503 |
| Polyclinics | 144 | 9 | 133 | - | 2 |
| Dental offices | 15095 | 29 | 12924 | 3 | 2139 |
| Medical laboratories | 4077 | 1960 | 1955 | 114 | 48 |

Source: authors' elaboration based on data from National Institute of Statistics (2018)

Table 2. The number of medical staff by area of residence and property form in 2017

| Medical staff | Total | Urban area | | Rural area | |
|------------------------------|-------|---------------|----------------|---------------|----------------|
| | | Public System | Private System | Public System | Private System |
| Physicians | 58583 | 36176 | 16751 | 612 | 5044 |
| Dentists | 15653 | 1605 | 12003 | 14 | 2031 |
| Pharmacists | 17833 | 1126 | 13518 | 35 | 3154 |
| Nurses with higher education | 14613 | 12258 | 1828 | 271 | 256 |

Source: authors' elaboration based on data from National Institute of Statistics (2018)

Both the reduced number of healthcare professionals in the public health system and their uneven distribution reduce the population's access to health care (Table 2). The urban environment faces an acute shortage of medical staff, which makes access to this system more difficult.

7. CONCLUSIONS

Access to healthcare is important for everyone. A high standard in this area is essential and large variations in access to the sector are increasingly visible both between and within many countries. As healthcare becomes more complex, spending continues to grow and, in this context, it is important to know equity in funding but also in accessing the health care system by the patient choosing a particular institution by healthcare professionals who improve continuous skills, the manager responsible for the proper functioning of the hospital unit, as well as by the regulators that evaluate the whole system. Specialist studies show that even the most developed countries face this challenge of maintaining their equity in public health financing and accessing these services. The cause of these problems is the continuing increase in the cost of this system.

The ideal situation of universal coverage of the population with health services cannot be achieved in a short period of time. In most developed countries, the transition period lasted for several decades, and this is also possible in the case of developing countries.

In Romania, the access of the population to health services is restricted by the under-financing of the system, which leads to (1) the uneven distribution of sanitary units and medical staff, which hampers access to the health system of the population in rural areas in particular; (2) waiting lists for a specialist consultation; (3) lack of funds for free and / or compensated medical tests and medication; (4) insufficient number of medical staff. Also, the financial situation determines to a large extent the access to the sanitary system. Thus, equity in

access is difficult to halt, but with fairness in financing this sector, this phenomenon could be considerably diminished.

The level of spending on health services in a society is a determining factor for its degree of economic and social development. Advanced economies allocate important resources to finance the health sector as a prerequisite for sustainable long-term economic development. The health problems of the population, as well as the difficulties of the medical system in general, are long-term problems and the consequences of which will be felt in the future and the attempt to solve them in the short term is impossible. The low standard of living of the population and the low resources of the medical system are the main causes of the current state of health.

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INTERNAL AUDIT LINKING WITH THE INTERNAL MANAGEMENT CONTROL SYSTEM IN ROMANIA

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Abstract

Internal managerial control is a public management tool, implemented as a result of Romania's accession to the European Union.

The diversity of activities carried out by public institutions has imposed a general structure of control standards in order to enable adaptation to institutional specifics.

Our work proposes an analysis of the relationship between internal audit and internal management control in public institutions.

Our analysis shows that there is a tendency to decrease the implementation of the 16 internal audit standard, at the level of the main authorising officers in Romania, and there are also a number of internal audit limitations on internal management control.

The methodological approach is based on the reports of the General Secretariat of the Government, the strategy of development of internal public financial control in Romania 2017 – 2020 (updated), indited by the Ministries of Public Finance, the Public Reports of the Romanian Court of Auditors.

Keywords: *internal managerial control; internal audit; public management.*

JEL Classification: C40, D12, O12

1. INTRODUCTION

Internal control existed in the Romanian public administration, as early as 1990, but accession to the European Union imposed a resettlement of it. At the level of the Member States of the European Union there has been a continuing concern for the development of internal public control systems, in particular with the aim of protecting Community funds and by implicitly reducing fraud in their field. If there was a need for evidence of concern shown by the European Commission's Budget Commission, we can remember: the elaboration of two compendes, in the years 2012 and 2014, documents which centralised the internal public control systems of the Member States of the European Union and conferences organised on the subject of internal public control: 2012 (Brussels), 2014 (Hague), 2015 (Paris), 2017 (Budapest), attended by representatives of the 28 member states.

According to the Compendium of the internal Public Control systems in the Member States of the European Union, (European Commission, 2012), the concept of internal public control in Romania includes:

- Internal/managerial control system;
- Internal audit;
- The coordination and central harmonisation of the two above-mentioned components.

Janusz Lewandowski, European Commissioner for the Budget 2009-2014, in the Compendium of Internal Control Systems of the EU Member States, second edition, (European Commission, 2014) said: in the context of the pressure on public finances in recent years, it is very important for the member states to share control experiences and audit systems that can improve transparency and accountability in spending budgets. The conclusion of the Budapest Public Internal Affairs Conference in June 2017 was that the PIC network initiatives should continue to debate the challenges that arise and improve internal control.

In the Compendium of Internal Control Systems of the EU Member States, (European Commission, 2012), it is estimated that: the reform of the internal control system actually means the reform of the public management system.

In this paper we aim to provide an overview of how internal audit can influence the internal management control in Romania, the limitations and constraints of the internal auditor, as well as the evolution of the level of implementation of the internal management control standard – Internal audit regarding central public entities (2011 – 2012 – 2013), respectively regarding public entities – own apparatus and subordinated and coordinated public entities (2015 – 2016 – 2017).

2. REFORM OF PUBLIC ADMINISTRATION IN ROMANIA

Lynn and Stanciu (2004) showed that: “Public administration provides an invincible environment for public management, from institutional / descriptive to formal analytical and didactic.”

Public management in Romania has gone through many changes in order to reach this form of organization, which is not perfect, we can say that it is perfectible. The new Public Management, which has been discussed since the 1980s in countries such as the UK or Australia, could have been an option, a possible model for public management reform in the Romanian administrative system (Androniceanu, 2007).

Gheorghe (2012) considers that the type of administration that Romania is doing is neither of the Weber type nor of the new Public Management, emphasizing the fact that the Romanian administration is still in the transition period in terms of public management.

In Romania, the state is the largest employer and the measures to be taken to make the administrative apparatus more efficient, from the central to the most remote, are difficult to implement. It is necessary to recall here also the low degree of computerization and interconnection of databases between public institutions, which lead to additional response times and sometimes to inaccurate situations.

Burduş and Popa (2014) state that “Implementing the change involves moving from the existing state of the organization to a desired state in the future. This transition is not immediate, but involves a certain state of transition where the organization sees the necessary conditions to reach the desired state.”

3. INTERNAL AUDIT IN PUBLIC INSTITUTIONS

Law no. 672/2002 on the internal public audit, as amended and supplemented, regulates the carrying out of the audit activity in public institutions in Romania.

Chersan and Precop (2016) stated that a reality of recent years is represented by the more frequent request from managers to internal auditors for counselling missions, in addition to assurance missions. Under these circumstances, it becomes increasingly obvious that the major role of internal audit is to be in the service of management.

The authors also appreciated the relationship of managers with the internal control system and the audit function, that managers often understand the basic elements of a good internal control system and accept the role of internal auditors in the validation process of the control processes, but there are cases in which managers understand that the responsibility of designing and implementing the internal control system is the responsibility of the internal auditor.

However, not all public institutions have constituted an internal audit department. Some of the institutions do not have functional audit compartments, and other functional compartments cannot fully cover all the activities that should be audited, either through insurance or counselling missions.

In the Court of Accounts Report for 2016, the Introduction section states that internal audit is an integral part of the internal control system and plays a key role in assessing entity control systems.

One of the recommendations formulated by external auditors for publicly audited entities is that the internal audit function should be further exploited by managers as a function that adds value to entities through their recommendations, so managers should be interested in the good functioning of this activity and in maximizing its results.

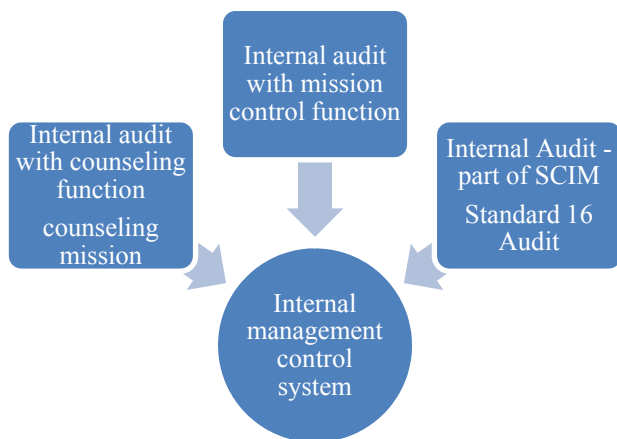
Romanian legislation allows for the audit function to be carried out through associative structures, the number of audit engagements performed being usually lower than that carried out by the internal auditor within the audited institution.

Among the actors that can influence the way of implementation of the internal managerial control standards, there is also the internal audit, structure

with a controlling role in the public institution, but also with advisory duties, as mentioned above.

Figure 1 highlights the relationships in which the internal audit can be performed in relation to the internal management control system.

Figure 1. Relation of internal audit with management internal control system



Source: own processing under existing legislation in the field of internal audit and internal managerial control

At the level of the Ministry of Public Finance, the Central Harmonization Unit for Public Internal Audit carried out the Internal Audit Assessment Guidelines in 2014 to provide internal auditors with support to internal audit for internal control. According to this guideline, the internal audit periodically evaluates the internal control device and proposes, if necessary, measures to improve the process for better risk management and thus for achieving the objectives.

In the Internal Audit Assessment Guide drawn up by the UCAAPI, it is specified that the specific of the internal control can be appreciated by the internal audit in three aspects:

a) the cultural dimension, the internal auditor to appreciate the internal control over the activity he / she audits must be involved in the cultural context of the audited field;

b) the universal dimension assumes that internal control is extended to all the entity's activities, built in the same way and appreciated with the same aspects and methods in all fields;

c) the relative dimension, ensures that internal control is not an end in itself, but has a relative application being the property of the entity's management.

4. INTERNAL MANAGEMENT CONTROL

The internal managerial control of public entities in Romania is governed by the Order of the General Secretariat of Government no.600/2018 regarding the approval of the Code of Managerial Internal Control of Public Entities.

At the level of the European Commission for control systems, the acronyms PIC and PIFC are used. According to the above-mentioned Compendium, the acronym PIC (Public Internal Control) is used as a common denominator for all internal control systems used in public administrations in EU Member States and the Public Internal Financial Control (PIFC) concept is a model for public internal control, which complies with international standards such as INTOSAI and IPAF IIA.

Pîrvan and Nişulescu (2018) found that most Member States (25 countries) are based on their COSO internal control systems and INTOSAI guidelines for internal control, meanwhile the internal audit assimilates targeted standards IPPF167 (International Professional Practices Framework – Professional Practices).

The Strategy for the Development of Public Financial Control 2017 – 2020 (Ministry of Public Finance / General Secretariat of the Government, 2018), elaborated by the Ministry of Public Finances in Romania, states that the system of internal managerial control, adopted in the public system of our country, is built and adapted on the COSO system and includes: control environment, performance and management risk, information and communication, control and evaluation and audit activities (IIARF, 2014).

Over the last 20 years, the legislation governing central and local public administration in Romania has undergone several changes, and in the field of managerial internal control there have been 3 major changes, followed by efforts to implement SCIM within public institutions.

The definition that is found in OSGG No. 600/2018 regarding the Internal Managerial Control is the following: all the forms of control exercised at the level of the public entity, including internal audit, established by management in accordance with its objectives and legal regulations, in order to ensure managing the funds economically, efficiently and effectively; it also includes organizational structures, methods and procedures. The phrase “internal managerial control” emphasizes the responsibility of all hierarchical levels for controlling all internal processes conducted to meet general and specific objectives.

This stated definition integrates internal audit as a form of control within managerial internal control.

According to the Court of Auditors ‘Report for 2016, the external auditors’ verification of compliance with the legal provisions regarding the internal managerial control system difficulties were identified in the implementation of the Standards 8 – Risk Management and 16 – Internal Audit.

A similar situation is found in the Court of Auditors' Report for 2017 at the level of central public institutions, with a slower implementation of standards 8 and 16 (as a result of the non-functioning or non-functioning of the internal audit function).

In our analysis, we wanted to present the evolution of the level of implementation of the control standard – Internal Audit from 2011 to 2017. For 2014, we did not identify data. We have presented in Table 1 the percentage of implementation of the internal managerial control standard – Internal audit regarding the public entities with the main credit authorizing officers for the years 2011, 2012, 2013 and in Table 2 the percentage of implementation of the internal managerial control standard – Internal audit regarding central public entities – its own apparatus and subordinate and coordinated public entities for the years 2015, 2016, 2017.

Table 1. The percentage of implementation of the internal managerial control standard – Internal audit regarding the public entities with the main credit authorizing officers for the years 2011, 2012, 2013

| Internal managerial control standard number | Standard designation of internal managerial control | Year 2011 | Year 2012 | Year 2013 |
|---|---|-----------|-----------|-----------|
| Standard 25 | Internal audit | 86.54% | 84.90% | 89.09% |

Source: Ministry of Public Finance, Central Harmonization Unit of Financial Management and Control Systems (2014, p. 17)

Table 2. The percentage of implementation of the internal managerial control standard – Internal audit regarding central public entities – its own apparatus and subordinate and coordinated public entities for the years 2015, 2016, 2017

| Internal managerial control standard number | Standard designation of internal managerial control | Year 2015 | Year 2016 | Year 2017 |
|---|---|-----------|-----------|-----------|
| Standard 16 | Internal audit | 67.84% | 69.01% | 63.4% |

Source: self-processing based on General Secretariat of the Government (2016, p. 9; 2017, p. 11; 2018, p. 13)

The numbering of the audit standard is made in Table 1 in concordance with the order of the Ministry of Public Finance no. 946/2005 for the approval of the Code of internal / managerial control, and in the second table, the internal audit standard is numbered according to the stipulations of the Order of the General Secretariat of Government no.400/2015 with subsequent amendments and completions.

Our analysis shows that there is a downward trend in the implementation of the Internal Audit Standard 16 regarding the main credit authorizing officers in Romania for the years 2015, 2016 and 2017 (Romanian Court of Accounts, 2017, 2019). A possible explanation could be the fact that the audit function is ensured by the chief authorizing officer for the subordinate and coordinated public entities, in conjunction with an increase in the degree of exigency in the self-assessment of standard 16 – internal audit, which could lead to the declaration the partially implemented or non-implemented standard. Last but not least, a lack of interest in the internal auditor function, since the remuneration of the control staff is similar to that of the staff of the institution, without disregarding the work of the latter, and the level of complexity of the tasks of completely different service.

We have presented in Table 3 the degree of exercise of public internal audit from 2016 regarding the main credit authorizing officers and subordinate structures.

Table 3. The degree of exercise of public internal audit from 2016 regarding the main credit authorizing officers and subordinate structures

| | Total entities | Organization of the internal audit | | Functionality of the internal audit | |
|----------------------------------|----------------|------------------------------------|-------|-------------------------------------|----------------|
| | | YES | NO | Functional | Not Functional |
| 1 | 2 | 3 | 5 | 5 | 6 |
| Main Credit Authorizing Officers | 3,013 | 1,928 | 1,085 | 1,734 | 1,279 |
| Subordinate structures | 8,018 | 6,739 | 1,279 | 4,981 | 3,037 |
| Total | 11,031 | 8,667 | 2,364 | 6,715 | 4,316 |

Source: Ministry of Public Finance/ General Secretariat of the Government (2018, p. 16)

According to the document – The Strategy for the Development of Internal Public Financial Control in Romania 2017 – 2020 (updated), elaborated by the Ministry of Public Finance for 2016, the level of the audit activity regarding the main credit authorizing officers and the subordinated structures was 61%, corroborated with the degree of implementation of the internal managerial control standard – Internal Audit 69.1%, leads us to the idea that the low interest in the auditor's position and even the preoccupation with the management of public institutions is low.

5. CONCLUSIONS

The Romanian administration is undergoing a process of adapting to the legislative requirements of the European Union and, at the same time, undergoing a prolonged self-preservation process. If until 2017 Romanian public servants were able to pay off unattractive wages and could identify a cause for demotivation in the accomplishment of their job duties, after the salary increases in the budgetary system, the failure to perform their tasks at the best standards would no longer have such explanation.

Internal management control, a tool which is at the disposal of the head of the public institution, is being inadequately used, far from being developed, as it is in some of the European Union countries. The implementation of the 16th Standard – Internal Audit is below the 70% threshold, a situation that was recorded between the years 2015 – 2016 – 2017. The internal auditor, by the means at their disposal, can contribute to the development of the internal management control system, but without a unitary IT platform, always using the physical archive, using documents with a large number of signatures, the activity proves to be bureaucratic.

The internal auditor, through his role of counselling and / or control, cannot supplement the day-to-day activities within the institution, the implementation of the managerial internal control system being a lasting process, achievable through the joint effort of all those involved: public managing servants, public execution servants, internal auditors, external auditors, contract staff.

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REFLECTIONS IN EUROPEAN UNION EXPENDITURE AND IMPACT ON THE REPUBLIC OF MOLDOVA

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Abstract

The objectives of the European Union are to promote peace, European values, the well-being of citizens, secure freedom, security and justice without internal borders, sustainable assurance based on balanced economic growth, combating social exclusion and discrimination, encouraging technical and scientific progress.

No matter how illusory the goals are, financial security is needed to achieve them, so that economic strength, sustainability, solidarity and security are fundamental to the finances of the European Union. The budget of the European Union cannot do everything by itself, a well-conceived budget, firmly focused on supporting these priorities can bring real change in people's lives and help restore confidence in the added value of the European Union.

The Republic of Moldova has as its objective the promotion of political, economic and cultural relations with the European Union, a major objective that remains on the strategic agenda of Moldova.

In this context, the study deals the aspects of promoting the values of the European Union on the situation of the Republic of Moldova and the impact on the European Union's expenditures.

Keywords: *European values; well-being; budget; citizens; expenditures; financial security.*

JEL Classification: K15, K33

1. INTRODUCTION

The motto of the European Union, first used in 2000 is "United in Diversity". It shows that Europeans have joined together to promote peace and prosperity while accepting to open their spirit to the different and diverse cultures, traditions and languages of our continent.

The objectives of the European Union are to promote peace, European values, the well-being of citizens, ensure freedom, security and justice without

internal frontiers, ensure sustainable growth based on balanced economic growth, to combat social exclusion and discrimination, to encourage technical and scientific progress.

Enlargement is a process by which various countries join the European Union. Since its creation in 1957, the European Union has expanded from 6 to 28 countries.

Over the last 50 years, the enlargement of the European Union has allowed economic growth and the strengthening of democratic forces in countries that have emerged from dictatorship. The six countries that founded the European Union in 1957 were Belgium, France, Germany, Italy, Luxembourg and the Netherlands. Several other Western European countries have joined the EU since 1973. Following the fall of their 1989 regimes, many communist countries in Central and Eastern Europe joined the European Union in 2 successive waves in 2004 and 2007 Croatia became the 28th member country in 2013.

The Treaty on European Union (Official Journal of the European Union, 2016) provides that any European country can apply for membership if it respects the democratic values of the EU and is committed to promoting it. In particular, a country can become a member of the EU if it meets all the accession criteria:

- politically – must have stable institutions guaranteeing democracy, the rule of law and respect for human rights;
- economic – must have a functioning market economy and be able to cope with competitive pressure and market forces within the Union;
- judiciary – must accept EU law and practice – especially the major objectives of the political, economic and monetary union.

According to the Charter of Fundamental Rights of the European Union (Official Journal of the European Union, 2012), in the Community legal order, first, their rights and obligations are detailed in the Treaties in a specific manner, giving all the particularities, without the possibility of referring to generic competence. In fact, it is about public figures and functional relations with other subjects in the Community legal order: the Member States, in particular, discuss more precisely powers and competences. In putting into practice. The Communities are represented by its institutions, each within its remit (Isaac, 1992).

Although people are public, Communities also have to cope with their “private lives”. The Treaties expressly provide that “in each Member State, the Community shall have the most extensive legal capacity accorded to moral persons by national law: it may, *inter alia*, acquire or dispose of movable and immovable property”. As regards the “civil capacity” of the Communities, there is no inconvenience to define it indirectly by reference to national law and in a generic way by referring to moral persons under national law.

The principle of subsidiarity is a regulatory principle of the exercise of competences, not a principle of conferral of competences, from which a list of national and / or Community competences can be deduced. It does not set a rigid border between the competences of the Member States and those of the Community but permits the organization of a division, for each area of competing competence, which may vary in time, following the circumstances and the needs of the objectives in question.

It is the case-law of the Court of Justice that has introduced the principle of proportionality in the Community legal order, but it was restricted to a specific area: the protection of economic operators against damages that could result from Community legislation.

Nowadays there is an unprecedented intensification of economic relations and interdependence between countries. This contradictory process results from the economic development and deepening of international specialization, under the impetus of new scientific and technical achievements.

2. CONTEXT OF REPUBLIC OF MOLDOVA

The forces involved have a dynamic and chaotic character with a general tendency of regional economic arrangements and the deepening of the process of globalization of the world economy. Regionalization assumes that national states cultivate integrative and collaborative relationships between them increasingly complex with varying degrees of complexity. Such relations include the Republic of Moldova for which economic and political integration in Western Europe, extending this process to the East represents one of the most significant and important phenomenon in the current period. Obviously, this phenomenon draws attention to large economic and political circles, as well as to many scientists. This also raised the need to develop agreements and conventions to strengthen these relations. As a result of these requirements, the “Partnership and Cooperation Agreement” appeared between various economic and political forces.

European integration is a notion that appeared in Moldovan politician’s vocabulary right after the proclamation of the independence of the Moldovan state. Taking into account historical, political, cultural and geographical criteria, this appears to be quite natural. Moreover, proposing as a strategic objective the creation of a rule of law based on democratic values, the aspirations of the Republic of Moldova to integrate into this structure is fair, because the European Union (EU) is an example of democracy, stability political, social and economic welfare.

Thus, the advantages of bringing Moldova closer to the EU are in the sphere of politics, economy and social life (*Delegatia Uniunii Europene in Republica Moldova*, 2016). From a political point of view, this means continuing the process of democratization, increasing the security of the country and its citizens. From an economic point of view – access to the European market, European funds for

development, investment and new technologies. In social terms – the approximation to European educational standards, labor protection, etc.

As a result, the European Union is attractive, by the degree of development, the standard of living of the population, by the civilization standards achieved and, last but not least, by the possibility of achieving the rights and freedoms of the citizens.

European integration offers a historic opportunity to the Moldovan society and, in particular, to its new generation. However, the relations of the Republic of Moldova with the European Union are developing very slowly, a situation created, also due to the very low political culture, insufficient knowledge by the society, but also by the political class, the phenomenon “European Union” the complex integration process into this structure. The integration of the Republic of Moldova into the European Union represents, or rather represents, a very difficult process requiring a profound and multidimensional approach.

It is important to be aware that two actors will be involved in this process: the European Union and the Republic of Moldova. It is therefore necessary to consider the willingness, the efforts and the position of both in this perspective.

The European Union was itself, during the 1990s, the protagonist of significant transformations. At the beginning of the past decade, after the signing of the Association Agreements with 12 states (Jinga, 2001), the optimism and, in some cases, the reluctance of European Union members to decide on the acceptance of other states, including the Republic of Moldova, initially as associate members then as full members seem to be on fully justified in the plan of objective realities.

The European Union is at an advanced stage in the completion of the Single Internal Market, and then the ambitious plans promoted by the Maastricht Treaty, including the common currency. On the other hand, the community was and is concerned with the accession of the Central and Eastern European states and, respectively, with all the issues that accompany and follow this process.

European integration has become a constant element of the political vocabulary in the country, either by expressing adherence to European values and the prospect of European integration, or by challenging the opportunity of European integration (Klipii, 2001). The real state of affairs, the confirmation or the denial of the desire to join or, more precisely, to be a part of what we call “European values” in general, and the European Union, in particular, can be inferred by analyzing the defining documents for politics external relations of the Republic of Moldova, governance programs as well as official statements. A central document in this context is the Concept of Foreign Policy of the Republic of Moldova of February 1995 (Official Gazette, 1995, no. 4). In this document, integration into the European Union is a major and perspective objective of the country’s foreign policy.

Analyzing the governance programs of the governments that have been active in the Republic of Moldova to date, it is clear that the objectives of the “foreign policy” chapter are European cooperation and European integration. Thus, it is clear that an early objective of the internal and external policy of the Republic of Moldova is the European integration, which will have a strong potential to facilitate the political and social cohesion of society.

The Republic of Moldova’s relations with the European Union were formally enshrined in the signing on 28 November 1994 of the Partnership and Cooperation Agreement (APC) (International Treaties nr. 10, art. 127, 1999) which entered into force on 1 July 1998 for an initial period of 10 years with the possibility of extending silent. The document establishes the legal framework for bilateral relations between Moldova and the EU in the political, commercial, economic, legal, cultural and scientific field and has as objectives the support of Moldova for: consolidating democracy and the rule of law respecting human rights and minorities by ensuring the appropriate framework of political dialogue; the sustainable development of the economy and the completion of the process of transition to the market economy by promoting trade, investment and harmonious economic relations.

The next step near the Republic of Moldova to the European Union was the Moldova-European Union Action Plan (International Treaties, 2005) elaborated within the framework of the European Neighborhood Policy and adopted at the February 2005 Co-operation Council. The Action Plan established strategic cooperation objectives initially for a three-year period which was subsequently extended. The Moldova-EU Action Plan was replaced in 2014 by the Association Agenda, agreed on the basis of the EU-Moldova Association Agreement. In August 2017, a new Association Agenda was approved for the period 2017-2019, containing short-term priorities and Moldova-EU cooperation environment.

Another important act implemented is the Association Agreement, the liberalization of the visa regime and the gradual integration into the EU internal market (International Treaties 10, art. 127, 1999), aimed at the de facto integration of the Republic of Moldova into the European political and economic space.

In order to better understand the essence of Moldova’s relations with the European Union, it is necessary to note that the Association Agreement between the European Union (EU) and the Republic of Moldova is a comprehensive treaty establishing the relations between the parties and includes a long-term roadmap, which contains the reforms to be implemented by the Republic of Moldova.

Trade-related content, which aims to establish a Deep and Comprehensive Free Trade Area (DCFTA), is one of the most important parts of the entire Agreement. The agreement was signed in June 2014 and much of it has entered into force provisionally in September 2014. Since then, the Agreement has been

ratified by both the Parliament of the Republic of Moldova and the European Union, but also by all 28 EU Member States. As a result, the Agreement entered into force on July 1, 2016 (Emerson and Cenușă, 2018).

In the interconnection of the mentioned ones, the Government of the Republic of Moldova desires to develop and modernize the state. European integration implies a process of adaptation to the objectives and values of the European Union.

In a different order of exposures, in addition to the cooperation structures established by the Association Agreement, the political dialogue between the Republic of Moldova and the European Union is ensured through meetings in the format of the European Union -Moldova Political Dialogue taking place in several formats in which the process of reforms is discussed in the Republic of Moldova, EU-Moldova relations and subjects of common interest in the field of foreign and security policy.

In the succession of the logic shown, it is clear that the European Union is the structure that provides major support to the Republic of Moldova in order to achieve the objectives set in the implemented acts, but it is necessary to highlight the financial aspect that concerns both the consolidated interests of the European Union and the Republic of Moldova.

Budgetary policy is a vital factor for the functioning of the European Union, but unlike other policies, the Fundamental Treaties (Rome and Maastricht) (Ceban, 2013) have not defined budgetary policy. Through the European Union budget, the activities that take place between Member States, the Community policy guidelines and their priorities are coordinated annually. Annual budgets are part of the seven-year budget cycle, also referred to as “financial perspectives”. These are set out at the proposal of the European Commission, with the approval of the members of the European Union unanimously and subsequently approved by the European Parliament. It should be noted that although the Community budget has increased, it represents only 2.4% of the total budgets of European Union members. The legal bases for the construction of the community budget were art. 272 (203) of the Treaty of Rome, art. 177 of the EURATOM Treaty, the provisions of art. 78 of the ECSC Treaty and the Interinstitutional Agreement, the agreement which took place on 6 May 1999, which is based on the improvement of the budgetary procedure and discipline between 2000 and 2006, preceded by the October 1993 agreement for period 1993-1998. The fundamental principles that governs the budget of the European Union are: – the principle of unity – the principle of universality – the principle of annuality – the principle of equilibrium; – specification of expenditure; – own resource financing (Amarița, 2014).

The general budget is divided into 10 sections, one for each institution. While the sections of the other institutions include administrative expenditure in particular, the section on the Commission (Section III) consists of operational

expenditure for the financing of actions and programs and the administrative costs for their implementation (technical assistance, agencies, human resources). In 2018, the total administrative expenditure amounts to 6.04% of the total budget, amounting to EUR 160 113.5 million.

The Commission uses a budget nomenclature that presents policy and activity resources, thus facilitating the assessment of the costs and effectiveness of each European Union policy („Activity-Based Budgeting”).

Since 1988, Community / European Union spending has been introduced into a multi-annual framework, which divides the budget into headings corresponding to the main policy areas, setting expenditure ceilings reflecting the main budgetary priorities for the period considered.

First the programming period was five years, the duration of the following and the current ones being seven years. The annual budgets must respect the limits set in the multiannual framework.

As regards the distribution of budget appropriations, agricultural and rural policy remains the area of activity with the highest level of funding, with regional policy being second.

In addition to the expenditure planned to finance the implementation of European Union policies under the multiannual programs, there is a category of financial resources entered in the European Union budget that are reserved for situations in which the Union has to respond to crises and unforeseen situations. These special flexibility instruments can be used in the case of economic crises (eg the European Globalization Adjustment Fund), natural disasters (such as the Solidarity Fund), humanitarian crisis situations (Emergency Aid Reserve) meet other unforeseen needs (such as the Flexibility Instrument) of the European Union Member States, candidate countries or third countries. These instruments can provide the funding needed to meet exceptional needs, usually outside the Financial framework (MFF) (European Parliament, 2019).

Turning to the relations between the European Union and the Republic of Moldova, it is worth mentioning that the European Union is by far the largest donor in Moldova, supporting political and economic reform and providing humanitarian aid. Bilateral assistance to Moldova under the European Neighborhood Instrument (ENI) has increased considerably from EUR 40 million in 2007 to EUR 131 million in 2014. Moldova is the largest beneficiary of European Union aid per capita in the vicinity of Europe. Although, according to the Annual Report 2015 drawn up by the State Chancellery of the Republic of Moldova on Foreign Assistance to the Republic of Moldova (State Chancellery of the Republic of Moldova, 2016), 2015 was a difficult year for our country in terms of external assistance, with more challenges and reservations, which, viewed in another way, can be interpreted as opportunities for more effective and realistic programming, implementation, monitoring and evaluation of official development assistance.

The value of official development assistance in 2015 declined by 26.7% compared to 2014, with the main reason being the suspension of European Union and World Bank budget support programs. At the same time, the implementation of other forms of external assistance, available to the Republic of Moldova in 2015, was continued. Even with the low disbursement rate in 2015, the European Union remains the absolute leader in the non-reimbursable financial assistance to the Republic of Moldova since the beginning of the cooperation with the Republic of Moldova, providing more than EUR 840 million in the form of a grant. In 2015, the European Union funded 100 active disbursement projects over the year worth 47million EURs.

During the reference period, over 70 European Union -funded projects were launched in favor of the Republic of Moldova, with a total planned budget of over EUR 132 million. The annual programming of European Union external assistance for 2015 is part of the Single Support Framework for Moldova 2014-2017, with a budget of 335 million euros to 410 million euros, of which about 60% of the committed amount is budgetary support. The main pillars are: Public Administration Reform; Agriculture and Rural Development and Police Reform and Border Management.

It is worth mentioning that due to the political instability and the financial and banking crisis in Moldova, disbursements for budget support in 2015 were suspended. In the event of full compliance of the current EU-Moldova Financing Agreements on budget support, EUR 31.5 million would be disbursed in 2015. One of the general conditions for the disbursement of tranches under budget support programs is the signing of the Agreement with the International Monetary Fund (FMI) and ensuring the macroeconomic stability in our country.

EU assistance is being used for key reforms in the justice, education, economic development and energy sectors. The EU also funded investments in air and road infrastructure as well as in cross-border cooperation projects (CBC). In addition, Moldova benefits from numerous thematic programs, mainly supporting civil society and regional programs related to trans-European networks.

The EU's financial support to Moldova has funded numerous and diverse projects, including:

- Improving public administration and financial management;
- Reforming the social assistance system;
- Energy production based on solar energy, agricultural waste and waste collection;
- Health system reform and equipment;
- Care centers for young and elderly people;
- Natural disaster relief;
- Rural economic activity;
- Water supply and wastewater treatment infrastructure.

The EU also supports the implementation of confidence-building measures in the Transnistrian region of Moldova through social and healthcare projects (Anon, 2016).

In order to ensure the transparency of the necessary information on the programming, implementation, monitoring and evaluation of the external assistance available to the public authorities, development partners and the general public in order to increase the efficiency, effectiveness, impact and sustainability of Moldova's assistance, Managing External Assistance – AMP, accessible online on the www.amp.gov.md portal, officially launched on January 27, 2014, by the State Chancellery, with the support of the United Nations Development Program (PNUD) and Development Gateway was operational in 2015 with over 8,000 unique visitors in the reference year, through the given platform, the State Chancellery annually publishes reports on Foreign Assistance to the Republic of Moldova.

Subsequently, by Government Decision no. 246 of April 8, 2010 (Government Decision no. 246 dated April 8, 2015) on the application of the fiscal and customs facilities related to the implementation of the ongoing technical and investment assistance projects falling within the international treaties to which the Republic of Moldova is a part, are listed “List of ongoing technical assistance projects falling within the scope of international treaties, for the application of income tax exemptions, excise duties, customs duties, duties for goods which in the process of use cause environmental pollution, as well as the application of TVA deduction for goods and services destined for them “, as well as “List of loans and grants granted to the Government of the Republic of Moldova / Republic of Moldova or granted with state guarantee on behalf of loans granted by international financial institutions of the Government's share), on the basis of the grants granted to the institutions financed from the budget, for the realization of the investment assistance projects on the basis of which goods (services, services) exempt from excise duty will be imported or purchased, exempt from excise duty , payment of the customs duty the duty for the customs procedures, the duty for the goods, which in the process of use cause environmental pollution”.

In this respect, based on Annex no. 1 of the Government Decision no. 246 of April 8, 2010 (Government Decision no. 246 dated April 8, 2015), the EU has implemented over 34 projects, such as: “Sustainable energy development in the city of Orhei” beneficiary Orhei City Hall, based on the Framework Agreement between the Government of the Republic of Moldova and the Commission of the European Communities on external assistance, signed in Brussels on 11 May 2006 and ratified by Law No.426-XVI of 27 December 2006, “Modernizing and saving energy for street lighting” Beneficiary: European Union; City Hall. Ocnitza; City Hall. Cantemir; City Hall. Soroca on the basis of the Framework Agreement between the Government of the Republic of Moldova and the

Commission of the European Communities on Foreign Assistance, signed in Brussels on 11 May 2006 and ratified by Law No.426-XVI of 27 December 2006, “Combating Trafficking in Human Beings and Organized Crime – Phase 2 “Beneficiary: The International Center for Migration Policy Development, based on the Framework Agreement between the Government of the Republic of Moldova and the Commission of the European Communities on Foreign Assistance, signed in Brussels on 11 May 2006 and ratified by Law No.426-XVI of 27 December 2006, and others.

At the same time, based on Annex no. 2 of the Government Decision no. 246 cited above, it is clear that by Law no. 142 of 17 July 2014, the Agreement between the Republic of Moldova and the European Union, the participation of the Republic of Moldova in the European Union Framework Program for Research and Innovation (2014-2020) Horizon 2020 (Official Gazzete, 2014), has the objective to the contribution the achievement of the European Research Area and the Innovation Union.

Based on art. 3 of the Agreement ratified by Law no. 142 cited above shows that Moldova pays for each year of participation in the Program a financial contribution to the general budget of the European Union. The financial contribution of Moldova shall be added to the amount allocated annually to the budget of the European Union for the fulfillment of the financial obligations resulting from the different types of measures necessary for the implementation, management and operation of the Program. Part of Moldova’s financial contribution could be funded through relevant Union external aid instruments if Moldova so requests. In this case, funding arrangements will be defined in the relevant financial decisions. The rules governing the financial contribution of Moldova are set out in Annex II to this Agreement.

According to point III of Annex no. 2 of the Agreement ratified by Law no. 142 shows that payments made by Moldova are credited to Union programs as budget revenues allocated to the corresponding budget line in the statement of revenue of the general budget of the European Union. The Financial Regulation applicable to the general budget of the European Union applies to the management of appropriations.

In these circumstances described, the Republic of Moldova’s obligation is to contribute financially to the general budget of the European Union is also enshrined, but corroborating the statistical data referring to the contribution of the European Union and that of the Republic of Moldova it is obvious that the European Union’s contribution is over.

In another order of exposure, it is worth mentioning that the annual programming of the European Union’s external assistance, part of the Single Support Framework for Moldova 2014-2017 (SSF), which is one of the EU instruments to support the implementation of the Agenda association.

The SSF 2014-2017 budget estimate is 335 million – 410 million euro and is distributed on priorities.

In 2016, the EU Delegation was in the process of drafting the Multi-Annual Strategic Framework for RM-EU 2017-2020 programming.

According to EU procedures, in order to benefit from this assistance, it is negotiated annually with the Moldovan Government and then approved by the European Commission Annual Cooperation Programs (NAPs). Thus, under the CSF 2014-2017, the following programs were approved: NAP 2014 – total budget 131 million. NAP 2015 – total budget 90 million euros. NAP 2016 – the total budget of 90 million euros.

The European Union remains the absolute leader in Moldova's non-reimbursable financial assistance since the beginning of the cooperation with the Republic of Moldova, providing over 900 million euros in the form of a grant.

In 2016, 145 projects with a total budget of over EUR 654 million were under development with EU assistance. The EU is actively involved in supporting the development of the socio-economic environment in the RM, especially in rural areas and economically less developed areas, and contributes to the development of financial, commercial and administrative policies, the development of civil society, agriculture, significantly in the field of education and training.

A significant weight in the annual action plans with the EU lies with Sectoral Budget Support Programs.

According to Government Decision no. 561 of 19 August 2015 (Official Gazzete nr . 224-233 art. 639, 2015), "support sector budgeting is the financial assistance of the budget by transferring financial means from a donor country / international organization for the implementation of the sector development program or strategy."

Since 2007, more than 12 budget support programs have been approved for a total amount of 501.85 million EUR. It is worth mentioning that, following the signing of the Agreement with the International Monetary Fund (IMF) in November 2016 and ensuring the macroeconomic stability in Moldova by the Moldovan Government, in December 2016 the European Commission unblocked disbursements for budget support and the total amount of transfers was 45 for 3 million EUR (State Chancellery, 2016).

3. CONCLUSIONS

In the circumstances described, it is concluded that the relations between the European Union (EU) and the Republic of Moldova are profound and multidimensional. The Republic of Moldova participates in many agreements and programs of the European Union. The EU aims to improve democracy, the rule of law and human rights in the Republic of Moldova, including joint programs with the Council of Europe.

Other priorities for relations with the Republic of Moldova include strengthening institutions, reforming the judiciary, improving the business climate, ensuring respect for freedom of expression, improving health and social conditions, and cooperation on issues such as border management, migration and the fight against trafficking, organized crime, corruption and money laundering.

Taking into account the active cooperation of the European Union with the Republic of Moldova, it shows the major financial impact that the European Union has on the Republic of Moldova, given the reports on Foreign Assistance to the Republic of Moldova for the reference years 2014, 2015, 2016 shows that the largest donor to the Republic of Moldova is the European Union (State Chancellery, 2015, 2016, 2017).

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PUBLIC DEBT VS. FINANCING MILITARY ACTIVITIES

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Abstract

The training, equipping and remuneration of the military, the endowment of the forces with modern capabilities, the provision of the necessary materials and logistics, participation in international missions requires considerable financial resources, which is why the economy has always constituted and will be one of the pillars of building a credible military power the EU area and achieving a sufficient level of security at national, regional or international level. Supporting a certain level of military power in the EU states is extremely difficult without an adequate level of economic power, which is why optimal solutions must be found to increase the capacity of the armed forces, including identifying the most appropriate sources of funding. Taking into account the contradictory results obtained by the specialists in the field of financing the armed forces and the relation between the public debt and the cost of this financing, we considered it appropriate to carry out a qualitative study to bring to light the trends identified in the literature in this respect. The paper aims to highlight the link between public debt and the cost of military funding in EU space. Given the importance of the relationship between public debt and the cost of financing the army, we have considered that the second appropriate objective is the link between the two notions in the opinion of the authors in the field. The working method used is documentary research and qualitative analysis based on specialized software. Building the code matrix has allowed us to notice that a number of concepts such as defense financing / military funding costs are interconnected by public debt and economic growth. This allows us to appreciate that the majority of the authors of the analyzed studies associate the economic growth and the increase of the debts of the states with the need to finance the military activities. Taking into account the results obtained, we appreciate that defense is and will continue to remain a major point of financing on the agenda of current European governments, especially in developed countries where the need for arming is dictated by their role in regional and / or international bodies. The link between economic growth and the armed forces is all the more evident as the new free market principles are also applied in the military, so investment efficiency and other project efficiency indicators are growing.

Keywords: *public debt; military expenditures; cost of military expenditures; financing of military expenditures.*

JEL Classification: H50, H56

1. INTRODUCTION

The well-equipped, well-equipped armed forces capable of coping with the growing range of risks and threats in the European, regional and international security environment can not be secured without adequate resources. The training, equipping and remuneration of the military, the endowment of the forces with modern capabilities, the provision of the necessary materials and logistics, participation in international missions requires considerable financial resources, which is why the economy has always constituted and constituted one of the pillars of building a credible military power achieving a sufficient level of security at national, regional or international level (Ene, 2015).

Thus, it can be said that economic power is the “motor” without which the national, regional or international power, whether political, social or military, can not function at normal parameters – the military power can not exist without the economic power without a robust economy, with significant increases (Alptekin and Levine, 2012). Thus, the ability to prepare, nurture, team and endow the armed forces depends on how the national economy is organized, on its ability to produce and to provide the necessary resources and means.

Therefore, supporting a certain level of military power in the EU and internationally is extremely difficult without an adequate level of economic power, which is why optimal solutions must be found to increase the capacity of the armed forces, including identifying the most appropriate sources of funding.

2. LITERATURE REVIEW

In the European and international environment, external financing of military spending is based on reimbursable or non-reimbursable funds made available by programs run by international organizations and bodies and on external credits made available through external credit / external lending. The latter have government guarantees and have a share in the public debt of a country (Văcărel, 2008).

Over time, the public debt connection – the defense industry has been the subject of several studies in the literature. Goyal, Lehn and Racic (2002) analyzed growth opportunities and public debt policy taking the example of the US defense industry. Examining how the level and structure of debt evolved for 61 defense companies between 1980 and 1995, the results showed that the debt levels of these companies increased significantly with the diminishing growth opportunities. In addition, as the growth opportunities of these firms declined, the private indebtedness period was also extended, with the ratio of public debt to private debt (Hou and Chen, 2013).

The impact of the financing of military spending on public debt was subsequently under investigation by Dunne, Perlo-Freeman and Soydan (2004). They took into account the experience of some countries like Argentina, Brazil and Chile. The results of the study indicate that there is a significant influence of

the military burden on the evolution of public debt in the three states, especially when the debt resulting from the financing of the military activity is correlated with other macroeconomic indicators.

For the purpose of endowing with modern, meditative or strategic capabilities, defense spending is funded through international body programs such as NATO programs or government-backed foreign government loans contracted with international financial and banking institutions. With regard to programs run by international organizations, we can exemplify through the budget of the NATO alliance, to which all member countries, the majority of Europeans, consistently adhere to their assumed commitment to NATO, namely the 2% of GDP allocation for defense spending, such as: USA, Great Britain, Greece, Estonia, Poland, Romania.

The achievement of the budget effort quantifies both the responsibilities of each state and their interest in the modernization of the armed forces. Other countries, such as France, Lithuania, Bulgaria and Turkey, have achieved a near-2% cut in their GDP. There are also states with allocations for defense spending above 1%, but even lower, below 1% of GDP (Popa and Pirvuț, 2017).

Developing the relationship between economic growth and the financing of the armed forces, Dunne, Smith and Willenbockel (2005) analyzed a number of theoretical and econometric aspects involved in estimating growth patterns that include military spending. Researchers consider that although the literature did not consider that the financing of the army is a significant determinant of economic growth, the link between the two variables is a positive and significant one, proposing in this respect a possibility to model the links between the military expenditures and the economic growth (Dunne and Tian, 2015).

In 2009, Pieroni proposes another model to test the relationship between military spending and economic growth, taking into account the impact of this component on government spending. Developing a growth model with endogenous technology, Pieroni (2009) left the hypothesis of a non-linear effect of military expenditure on economic growth. In general, the comparison of the defense sector costs and benefits has explained the non-linear relationship. Through his study, Pieroni suggests that insecurity shocks may also be a source of non-linearity, as it causes a reallocation effect within public spending. While parametric partial correlations are consistent with empirical findings, the robustness of the estimates was tested using a nonparametric approach. The negative relationship between military spending and growth in countries with a high military burden predicted by the theory becomes significant only after considering the reallocation effects in the growth equation (Heo and Bohte, 2012).

In the European environment, following a study by Kollias and others, a group of 15 European countries (Austria, Belgium, Denmark, Finland, France, Greece, Ireland, Italy, the Netherlands, Portugal, Spain, Sweden and the UK)

with the aim of investigating the defense potential of the European Security and Defense Policy (ESDP), we can see that the results obtained do not indicate a consistent quantitative relationship between defense spending and economic growth or investment (Kollias and Paleologou, 2010). The impact of military spending on public debt is insignificant. This situation leads us to believe that although these European states have a high level of economic development and have a need to ensure both the inviolable and regional security and defense, they do not promote reasonable investment policies and defense and security spending.

Smyth and Kumar Narayan (2009) were interested in determining the impact of the cost of the armed forces not only on economic growth but also their effect on external debt. Thus, examining the situation in six states in the Middle East between 1988 and 2002, the two authors found that foreign debt is elastic in terms of long-term and inelastic military spending on short-term military spending. For the six Middle East group, in the long run, a 1% increase in military expenditure results in an increase of 1.1% and 1.6% in external spending, while an increase in income 1% reduces external debt by 0.6% – 0.8%, depending on the specific estimator used. In the short term, a 1% increase in military expenditure increases external debt by 0.2%, while the effect of external debt on income is insignificantly statistically.

Taking into account the contradictory results obtained by the specialists in the field of financing the armed forces and the relation between the public debt and the cost of this financing at European and international level, we considered it appropriate to carry out a qualitative study to highlight the trends identified in the literature in this sense.

3. PURPOSE AND OBJECTIVES OF THE RESEARCH

Through this analysis we aim to identify the main ideas from the literature on the financing of military activities. Among the objectives we are pursuing are:

1. Identify the main ideas / themes of the specialized articles in the field on the financing of military forces at EU and international level.

As mentioned in the preamble of the study, in order to have a competitive, well-equipped army, there is a need for adequate funding. The latter has a significant impact on public spending and, in particular, on the level of indebtedness. Of course, there is also a connection between the degree of development of a country, its budget and its real possibilities for financing the armed forces. Taking into account these aspects, the first objective we aimed to determine are the main ideas / notions mentioned in the literature when it comes to the necessity of financing military expenditures.

2. Highlight the link between public debt and the cost of military funding.

Given the importance of the relationship between public debt and the cost of financing the army, we have appreciated that the second objective on which we will focus is the link between the two notions in the opinion of the authors in the field.

In achieving the two proposed objectives, an important contribution is also made in identifying positive / negative views on the impact of military funding on public debt.

Finally, after studying the type of relationship (positive / negative) that derives from the results of the articles analyzed, we will determine the predominant trend in the literature regarding the influence of the cost of military activities on expenditures and implicitly on government debt. Next, we will consider the research methodology adopted.

4. RESEARCH METHODOLOGY

For the proposed study, I have approached documentary research. The study sample is 10 articles from the profile literature searched using the Google Academic engine.

To identify the 10 articles that were analyzed, we used a number of English keywords as:

- “cost of military expenditure” – 409,000 results;
- “finance of military spending” – 280,000 results,
- “public debt military expenditure” – 243,000 results.

After using keywords, I selected the 10 articles by considering the highest number of citations from other authors in the field. The 10 selected articles were introduced into the NVIVO Qualitative Analysis Software, version 12.

5. RESULTS AND DISCUSSIONS

To analyze the content of the selected articles, we introduced them into the NVIVO software and ran an analysis of the frequency of the most common words. This analysis was the starting point for the coding process.

To determine the most common words found in articles, we selected a maximum of 100 clustered words, including synonyms, of at least 4 characters (The results obtained are shown in Figure 1. The frequency of the words).

Later, we turned to the autocoding function to determine what codes we can assign to each item. After we identified the most common codes, we built a code matrix to identify those that are found in all 10 articles alike. The results obtained are as follows:

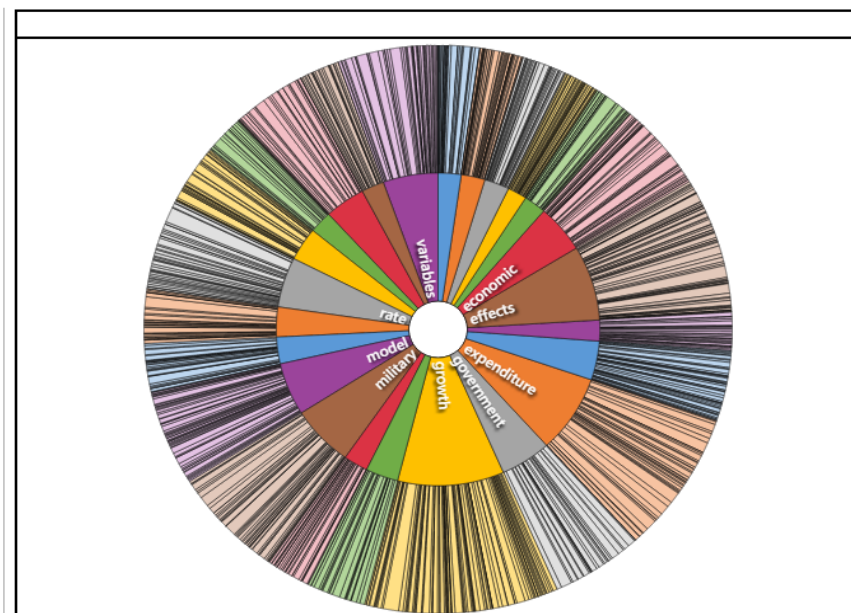
Figure 1. The most common 100 words



Source: own processing in NVIVO

The code matrix created automatically based on the keywords selected from the most used words in the reference base used are shown in Figure 2.

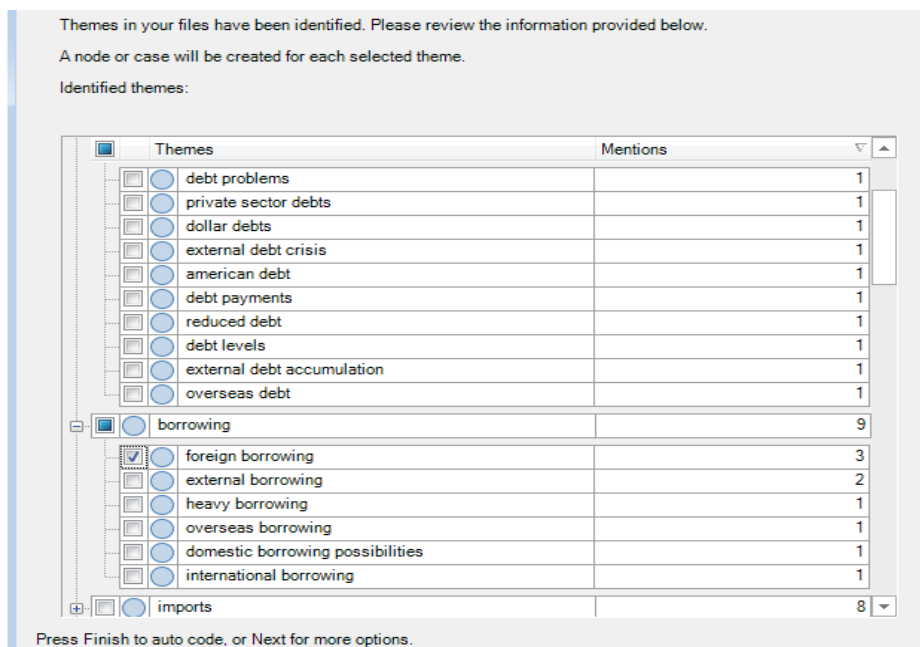
Figure 2. Codes created automatically by NVIVO



Source: own processing in NVIVO

Given that in the NVIVO autocoding process we can define both words and groups of words as codes, we have manually selected the codes as the groups of words most relevant to the proposed topic, taking into account the frequency of their occurrence in each article (see Figure 3).

Figure 3. Example for selecting relevant codes



Source: own processing in NVIVO

For the purpose of faithfully reflecting the content of the analyzed works, the relevant code selection process was resumed for each article using the pattern applied to the first self-coded article, resulting in the following matrix (see Table 1).

Table 1. The main codes identified in the 10 articles

| Cod name | Frequency of occurrence |
|------------------------|-------------------------|
| Military expenses | 30 |
| Public debt | 25 |
| External loans | 17 |
| Armed Forces Financing | 29 |
| Defense contractors | 16 |
| Growth opportunities | 18 |
| Internal security | 26 |

| Cod name | Frequency of occurrence |
|-----------------------|-------------------------|
| Allied security | 8 |
| The cost of financing | 22 |

Source: own processing in NVIVO

After identifying the common codes for the items we analyzed, we will make a number of assessments of the incidence and context in which the most common syntax occurs.

6. CONCLUSIONS

This analysis aimed at identifying the main ideas in the literature on the financing of military activities. It is clear from the analysis that all the articles concerned involve the public debt with the need to finance military activities to ensure internal security and / or allies. The construction of the code matrix allowed us to observe that a number of concepts such as defense financing / military funding costs are interconnected by public debt and economic growth. This allows us to appreciate that the majority of the authors of the studied studies associate the economic growth and the increase of the debts of the states with the need to finance the military activities.

If a number of authors consider that the financing of the armed forces has a positive impact on domestic growth, the need for arms contributing to the economic development of the states (we have identified 6 positive opinions), other specialists support the negative effect of the cost of arms on the fiscal burden and, implicitly, public debt (4 negative outcomes in the studies under consideration).

In the light of the outcomes, we appreciate that defense is and will continue to remain a major point of funding on the agenda of today's governments, especially in developed countries, where the need for arming is dictated by their role in European, regional and / or international bodies. Moreover, the link between economic growth and armed forces is even more evident as the new free market principles are also applied in the military field, so investment efficiency and other project efficiency indicators are growing.

7. LIMITS AND PERSPECTIVES OF RESEARCH

Study boundaries are required by:

- The limited number of articles on the same topic – 10;
- the minimum interest of the specialized literature in aspects specific to the financing of the armed forces;
- Relative experience in using NVIVO qualitative analysis software;
- the self-coding criteria considered (only those codes created by NVIVO that are common to all 10 articles were selected).

The prospects of the study are given by:

- the possibility to extend the analysis either by introducing more codes or by including more articles on the selected topic;
- the growing interest of researchers in the field of identifying potential sources of financing public spending, including military expenditure;
- Presentation of the study conducted at a conference in this field in order to obtain an informed opinion from the colleagues.

All of these aspects can be a starting point for expanding the qualitative analysis in conducting a quantitative analysis based on the results obtained so far.

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EUROPEAN AUDIT OVERSIGHT

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Abstract

For the audit, the role of guarantor of the accuracy of financial-accounting information in relation to predefined quality criteria as well as monitoring of organizational performance becomes essential in the context of a huge information volume and the proliferation of intelligent data processing solutions. Business Intelligence (BI) solutions are information processing and reporting tools to support complex management processes within organizations, to create predictive scenarios based on historical data, to provide knowledge through accessible, dynamic and up-to-date reports on the main performance indicators.

The demonstrated applicability of BI to supporting audit processes opened the way for new research directions not only from the perspective of “modernizing” the audit act but also of a wider context, namely economic realities at European Union level. Recent financial crises have triggered new audit regulations, especially with regard to its oversight. EU Regulation no. 537/2014 recommends that statutory auditors and audit firms be supervised at national level by competent authorities and “independent of the auditing profession and having the necessary capacity, expertise and resources” to achieve this goal. At EU level, the framework for cooperation of the national supervisory bodies is ensured by the Committee of European Oversight Bodies (CEAOB), which contributes to the effective implementation of the new European legislation in the audit.

Under these circumstances, information uniformity in audit surveillance becomes a direction of action and Business Intelligence solutions have the ability to provide the necessary analytical and decision-making tools. This paper is in line with the efforts at the European level to establish centralized data analysis and processing mechanisms in order to ensure the audit oversight functionality in the EU. Specifically, the research aims at a rigorous analysis of the existing processes in the field of statutory audit supervision and comes with proposals for inserting BI solutions into the informational flows carried out between CEAOB member countries.

Keywords: *audit; Business Intelligence; audit supervision.*

JEL Classification: M42

1. INTRODUCTION

The insertion of Business Intelligence in audit processes is a topic addressed in the literature (Murali, 2010; Webb, 2012; Caranica, 2016; Che, Yang and Jiang, 2017) starting from the unanimously accepted idea that audit standards were designed on the basis of the idea that 100% testing of an entity's transactions is impossible. Given the existence of intelligent solutions today, such a hypothesis is not true; traditional statistical methods are insufficient in analyzing data volumes and current information complexity, but through Business Intelligence, auditors can organize and analyze all significant data from multiple perspectives in order to provide the desired reports (Che, Yang and Jiang, 2017). Moreover, early detection of certain anomalies or operational or financial problems may lead to timely rescue measures for the organization in question. Thus, in the spirit of continuous audit and total transaction analysis, major audit firms rethink work procedures and prepare the leap from traditional processing methods to intelligent analytical methodologies. Ernst & Young LLP is committed to integrated intelligent applications in client company data centers to provide the required information to audit teams.

On the other hand, the reorganization at EU level of the institutions responsible for regulating and supervising the audit is still at the beginning of the road. The Committee of European Auditing Oversight Bodies (CEAOB) – started work on 17 June 2016 in order to strengthen the supervision of the audit at European level by effectively enforcing Community legislation in the field. Thus, the organization's stated major objective is to support a consistent quality of audit services, to consistently support and increase the confidence of investors and the general public in financial statements (Law 162/2017) issued within the European Union. Promoting and supporting such a goal becomes possible given the existence of competent authorities at national level to regulate and supervise the audit status; at the same time, the operations of audit firms at EU level need to be addressed by providing a fair and comprehensive platform practice for cooperation between regulatory authorities in the field of auditing under CEOB.

In Romania, the Authority for Public Oversight of Statutory Auditing (ASPAAS) was established, and it took over an important part of the functionality of the Chamber of Financial Auditors of Romania (CAFR) regarding the authorization and supervision of the audit activity and ensuring the information flow in relationship with CEOB. The new structure thus created has the right to request information from auditors, audit firms or CAFR, and to perform inspections to establish compliance with legal provisions. In this context, CEOB presents regular activity reports and sets out action lines for the next period, as set out in the Work Plan for 2019; this document refers to the need for an exchange of information and experience between members to ensure

common methodologies and practices with a direct impact on the enhancement of audit quality.

The process is at the beginning and the working procedures are in the process of being implemented in the bodies that regulate statutory audit at European and national levels. The present paper justifies the opportunity to introduce Business Intelligence solutions through specific analytical capabilities in the field of defining reports and data warehouse support in monitoring and processing audit results at Community level.

2. THE CEAOB WORK PLAN, BETWEEN DEZIDERATE AND RESULT

In the spirit of achieving the proposed objectives, CEAOB builds its working strategy for 2019 based on four main pillars:

Cooperation – the active involvement of all member countries and observers through the exchange of experience, knowledge and information, but not limited to other forms of cooperation. The idea of common practices and methodologies with a positive impact on the quality of the audit is promoted.

Communication – being of public interest, all activities under the aegis of CEAOB must be transparent and dialogue and collaboration with interested third parties become key issues. Here is the perception of the public about the activity of regulatory bodies as well as the interaction with shareholders who need a correct perception of the importance of quality audit services.

Interconnectivity – given the global and interconnected nature of today's economy, the audit now has a sizeable degree. This is why regulators in the field must cooperate at the same level; to ensure high standards for other audit services at EU and global level, CEAOB aims to contribute to sustained collaboration between European and third bodies.

Monitoring – the ever-changing political and economic environment in which CEAOB conducts its work requires increased attention to specific risks as well as changes in the audit and financial markets. An analysis of key influencing factors can lead to a correct anticipation of future trends in order to prevent and respond appropriately to the long-term public interest (European Commission, 2019).

The four proposed action lines are ambitious and have a direct impact on statutory audit at the level of the EU member states, first of all. However, it should be noted that, as stated by Ralf Bose, chair of the CEAOB, at a workshop held in Paris on 20 April 2017 by the European Audit Committee Leadership Network (EACLN), CEAOB has rather a coordinating role than a regulating one. This statement by the highest official representative in an European institution with a leading role in the statutory audit area may have more interpretations:

- The role of regulatory bodies created task falls mainly on the national level in EU member states (such as ASPAAS in Romania still face difficulties in working with big loser in this process of transformation in supervising the audit, namely CAFR);

- The major audit firms report and take into account the regulations of the European Commission which remain, however, the forum that has the power to promulgate official interpretations of the rules. CEAOB is viewed under these conditions as a forum for supervising and resolving issues related to the implementation of regulations, including those related to the rotation of audit firms. Given the fact that mandatory rotation of audit firms to the multinational companies deliver benefits in terms of fairness and transparency of financial reporting, CEAOB contribute to this by inspections of audit firms on a joint working methodology;

- Audit committees are seen as a dialogue partner with a real contribution to increasing the quality of the audit, which is why the results of the inspections should be disseminated through tripartite dialogue between committees, auditors and regulatory bodies;

- CEAOB, based on the 2014 Audit Regulation and Directive (ARD), facilitating the exchange of information, expertise and practices, with a leading role in the field of technical monitoring markets, ISAs, specialized inspections, etc.

Therefore, the formal authority is held by the European Commission and the Member States through its own bodies. CEAOB provides assistance, makes recommendations on the implementation of ARD and can provide opinions within a common working platform. It is a complex role given that the national statutory audit bodies are at different stages of maturity and on the background of a diverse economic landscape. The information flow thus becomes essential in the CEAOB functionality and creates the common language of cooperation between Member States.

3. INFORMATION FLOW INTELLIGENCE

A robust Business Intelligence platform can support companies in managing resources in confronting changing financial realities and can prevent possible failures in performing simple and common functions such as reporting to customers (Yahav, 2014). The results or “out-put” of Business Intelligence applications meet the needs of the management level through the presentation mode and the analytical possibilities offered. According to Business Intelligence (2015), dashboards have the following advantages that distinguish them from classic reports:

- Employee performance improvement – BI tools provide details of all components of a business, including the competitiveness and productivity of the

human resource. Monitoring employees' work can lead to an acceleration and a more accurate dosing of their efforts;

- Monitoring progress towards objectives – tracking certain projects allows management to see whether action plans or entrepreneurial strategies are implemented and respected to determine whether the organization is on its way to achieving the objectives;

- Time and money saving – using Dashboards allows to substantially reduce the amount of time needed to digitize. The centralized and integrated nature of these out-puts allows to simultaneously view data from multiple sources without having to generate additional spreadsheets or manual data aggregation. At the same time, it is possible to view strategic information on mobile media – mobile phone or tablet – from any location and at any time;

- Preventing human error – decisions are made based on solid arguments not just on suppositions. Moreover, information can also be made known to other departments, thus making information flows more efficient and reducing the lack of communication within a company;

- More efficient use of data and information – the visual form of the reports and analyzes presented makes the information better digested. For example, negative trends can be immediately detected from the incipient phase and preventive action is possible in this regard. Practically, due to the dashboard format, information can be quantified or measured, unlike classical reports where it could have been overlooked.

The application of Business Intelligence in managing information flows within CEA OB is possible through the aspects outlined above and supports the working philosophy of this organization. In particular, regular inspections on audit firms have the stated purpose of identifying problems or risks and finding solutions; the results achieved so far have had a positive impact on the consistency of subsequent inspections and led to the creation of a database of the results of the investigations on the first 10 audit firms in the CEA OB member countries (European Networks Audit Board, 2017). The need for joint audit procedures and maximum use of results from audit firm inspections is the starting point for involving Business Intelligence solutions in CEA OB's working techniques. Specifically, the proposed smart solutions can contribute to achieving the four main objectives proposed in the Work Plan, namely:

Cooperation – the exchange of experience and information between CEA OB members – BI has the tools needed to provide dynamic and updated real-time reports on the main indicators of audit work at Member State and EU level. In order to provide added value through the information provided, the implementation of Business Intelligence systems should generally take into account the following conditions:

- To bring real-time information to the impact factors of the organization;

- Provide information in supported formats, preferably for shared use (e-mail, web pages, MS-Excel, Adobe PDF, text documents);
- Implement a personalized, secure and organized approach to BI to be seen as a tool for generating knowledge across the organization;
- Enhance users' ability to interact with information, even from mobile terminals;
- Ensure the development and further dissemination of BI systems;
- Use web-based technologies to meet the growing need for information.

Communication – ensures transparency to the general public, to shareholders or investors – Through BI solutions, it is possible to provide unitary reporting methods on statutory audit (dynamic dashboards, predictive analytics, online data processing). Creating a common data repository as well as agreeing intelligent interrogation and processing tools to gain knowledge can provide the basis for effective and real-time communication between CEAOB members. The results of inspections as well as other quantifiable issues at national level are harnessed through clearly defined clear communication and access procedures at different hierarchical levels.

Interconnectivity – in terms of economic globalization, European statutory audit must integrate and contribute to the normalization of a regulated framework at international level – quantifying the provisions of the European Directives in Business Intelligence can help monitor statutory audit activities by reporting anomalies and analyzes on regions or sectors of activity.

Monitoring – analyzing specific auditing risks, financial markets – is one of the crucial aspects that anticipates future trends and BI has appropriate tools for such predictive analyzes or work scenarios. By their nature, Business Intelligence facilities transform the information system through superior quality, timeliness, and accuracy of information. The large amount of data processed, the speed of online capability reporting, secure access procedures and beyond, make BI a key tool for decision-makers and other interested departments. The oversight body has the possibility of real-time monitoring of transactions and early warning of possible slippages or errors, and the IT system is equipped with superior data processing and transmission facilities.

The success of a Business Intelligent project developed within the European Statutory Audit Oversight Body is only possible if all decision makers are involved (regulatory bodies at European and national levels, audit committees, large audit offices, etc.). The architecture of the BI system focused on audit monitoring processes should start from the interstate collaboration stage, which is, in fact, the essence of the necessary information processes within CEAOB.

4. CONCLUSIONS

Restructuring at the level of the statutory audit body is still in full swing and, moreover, may be permanent, taking into account the dynamics of the European

economy as well as the policy specific to each Member State. Finding common language, commonly accepted methodologies and procedures are essential in strengthening CEAOB; Business Intelligence offers a viable alternative to consolidating the information flows within this body and creates solutions for national regulators to work together and benefit fairly of information.

It is encouraging that at this time a common methodology and database has been developed based on the results of inspections at European level, but the insertion of intelligent information processing and reporting tools can ensure a higher level of supervision in audit services. Quick access to data, a dynamic and up-to-date visualization of the audit market, in line with the European Digital Agenda, is needed.

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Section V

EU TAX LAW

THE RIGHT OF PERSONS TO EQUITABLE TAX TREATMENT

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Abstract

Good administration increasingly acquires the character of a basic principle of the public law, the administrative one in particular, designating an ensemble of items defining a fundamental standard of the modern public administration.

In the field of collecting tax receivables, representing taxes or other contributions of fiscal nature, the debtor's right to an equitable treatment – as part of the right to a good administration – imposes the obligation of the tax administration to ensure the listening of the debtor before taking any individual measure, the right of access to his/her own fiscal file, the obligation of the tax administration to communicate the tax documents and to motivate its decisions.

The investigation starts with the analysis from an empirical perspective of certain issues regarding the activity of the competent tax authority in Romania, based on the hypothesis that an authentic rule of law cannot exist where values established at European level do not completely find their application in the internal law and administrative practice.

Keywords: *good administration; tax administration; rule of law; equity principle; fair treatment.*

JEL Classification: K34.

1. PRELIMINARY CONSIDERATIONS

Ensuring the fulfilment of the common needs of a politically and legally organized human group needs that join its members, giving them the feeling of belonging to a community of interests, implies the existence of adequate resources: material, human, informational, financial, etc. In order to organize, direct and imperatively propel the action of its members, public communities are organized politically and they form the mechanisms and authorities necessary for the achievement of these objectives (Muraru and Tănăsescu, 2008, p. 556). The procurement of financial resources, in the form of public budgetary funds, implies the contribution of all members of the respective community.

At present, the political leadership of each society must aim to achieve the essential goal of any government – the achievement of the common good – by democratic means accepted and appropriated by the social group.

In order to guarantee and comply with the human rights, at the end of the 20th century and the beginning of the third millennium, the concept of good governance, with the variant specific to public administration, that of sound administration, emerged in the social-political theory. The European Ombudsman had an important place in defining the content of this concept.

Considering the above, the analysis will focus on the way in which the right to sound administration, as provided by Article 41 of the Charter of Fundamental Rights of the European Union, with its components, can be found in the internal regulations in tax matters and in the adequate tax-administrative practice.

The objective of this research is to identify the degree of assimilation of the right to fair treatment and of the requirements of procedural correctness in the matter of establishing taxation and collecting taxes and duties as tax revenues. In order to achieve this complex objective, the analysis will focus on the following research questions:

- What is the nature and source of tax obligations?
- What content is entitled to sound administration in the light of EU primary law?
- How is the principle of procedural fairness and fair treatment reflected in Romanian tax law and practice?
- What steps should be taken to assimilate the European practice of fully assuring the right to fair tax treatment?

The main assumption of the research is that of the existence of a gap between European and national regulations in the matter of ensuring the right to equitable administrative treatment and a conservative attitude from the active administration, retained in implementing the standards of sound administration as legacy of an abusive behaviour acquired during the totalitarian regime.

From a methodological point of view, the study aims to combine the normative-institutional analysis with that of the administrative and judicial practice in the field of imposing taxation and collecting tax contributions in order to ensure a complex assessment of the phenomenon investigated.

2. TAX OBLIGATIONS – NATURE, LEGAL SOURCES

Out of the total revenues of the public budget of Romania taxes, duties and other monetary contributions exceeds two thirds. This situation illustrates the precariousness of resources deriving from field operation, royalties, capitalization of goods not owned or coming from seizures, sums resulting from fines, etc. Responding to the requirements of subsidiarity, the tax policy of the state must be adjusted in relation to the society dynamics, to the prospects of state development and modernization, being a mission of the political power.

Taxation, as an expression of political will, comprises of rules, regulations, procedures, routines relating to the establishment and collection of taxes, duties or other tax contributions. The ability of the states to impose tax obligations on their nationals is part of the “royal” rights that are legitimately recognized to the sovereign states as originating rights. In the doctrine, various theories justifying this original competence of the states have emerged: *the theory of social contract, the theory of solidarity, the theory of equivalence*, all starting from the premise of the necessity of introducing mandatory contributions by which the citizens of a state to participate in the constitution of resources used in the general interest.

The economic theory includes in the category of public expenditures both the expenses necessary for the national community in its entirety, so called state expenses, as well as the expenditures of the local communities organized by law: commune, city, county.

The Romanian constitutional system starts also from the premise of the existence of a universal obligation, of every citizen, to contribute to the coverage of public expenditures. Thus, Article 56 of the Constitution of Romania, republished states:

“(1) Citizens have the obligation to contribute, through taxes and duties, to public expenditures.

(2) The statutory system of taxation must ensure the correct establishment of tax burdens.

(3) Any other benefits, other than those provided for by law, in exceptional circumstances, shall be prohibited”.

Consecrating this obligation, the Romanian Constitution provided also the limits representing constitutional guarantees of property rights, citizens’ wealth, and in general, any contribution to public expenditure being a burden on the exercise of this right (Constantinescu *et al.*, 1992, p. 126).

These limits, which maximize the value of justice in classical doctrine, are:

- a) the citizens’ contribution to public expenditures can consist only in payment of taxes and duties, which can be established, according to article 139 of the Constitution, only by law or within the limits and conditions of the law when it refers to taxes and duties financing the local budgets;
- b) the statutory system of taxation must ensure the correct establishment of tax burdens, *i.e.* be subordinated to a principle of equity in order not to distort equal opportunities, which excludes any privilege or discrimination as well as a social justice principle, which corresponds to the social character of the state (Article 1 paragraph (3) of the Constitution), taking into account the need to protect the more disadvantaged categories.

An important element, which is retained in a series of theories as one of the principles of taxation, refers to the general condition of establishing taxes

according to capacity, to the “contribution capacity” of citizens, *i.e.* ability to pay principle, in the spirit of the highest degree of justice, which requires citizens to contribute to public expenditures as much as practicability under the protection of the state allows them (Bălan, 2007, p. 166).

3. GOOD ADMINISTRATION AND RIGHT TO FAIR TREATMENT

Just like any field of social life, public administration also needs to improve its functioning, it must progress, keep up with the evolution of society and with the needs of the community it serves.

As regards guaranteeing and respecting human rights, at the end of the 20th century and the beginning of the third millennium, the concept of good governance with the special variant of good administration emerged and developed in social-political theory.

In order for citizens to have the feeling that they are involved in the decision-making process at the state level, it is necessary for them to be able to formulate proposals and be able to follow the progress of debates on the draft legislative acts that will influence their life, to enhance the transparency of the regulatory mechanisms (Ene, 2019, p. 20).

The concept of good administration can thus be foreshadowed, this concept presupposing both observance of the fundamental rights of those administered by the governors under the rule of law, and the good functioning of the public administration as a system, according to clear, predictable rules easily known and applied both by citizens and by the administration, with the establishment of public objectives that correspond to the wishes of the administered ones (Bălan, 2019, p. 163).

Charles Debbasch argued that administrative law must meet two fundamental requirements: on the one hand, “[...] to ensure the internal discipline of the administration in order to enable its best functioning [...]”, and on the other hand, “[...] to guarantee to the citizens a functioning of the administration in accordance with the requirements of the rule of law [...]” (Debbasch, 2002, p. 3).

Through the Treaty of Lisbon, the Charter of Fundamental Rights of the European Union has acquired primary legal force, such as the treaties. Thus, the right to good administration provided for in Article 41 of the Charter has become legally binding for all EU states, not only for the EU institutions. Member States must “identify the concrete ways of achieving this right, the main elements mentioned in the contents of the article constituting a starting point for Member States in designing the internal regulations that will lead to sound governance at national level, because the provisions of the Treaty underline that the Union has as targets, at present, not only a unitary economic development, but also the strengthening of the compliance with the fundamental rights of the people, hence implicitly of the right to sound administration” (Slabu, 2018, p. 53).

As mentioned in the national doctrine, the Charter is a “[...] genuine catalogue of the rights that all European citizens should enjoy before all the institutions of the European Union and the Member States when the latter implement European law” (Tănăsescu, 2010, p.18).

Good administration cannot be limited only to impartiality, fairness, transparency, right of access to one’s own file or the obligation for the administration to motivate its decisions. As it is emphasized in the literature, “good administration also means the legality (and implicitly the opportunity) of public administration action and the right to petition and to receive a response within a reasonable time, and the right to challenge in court a decision of the administration which affects the legitimate rights and interests, and the right to compensation in the event of damage through the action or inaction of a public authority, and the right to benefit from clear procedures made publicly available regarding the relationship with the administration” (Slabu, 2018, p. 55).

Good administration increasingly acquires the character of a fundamental principle of administrative law, comprising a set of elements that are linked to each other and which define a fundamental standard of modern public administration.

According to article 41 of the Charter of Fundamental Rights of the European Union, the right to fair treatment seems to include mainly the following elements:

- a) the right of any person to be heard before any individual measure affecting him/her is taken;
- b) the right of any person to have access to his / her own file;
- c) administration’s obligation to motivate its decisions.

When a public authority activity is analysed by applying the good administration concept at least the three elements mentioned above should be met. Other way it is fair to say that one of the fundamental rights of the EU citizens is not achieved.

4. FAIR TREATMENT AND ROMANIAN TAX PRACTICE

Under Romanian law, taxes and duties, as tax obligations are mainly regulated by the Tax Code (currently Law no. 227/2015) and the procedural rules can be found in the Tax Procedure Code (currently Law no. 207/2015).

In the matter of collecting tax debts representing taxes, duties or other contributions, the debtor’s right to fair treatment as part of the right to good administration requires the communication of the tax documents and of the precursors to a possible enforcement (tax debt titles, enforcement orders, summonses) by the tax authority in order for the debtor to be able to knowingly regulate his/her conduct in relation to his/her obligations.

The enforcement order, comprising of tax obligations, must be drawn up based on a tax debt title against which the taxpayer may lodge an appeal and, if

the tax debt title, which represents a tax administrative document, has not been communicated to the taxpayer, it would not produce any legal effects.

The investigated jurisprudence illustrates the existence of many cases in which the taxpayer, *i.e.* the debtor, is informed of the tax liability claimed from the garnishment notification or from the communication sent by the third party garnishee (bank or employer).

In order for a tax debt title (tax decisions, tax returns, decisions relating to ancillary obligations) to be enforceable it is necessary to cumulatively meet the following conditions:

- a) the tax debt title has to be legally communicated to the taxpayer, and
- b) the payment deadline mentioned in the tax debt title has to be passed.

Regarding the first condition, according to the Tax Procedure Code, the communication of the tax debt title is made by registered mail with acknowledgment of receipt and, if the communication cannot be performed in this manner, communication will be made also by advertising.

In this respect the Decision of the Constitutional Court of Romania no. 536/2011, published in the Official Gazette of Romania, Part I, no. 482/2011 states that the provisions of Article 44 paragraph (3) of the Government Ordinance no. 92/2003 regarding the Tax Procedure Code, are unconstitutional insofar as they are interpreted in the sense that the issuing tax authority may proceed to the communication of the tax debt title through advertising, with the unjustified removal of the order of performance of the communication methods stipulated in Article 44 paragraph (2) sections (a) to (d). The Court has found that such an interpretation infringes the right of free access to justice for the taxpayer who disputes the existence or the amount of the tax debt. Taking into account that the moment when the deadline for the submission of the appeal starts to run is the date of the communication, its uncertainty constitutes an obstacle to the exercise of the right of access to justice. It is important to mention that even if the Government Ordinance no. 92/2003 was repealed by Law no. 207/2015, the current Tax Procedure Code has similar provisions and the arguments mentioned by the Constitutional Court are still valid and very much applicable in practice.

According to the current Tax Procedure Code (Law no. 207/2015), the communication of the tax debt titles can be performed by any method which ensures their receipt by the taxpayer, *i.e.* personal delivery to the taxpayer at the headquarters of the competent tax authority or at the taxpayer's residence by the tax authority employees, via registered mail with acknowledgment of receipt or, if all other methods mentioned above fail, by advertising. When delivery in person or registered mail of the tax debt titles has failed, by exception and only after the last resort, *i.e.* registered mail failed, the tax authority may communicate the tax debt titles by presentation on the tax authority website. In this case the communication date is considered to be the date of publication on

the website. The communication date is very important for the taxpayer and the tax authority as the term for challenging the content of the tax debt titles starts on the first day of the communication.

The non-communication has as a consequence the non-enforceability of the tax debt titles, the Tax Procedure Code stipulating that the tax debt title enters into force and has effect from the date when it is communicated to the taxpayer or at a later date mentioned in the tax document. In the matter of enforcement documents, the Tax Procedure Code provides that foreclosure begins by communicating the summons, which must be accompanied by a copy of the enforcement title. If the debt is not paid off within 15 days of the summons notice, the foreclosure measures shall continue.

Regarding the second condition, namely the fulfilment of the payment deadline, it is obvious that, in the hypothesis in which the tax documents or the summons were not communicated, the enforceable titles did not become opposable to the debtor, thus producing no legal effects. Therefore, as this condition was not met, the payment deadline did not start to run.

As it results from the analysis of the tax enforcement practice, in many situations the tax authority has communicated the enforcement summons without communicating also the tax debt titles based on which the summons were issued. Communicating summons without prior communication of the tax debt titles mentioning the tax obligations is a reason of the enforcement procedure unlawfulness. Such a conclusion is imposed from the perspective of the fact that the tax obligation from which the debt originates are recorded only in the tax debt titles, so the communication of the tax document is crucial in order for the debtor to know precisely the debt for which foreclosure is started and to be able to formulate his/her necessary defence arguments accordingly. The same solution is also reached in the light of the obligation of communication laid down in the current Tax Procedure Code, under which non-communicated tax documents cannot generate effects, so that they cannot represent the basis for an enforcement procedure.

5. CONCLUSIONS

Analysing from an empirical point of view the activity of the tax authority and the relations developed with the taxpayers in the matter of taxes and other contributions, based on the regulations of the Tax Procedure Code in force, we appreciate that we cannot speak of a genuine rule of law where values established at European level do not fully find their application in the internal administrative law and practice.

The enforcement order containing tax obligations must be drawn up based on a tax debt title against which the taxpayer can lodge an appeal and if the tax debt title, tax administrative document, was not communicated to the taxpayer, it could not generate any legal effects.

The jurisprudence reveals that, in the absence of an explicit mention of the obligation to comply with legal provisions regulating the communication methods, there is a tendency of the tax authorities to ignore the sequence in which they are provided by the Tax Procedure Code and to resort directly to the communication by advertising before exhausting the other means of communication. It was necessary for the Constitutional Court to intervene and to sanction such an interpretation of the law, considering that it violates the right of free access to justice for the taxpayer who disputes the existence or amount of the tax obligation. Taking into account that the moment when the deadline for filing the appeal starts is represented by the date of communication, its uncertainty constitutes an obstacle to the exercise of the right of access to justice.

The tax authorities' interest in making the taxpayer aware of a tax liability implies the obligation to communicate the legal document in which it is recorded by ways that ensure the taxpayer's effective information on the existence of tax obligations.

Beyond the generally binding nature – both for the legislator and for the administration – of the operative part and considerations of the Constitutional Court's decision, the factual and not just the feigned nature of the communication of tax documents to taxpayers should be deduced from the respect for citizens' rights to fair treatment which is a component of the right to good administration.

The procedural correctness applied by the administration ensures the citizen's right to a treatment based on justice, impartiality, truth, fairness, giving content to the right to equal and fair treatment. The taxpayer must have at his/her disposal appropriate instruments, guaranteed by law and validated by good practices, which allow him/her to protect his/her rights before the tax authority and to ensure stability, safety and certainty in the legal relations resulted from tax obligations.

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EXTERNAL TRACEABILITY AND VAT. A JURISPRUDENTIAL APPROACH

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Abstract

The difficulties the fiscal authorities have with fighting fraud have led to the establishment of a mechanism to prevent tax evasion by the statement of the inactivity of tax payers involved in illegal operations through the annulation of the VAT code. These measures were applied in the context of the external traceability monitoring difficulties, regarded as an operation to upstream identify the origin of assets and services purchased by a company. Proving external traceability is necessary, as a rule, in the case of purchasing assets from intermediaries (successive owners of assets) and also in the situation of construction work and management services.

The analysis of the legal frame applicable with the EU starts from the observation that Directive 2006/112/CE is opposed to the national regulations which allow the fiscal administration to refuse the right to deduct the value added tax corresponding to transactions, where the basic requirements are observed and the deduction right is not invoked in a fraudulent or illegal way. The legislative act refers to taxable persons who have either conducted transactions with an operator declared inactive for a period, or have made acquisitions in a period when their VAT registration number was annulled, even if it had been reactivated at the date the invoices were issued. An important limitation to such measures was imposed by the jurisprudence of the CJEU. The present paper analyses the conclusions to be had from the resolution of 19 October 2017 in the case C-101/16 – Paper Consult and, respectively, the resolution of 12 September 2018 in the case C-69/17 – Gamesa Wind Romania, both given as a result of the interpretation of the Council Directive 2006/112/CE of 28 November 2006 regarding the common value added tax system, modified by the Council Directive 2010/45/EU of 13 July 2010. There are suggestions to improve the applicable VAT regulation frame in order to limit the effects the traceability deficiencies can generate.

Keywords: traceability; value added tax; deductibility.

JEL: K20, K34, K4

1. WHAT IS EXTERNAL TRACEABILITY?

Each year the member states of the European Union lose millions of euros in income representing VAT. One strong cause: fraud. In Romania, VAT fraud is extremely important and creates a significant difference between expected VAT income and the actual collected VAT.

The impediments met by the fiscal authorities in fighting against VAT fraud have led to the establishment of a mechanism to prevent tax evasion by measures such as the statement of the inactivity of tax payers involved in illegal operations through the annulation of the VAT code. These measures have been applied in the context of the external traceability monitoring difficulties, regarded as an operation to upstream identify the origin of assets and services purchased by a company.

The speciality literature (Bufan and Şvidchi, 2018) underline the fact that proving *external* traceability is necessary, as a rule in the following cases: first, in the case of purchasing assets from intermediaries (successive owners of assets), in which case the underlining discussion is either their “absolute” reality – in the sense that the transaction did not actually take place – or their “relative” reality – being admitted that they do not originate with the persons listed as providers.

Secondly, there is the case of construction work, where the “relative” reality of the services is the underlining discussion, being admitted that they exist but have not been executed by the persons listed as providers in the corresponding invoices. This is the context in which the control fiscal authorities need detailed rules of evidence in order to demonstrate the fact that the works have been executed by the contractor and by the subcontractor, respectively.

A third case where proving *external* traceability is required is management services, where the discussion is usually about the “absolute” reality of the services, as they are difficult to physically identify.

Coming back to the starting point of the present paper, we need to have an introspective look on the way fiscal authorities approach transactions between taxable persons, as it was modified as an effect of a rise in fraud and tax evasion.

The analysis of the legal frame applicable with the EU starts from the observation that Directive 2006/112/CE is opposed to the national regulations, which allow fiscal authorities to refuse the right to deduct the value added tax corresponding to some transactions, as long as the requirements are observed and the right to deduct is not invoked illegally or fraudulently. We are talking about a national norm which refers to taxable persons who have either conducted transactions with an operator declared inactive for a period, or have made acquisitions in a period when their VAT registration number was annulled, even if it had been reactivated at the date the invoices were issued.

2. LIMITS OF THE LEGISLATIVE MEASURES TAKEN BY THE TAX ADMINISTRATION. CJEU INTERPRETATION

An important limitation of the effects such measures as the declaration of the inactivity of the tax payers involved in illegal operations or the annulation of the VAT code can generate was made by the CJEU jurisprudence, by the resolution of 19 October 2017 in the case C-101/16 – Paper Consult and,

respectively, the resolution of 12 September 2018 in the case C-69/17 – Gamesa Wind Romania, both given as a result of the interpretation of the Council Directive 2006/112/CE of 28 November 2006 regarding the common value added tax system, modified by the Council Directive 2010/45/EU of 13 July 2010.

In the case C-101/16 – Paper Consult, this interpretation was presented with a conflict between SC Paper Consult LLC, on the one hand, and the County Administration of Public Finances Bistrița Năsăud, on the other hand, Paper Consult contesting an administrative decision which refuse its right to deduct the value added tax (VAT) paid for services purchased from SC Rom Packaging LLC because the latter was declared “inactive” tax payer when the contract was concluded.

The refuse of the fiscal authority came when Paper Consult claimed that Rom Packaging paid the VAT collected based on the contract with Paper Consult to the public treasury. In response to one of the questions of the Court, the Romanian government has confirmed that the sums corresponding to the VAT owed by Rom Packaging had been paid, but it was impossible to verify whether these sums corresponded to the transactions concluded between the two companies, as Rom Packaging has not reported its VAT statements.

The national regulations discussed with the main conflict referred to Article 11 paragraph (1²) of the Fiscal Code applicable on the date of the facts presented to the court, which stipulated that the beneficiaries who purchased assets and/ or services from tax payers after these have been listed as inactive, do not have the right to deduct expenses and VAT corresponding to the respective transactions.

In paragraphs 54 and subsequent of the resolution analysed, the Court of Justice of the European Union interpreted that in such a case the only obligation imposed to the taxable person is to consult the list of the tax payers listed as inactive displayed at the NAFA head office and published by NAFA on their web site, such a check being easy to make. Thus, it results that by the obligation of the taxable person to make such verification the national legislation has an objective which is rightful and even imposed with the Union legislation, i.e. the right of ensuring the correct VAT collection and avoiding fraud and that such a verification can be reasonably asked of any company.

According to its constant jurisprudence in interpretation matters, the Court continued the analysis by verifying whether this law exceeds or not what is necessary in order to achieve the objective in sight.

Thus, the Court has ascertained that article 11 paragraph (1²) of the Romanian Fiscal Code does not stipulate an accrual to the benefit of the taxable person downstream in spite of proof of VAT payment by the taxable person upstream, the non-recognition of the deduction right being definitive. Or, the impossibility of the taxable person to prove that the transactions concluded with the operator listed as inactive observe the conditions under Directive 2006/112

and especially that the VAT has been paid to the public treasury by the operator does not exceed what is necessary in order to achieve the rightful objective of this directive.

The European court of law has established that Directive 2006/112 must be interpreted in the sense that it opposes a national regulation such as the one discussed above in the main case, based on which the right to deduct VAT is denied to a taxable person for the reason that the operator which delivered the services in exchange for an invoice listing the price and the VAT separately has been declared inactive by the fiscal administration of a member state, this declaration of inactivity being public and accessible online to any taxable person in the member state, when this refusal of the deduction right is systematic and definitive, not allowing the proof of any absence of fraud or fiscal income loss.

The measure of the annulation of the VAT code has been regulated for the same objective of the tax authority of fighting against VAT fraud. Again, the European Union Court of Justice has marked, by means of its jurisprudence, an important limit regarding the traceability of the acquisition of a taxable person from a provider upon which such a measure has been applied by the resolution of 12 September 2018 in the case C-69/17, *Gamesa Wind Romania*.

The interpretation was given with a conflict between Siemens Gamesa Renewable Energy Romania LLC, former Gamesa Wind Romania LLC (referred to hereafter “Gamesa”), on the one hand, and the National Agency for Fiscal Administration – General Division for Appeal Solutions (Romania) and the National Agency for Fiscal Authority – General Division for the Administration of Large Tax Payers (Romania), on the other hand, regarding the right of Gamesa to deduct the value added tax VAT paid for acquisitions made during a period when its VAT identification code was annulled.

For a short period, Gamesa was declared inactive tax payer, but later it was reactivated and re-registered for VAT and, as a result, it exercised its right to deduct VAT through VAT statements submitted after the above mention reactivation or through invoices issued after the reactivation.

According to constant jurisprudence, which is underlined by the resolution presented above (the Resolution of 19 October 2017, Paper Consult, C101/16, EU:C:2017:775, point 41), the fundamental principle of VAT neutrality imposes that the deduction of the VAT corresponding to entries should be allowed if the substantive requirements are observed, even if some formal requirements have been omitted by the taxable persons.

As shown in the previous jurisprudence resulted from the preliminary questions forwarded by Romanian courts of law (Resolution of 9 July 2015, Salomie and Oltean, C183/14, EU:C:2015:454, point 60, as well as Resolution of 7 March 2018, Dobre, C159/17, EU:C:2018:161, point 32), the identification for VAT stipulated under article 214 of Directive 2006/112, as well as the obligation of the taxable person to declare when they start, when they modify or

when they stop their activity under article 213 of the directive are only formal requirements for control purposes and cannot bring into question the right to deduct VAT, as long as the substantial conditions giving rise to this right are observed.

As a result, a taxable person for VAT cannot be prevented from exercising their right to deduct for the reason that they haven't been identified for VAT purposes before they use the assets acquired during their taxed activity.

Moreover, the Court has declared that the right to sanction the non-observance by the taxable person of their accounting obligations and of their obligations regarding declarations with the refusal of the right to deduct obviously exceeds what is necessary to achieve the objective to ensure the correct execution of these obligations, as the right of the Union does not prevent the member states to impose, if the case may be, a fine or a monetary sanction proportional to the gravity of the violation.

The European court of law has appreciated that the date the VAT statement is submitted or the invoice is issued does not necessarily have any effect on the substantial requirements whose observance offers the right to deduct, so that if the substantial requirements whose observance offers the right to deduct VAT upstream are observed and this right is not invoked in an abusive or fraudulent manner, a company in a situation similar to Gamesa would be entitled to valorise its right to deduct VAT through financial statements for VAT or issued invoices, after its activation in both situations.

To conclude, the European Union Court of Justice has declared that Directive 2006/112, especially articles 213, 214 and 273 of the directive, must be interpreted in the sense that it opposes a national regulation such as the one in question with the main conflict, which allows the fiscal administration to deny a taxable person who made acquisitions in a period when the VAT identification code was annulled as a result of non-submitting financial statements the right to deduct the VAT corresponding to these acquisitions through financial statements for VAT – or issued invoices – after its identification number has been reactivated for the simple reason that these acquisitions took place in the deactivation period, whereas all the substantial requirements are observed and the right to deduct is not invoked in an abusive or fraudulent manner.

3. CONCLUSIONS

It is obvious that some conclusions are to be had as a result of the interpretation offered by the European Union Court of Justice in the resolutions pronounced in the two cases mentioned above. Is traceability denied in all acquisition cases done in the periods when the VAT code is annulled or from inactive tax payers?

This question essentially refers to the operation constantly used in the field by the European court of law, that is to balance the right to deduct, an essential

element of the VAT mechanism, on the one hand, and on the other hand of the fight against fraud, an objective acknowledged and encouraged by Directive 2006/112. The imperative of keeping a balance between the two desiderates guides the entire reasoning of the Court.

First of all, we notice that the European court of law agrees with the approach of the Romanian legislator who had regulated additional conditions for the exercising of the right to deduct VAT, in addition to the standard ones stipulated in Directive 2006/112.

We also need to mention that the interpretation given in the cases C101/16 Paper Consult and C-69/17 – Gamesa Wind Romania refers to the provisions of the Romanian Fiscal Code valid until 31 December 2016. Thus, the beneficiaries who purchased assets and/ or services from inactive tax payers lost their right to deduct the VAT corresponding to the respective purchases, regardless of the fact that the provider may have been subsequently reactivated and re-registered for VAT purposes.

Equally, the provisions of the Fiscal Code prior to 1 January 2017 did not take into account any counterargument (such as, for example, the observance of the substantial requirements of the operation) when they established a systematic and definitive refusal of the right to deduct VAT for the reason of the annulment of the VAT code.

We notice that the European court of law has indirectly criticised the provision of the fiscal law in Romania regarding the deduction of the VAT invoiced by inactive tax payers from the perspective of the fact that this is disproportionate to the objective followed by the national regulation in discussion in the main conflict. From the elements presented to the Court it follows that it has as objective the fight against VAT fraud sanctioning, by its refusal of the right to deduct, a type of behaviour which may contribute to the delay of detecting such a fraud or, at least, the VAT non-payment by the tax payers who do not observe the requirements established by the law, who avoid fiscal control by declaring false information regarding their head office which will not allow fiscal authorities to identify them or where the fiscal authorities have ascertained they do not exercise their activity.

Starting with 1 January 2017 the Fiscal Code was modified under the imperative of ensuring just fiscal treatment for tax payers who regain their VAT code, by re-instating their rights and the rights of the beneficiaries who have purchased assets/ services from them in the period when they did not have a valid VAT code.

Thus, the regulation valid starting with 1 January 2017 allows the VAT deduction corresponding to the acquisitions made by inactive tax payers or by any other taxable persons whose VAT code was annulled on the date these operations were made, after they have been re-activated and re-registered for

VAT or, respectively, after the situation that has caused the annulment of the Vat code has stopped and the VAT re-registration has taken place.

However, the provision is applicable for the VAT re-registration only after 1 January 2017, as the law does not apply retroactively.

This is the context in which we believe that the Court, though its resolutions C-69/16 *Paper Consult* and C-101/17 *Gamesa Wind Romania*, respectively, has formulated recommendations for the improvement of the legislative frame applicable for VAT. Even if the final purpose of these recommendations is not expressly indicated we consider that the European court of law has in mind the limitation of the effects traceability deficiencies may generate.

To this end, it is worth mentioning that the impact of these recommendations was visible by the adaptation of Emergency Ordinance no 79 of 8 November 2017, by which the provisions of article 297 of the Fiscal Code were amended with the introduction of paragraph 8 which stipulates that the competent fiscal bodies have the right to refuse VAT deduction only if, after the evidence stipulated by the law has been administered, they can prove beyond any doubt that the taxable person knew or should have known that the operation in question invoked for the justification of the deduction right was involved in a VAT fraud which occurred upstream or downstream the delivery/ service execution chain.

In spite of all these, we appreciate that the intention of an effective and fair application of the terms regulated by the law is still applicable. Thus, examples cited in the speciality literature (Bufan and Şvidchi, 2018) of the practice of fiscal bodies shows us that traceability is denied in the consideration of the upstream provider's behaviour, on the one hand, by assigning true value to the way the operations are declared by the upstream providers, while on the other hand the evidence forwarded by the beneficiary (including the evidence obtained from the first provider in the chain and from the final beneficiary) is ignored, thus denying the reality of transactions only with the beneficiary (the deduction right) and not with the provider (tax and VAT additionally calculated).

Could a different approach from the fiscal authorities in question be necessary in order to eliminate the major obstacles that at the moment hinder an effective fight for the prevention and reduction of fiscal fraud?

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FISCAL RULES AND FISCAL DECENTRALIZATION. CASE STUDY FOR ROMANIA

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Abstract

The paper investigates the relationship between fiscal rules and fiscal decentralization in Romania. We firstly aim to highlight the state of fiscal legal framework for subnational governments in Romania and the process of fiscal decentralization in Romania. Then, we intend to evaluate the relationship between fiscal decentralization and fiscal rules and apply it for the case of Romania, during 2000-2014 based on a regression model. The main finding is the interactive effect of fiscal decentralization and fiscal rules, which imply that fiscal decentralization generally fails to achieve fiscal discipline in the absence of fiscal rules.

Keywords: *fiscal rules; fiscal decentralization; fiscal discipline; subnational governments.*

JEL Classification: H7, H30, K34

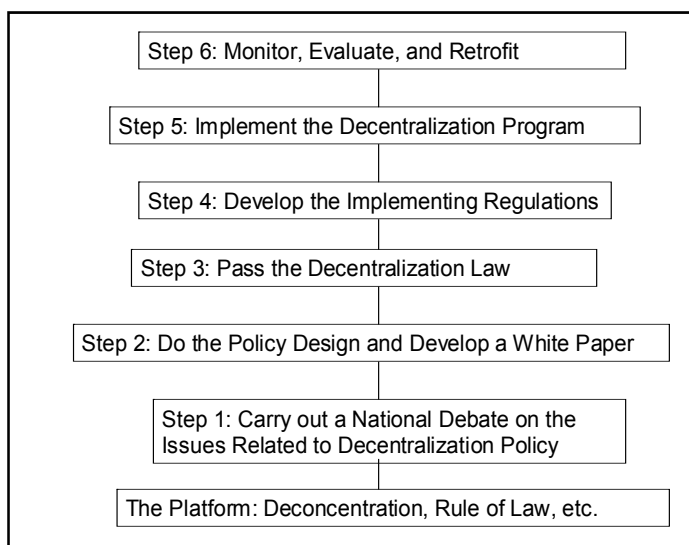
1. INTRODUCTION

Fiscal rules have acquired greater importance as the autonomy granted to subnational governments has increased. Fiscal rules can be described by numerous properties in terms of both legislative acts and informal agreements, which are typically ordinal in nature and not comparable with each other (Badinger and Reuter, 2015). Fiscal rules are considered a set of institutional constraints on policymakers' decision-making discretion (Sutherland, Price and Joumard, 2005). By definition, a rule is a provision exercising constraints on policy-makers in formulating the fiscal policy decisions.

In a decentralized context, fiscal rules need a clear definition of intergovernmental relationships (Kopits, 2001; Sutherland, Price and Joumard, 2005; Ter-Minassian, 2007) and are more needed when higher vertical imbalances are in place (Eichengreen and von Hagen, 1996). Subnational fiscal rules have gained prominence in Europe marked by successive reforms in the EU fiscal governance framework. As a result, the number of subnational rules adopted in the EU countries increased. Most of the rules adopted were either budget balance or debt rules. In most cases, subnational fiscal rules were imposed by the central government and adopted in conjunction with national fiscal rules.

Regarding fiscal decentralization in terms of legislative acts, there must be followed six important steps developed by Bahl and Martinez-Vazquez (2006) (see Figure 1).

Figure 1. Sequencing Fiscal Decentralization



Source: (Bahl and Martinez-Vazquez, 2006)

The first one asks for a national debate about decentralization, usually determined by national election or a change in the pattern of governance. The second step is considered the design of the fiscal decentralization program or plan with a timetable for implementation and serving as the basis for writing the law, culminating in a policy paper or a framework for the fiscal decentralization. The third step is the draft and the adoption of the decentralization law(s), giving legal standing to the implementation of the fiscal decentralization measures. Step four creates a set of implementing regulations that spell out the detail of how the

fiscal decentralization will be put in place. Step five to six supposes implementation following a very clear set of rules and regulations, and involves a well-designed and operational system of monitoring and evaluation by the central (state) government and a well laid out accountability system at the subnational level.

The steps outlined by Bahl and Martinez-Vazquez (2006) might be thought of as a normative approach to ordering the elements of a sustainable fiscal decentralization strategy.

There are few theoretical studies that emphasize the important role that fiscal rules play for fiscal decentralization to attain the sustainable economic growth and development. More specifically, fiscal rules are found to be important tools of fiscal consolidations (Larch and Turrini, 2008) and in fulfilling medium-term fiscal objectives and plans (von Hagen, 2010). Foremny (2014) considers that the idea of fiscal rules is to force subnational governments to act in the way the central level desires. Foremny (2014) examined how fiscal rules and tax autonomy influence deficits of sub-national sectors across EU-15 countries over the period 1995 to 2008 finding that the effectiveness of fiscal rules and tax autonomy depends on the constitutional structure; fiscal rules decrease deficits only in unitary countries; and deficits of subnational sectors in federations can be avoided through tax autonomy. Neyapti (2013) analysed the effect of fiscal rules on the effectiveness of fiscal decentralization finding that balanced budget and expenditure rules help fiscal decentralization to achieve fiscal discipline, while debt rule has a direct disciplinary effect. Rodden's (2002) results show that revenue autonomy improves fiscal balance at the subnational government (SNG) level, but hurts fiscal balance at the general government (GG) level.

The goal of this paper is twofold, theoretical and empirical. Firstly, at theoretical level, we intend to highlight the state of fiscal rule and fiscal decentralization in Romania. Secondly, we intend to develop an econometric model for evaluating the relationship between fiscal decentralization and fiscal rules and apply it for the case of Romania, during 2000-2014. Our working hypothesis is that, as decentralization theory stipulates, well-defined and targeted fiscal rules may help in promoting fiscal consolidation, fiscal discipline and can help attain a sustainable fiscal decentralization.

The paper is structured as follows: section 2 provides facts of laws on decentralization in Romania; section 3 describes the method, variables and data sources; section 4 summarizes the results of the empirical study conducted on Romania, over the period 2000-2014. The paper ends with conclusions and references.

2. SOME PRELIMINARY EVIDENCE: LAWS REGARDING DECENTRALIZATION IN ROMANIA AND BASIC SNG FINANCE INDICATORS

The decentralization process in Romania requires constantly an improving in legislation. Over time, Romania has experienced significant changes in fiscal rules, from a legal framework when the local budgets were regulated through the State budget law itself to a more diversified and more issue-oriented legal framework.

Fiscal decentralization in Romania is considered to be initiated along with the adoption of the Law on local taxes and charges (no. 27/1994), which empowering the subnational governments to establish, collect and administer certain taxes and fees, considered own revenues of the local budget. During 2002, the law no. 27/1994 was amended by GO no 36/2002 in order to facilitate the local government own revenues increasing.

The role of the Romanian local budgets became more important with the adoption of Law on local public finances (no. 189/1998), which provided a new framework for local finance mechanism, clarifying and expanding local control over revenues and formation of the local budgets. The law regulated the intergovernmental transfers and the distribution of the equalization funds based on a mathematical formula where the indicators used in the equalization decision making process were the length of the streets, the number of high school, the secondary school students, etc. Although the establishment of an equalization system has been an important step towards local financial autonomy, there were still problems that were mainly related to: the indicators as well as the place of the financial capacity formula in the whole equalization process were annually revised in the context of the State budget law; the lack of transparency of the allocation of funds and the political interference in the financial decentralization process at different levels. The Law on local public finances also includes the timing local budget process and an appendix on the budgetary classification that must be followed by the subnational governments while administrating the own budgetary revenues and expenditures. Regarding fiscal revenues, to subnational governments was given a share of the percentage of the income tax collected in their community and earmarked transfers allocated to autonomous enterprises or to public services and investments were eliminated. Overall, an equalization system that aimed to correct expenditure and fiscal capacity disparities among subnational governments was also elaborated. This law was followed by subsequent modifications through other laws and governmental ordinances. In 2006 was adopted a new Law on local public finances (no. 273/2006) which has been amended and completed several times so far.

In 2003 was adopted Fiscal Code (Law no. 571/2003) which provided an integrated legal framework for the taxes and fees, as revenues of the state budget and local budgets, specifying the taxpayers, the manner of calculating and

paying the taxes and fees, the procedure for modifying taxes and fees. The legal framework for administering the taxes and fees governed by the Fiscal Code was provided by Fiscal Procedures Code (GO no. 92/2003). Fiscal Code was followed by subsequent modifications and it was replaced by the new Fiscal Code (Law no. 227/2015), which also has been amended and completed several times so far.

Framework-Law no. 195/2006 on decentralization has defined decentralization as the transfer of administrative and financial responsibility from the central government to the local government or the private sector. These powers fall in three categories: exclusive, shared and delegated to different subnational public authorities according with their level: communes, towns/cities and county. The summary of the subnational government fiscal rule practices in Romania is presented in Table 1.

Table 1. SNG fiscal rule practices in Romania

| Fiscal rules | Constraints | | |
|---------------------------------------|--|---|--------------------------------------|
| Borrowing constraints | Access conditions | Prior approval is required | |
| | | No restriction on purposes on access to borrowing | |
| | Restrictions on borrowing and guarantees | Numerical constraints | On debt level |
| | | Guarantees | On debt service Exceptional basis |
| Tax limits | Subnational government autonomy over | Rate and reliefs | |
| | Taxes are shared | By stable formula | |
| | | Decided on an annual basis | |
| Expenditure limits | | Are set for individual spending items | |
| Subnational budget constraints | | Budget balance in nominal terms | |

Source: computed by authors based on Romanian legal framework

The decisive factor that determines the actual position of the Romanian subnational governments in their effective decentralization is considered the totality of exogenous and endogenous constraints imposed on their tax autonomy, expenditure autonomy, and budgetary autonomy. Thus, exogenous constraints must be taken into account both by their nature and by their effects (Beer-Tóth, 2009).

Soft budget constraints appear in the form of excessive expenditure of Romanian subnational governments and, so that, there are distortions in local public expenditure that generate local debts, where excess of expenditure over revenues are paid by central government through transfers, and so that excessive transfers. In this context, the efficiency of public expenditure and the fiscal discipline of the administrative-territorial units may be jeopardized. In direct connection with the terminology is inclusive “soft” taxation. For soft taxation terminology, the attribute soft does not refer to the rate of taxation. Even with a low tax rate the taxation system can be hard, if rules are uniform, fixed for a long period and the payment of taxes rigorously enforced. In contrast taxation is soft, even with a high tax rate, if the rules are negotiable, subject to bargaining, political pressures, ad hoc exemptions, postponements, etc. (Bordignon, 2004).

According to the nature criteria of exogenous constraints, as direct legal constraints on Romanian local revenue autonomy, there are statutory national rules established by Fiscal Code on specific parameters of own-source revenues, respectively on tax base assessment, exemptions, deductions, rates, earmarking of user charge revenues, which are stringent. Regarding direct legal constraints on local budget autonomy, there are statutory rules on deficit, borrowing and debt. Borrowing constraint are established according to article no. 63 of Local Public Finance Law no. 273/2006, where the administrative-territorial units are not allowed to access loans or to guarantee any loan if the total annual debt due to contracted loans and/or guaranteed, interest and commissions, including the future loan to be contracted and/or guaranteed in that year, exceeds 30% of their total own income (taxes, fees, contributions, other payments, other income and allowances deducted from income tax).

As non-legal exogenous constraints of local budget autonomy is the poor access to borrowing and the high cost of debt service. Through endogenous constraints of local budget autonomy are the political risk of indebtedness, the lack of capacity to manage debt of subnational governments and small jurisdiction size in case of communes. According to their effect of exogenous constraints, one of the most powerful indirect legal constraints is the right and the practice of the national legislative to revise the legal framework on local taxation and grants every year or even more frequently. Non-legal direct exogenous constraints on Romanian subnational revenue autonomy are visible through a less productive efficiency of own-source revenues, regarding the volume of tax collection (80-90%) and non-legal indirect exogenous constraints are visible through a less productive efficiency of revenues feeding the grant system (Bilan and Cigu, 2015).

Generally, fiscal decentralization leads to an increase in local responsibility for expenditures. Local share of total fiscal expenditure hence quantifies the degree of local expenditure responsibility in comparison to that of the central government (Uchimura and Suzuki, 2012):

$$SLE = \frac{\sum_{i=1}^n LE_i}{(\sum_{i=1}^n (LE_i + CE))} \quad (1)$$

where i are subnational governments, LE_i is the expenditure of the local government (i), CE is the expenditure of the central government, and (n) is the number of subnational governments.

The degree of local expenditure responsibility at the county level in Romania ranges between 0.04 and 0.35 over the period of time 2000-2014.

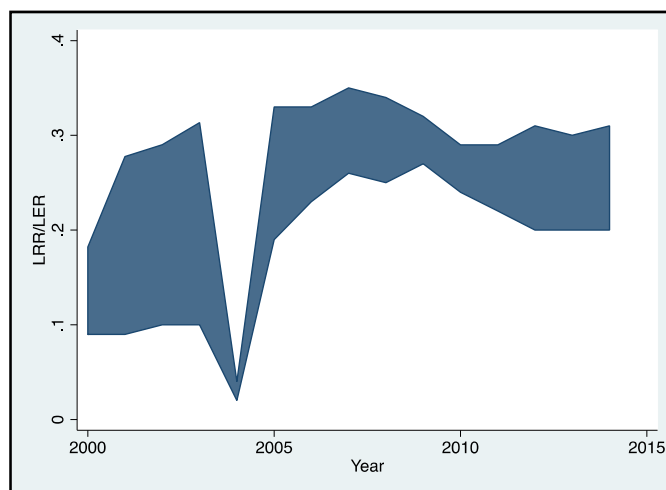
Local share of total fiscal revenue (SLR), where the denominator captures the total fiscal revenues without redundancy (Uchimura and Suzuki, 2012):

$$SLR = \frac{\sum_{i=1}^n LR_i}{(\sum_{i=1}^n (LR_i + CR))} \quad (2)$$

where LR_i is the own revenue of subnational government (i), CR is the revenue of the central government, and (n) is the number of subnational governments.

Local share of total fiscal revenue at the county level in Romania ranges between 0.02 and 0.27 over the period of time 2000-2014.

Figure 2. The fiscal gap of SNG in Romania (at the county level) during 2000-2014



Source: computed by authors processing data of the Directorate for Fiscal Policies and Local Budgeting, Ministry of Regional Development and Public Administration and European Grants (2019)

The difference between local expenditure responsibility and local own revenue shows the level of the fiscal gap of subnational governments in Romania, which is high over the periods of time 2001-2003, 2005-2006 and 2012-2014. Intergovernmental fiscal transfers usually fill this gap. Figure 2

shows very clearly that there is fiscal gap over the period under review that is bridged mainly by conditional transfers which clearly reflects a limited local fiscal autonomy.

Romanian subnational governments have a management of public funds that need some improvements. The start point is a better law on the formation, administration, recruitment and use of public funds. The main deficiencies regard significant arrears accumulation fund in local governments that are not able to provide a control system of budgetary commitments and efficient management of public funds. Consequently, there are problems in hiring costs and payments due to lack of funding by developing local budgets unrealistic, based on potential resources and not certain, leading to the end of the impossibility to cover expenditure committed and the accumulation of arrears payments.

The local dependence on fiscal transfer, where a value close to 1 indicates an increase of financial dependence and as the coefficient value is closer to 0, reflects a high financial autonomy of subnational governments over the period 2000-2014.

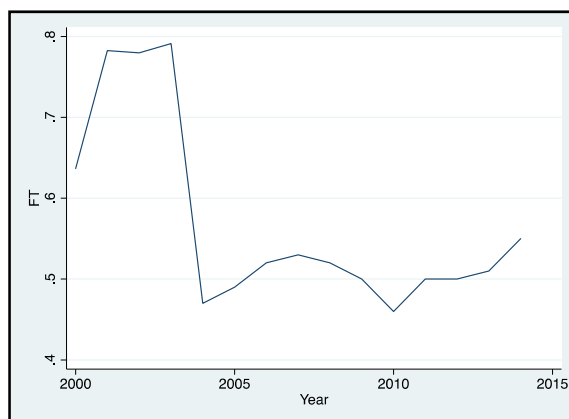
Local dependence on fiscal transfer (*DFT*) measures the ratio of the fiscal transfer to total local revenue (Uchimura and Suzuki, 2012):

$$DFT = \frac{\sum_{i=1}^n FT_i}{\sum_{i=1}^n LTR_i} \quad (3)$$

where FT_i is the fiscal transfer from the central government to subnational government (i), and LTR_i is the total revenue of subnational government (i), and (n) is the number of subnational governments.

Basic condition and direct effect of administrative decentralization of powers was the disposal of income source by central authorities (sources previously reflected in the state budget), to the public budget components managed by decentralized authorities in 2003-2004. From this perspective, is suggestive for the period under review (2000-2014) evolution of transfers from central budget to local budgets, the factor ranged between 0.46 in 2010 and 0.79 in 2013. Transfers are high after 2005, and further decentralization may result in slower overall economic growth (Bilan and Cigu, 2015). However, there is a very high degree of dependence of the budgets at the level of the counties towards the central budget. This is explained by the fact that the budgets of communes benefit from very large transfers due to their inability to generate own revenues (Figure 3). Theoretically, the need for fiscal transfers is emphasized for the purposes of equity and maintenance of certain national standards for public services across subnational governments (such as health and education services), but in practice, transfers for communes support too many of the current expenditure.

**Figure 3. The local dependence on fiscal transfer in Romania
(at the county level) during 2000-2014**



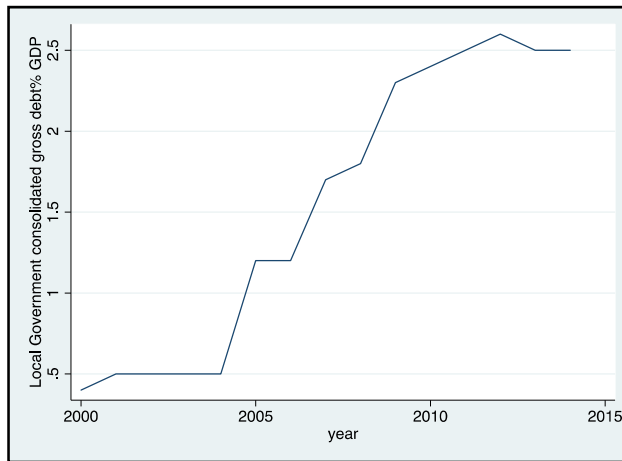
Source: computed by authors processing data of the Directorate for Fiscal Policies and Local Budgeting, Ministry of Regional Development and Public Administration and European Grants (2019), using Stata 14.0

A questionable aspect referred to the substantiation method of transfer, shares and amounts deducted from the state budget is linked to the time when they are established. Naturally, the amount of money should be determined based on real deficits of operating section of local budgets, i.e. the approval of local authorities' viable projects, necessarily reflected in the local investment program, offering all the necessary information (value, financing sources and graphics, cost-benefit analysis, investment strategy, etc.). In practice, however, the government approval refers only to new investment objectives financed by foreign loans and, in addition, transfers from the state budget and other sources, as well as those supported in whole or in completion of external loans contracted or guaranteed by State. There are not mentioned the investment objectives that are financed wholly or in addition by local budgets or those financed from internal and external loans contracted directly or guaranteed by local government authorities, approved by the local deliberative authorities. This may result in an excessive indebtedness of local authorities to finance investment objectives "evaded" to Government approval.

For the financing investment expenditure, the openness to international capital markets (which is not expressly forbidden, but not recommended) is a factor of stimulating competition and would be an appropriate framework for carrying out specific budgetary financial relations for creating local revenues based on the type of loan resources.

The Romanian local public finance Act stipulates that local authorities can contract internal and external loans, short, medium and long-term, for local public investments and for refinancing local public debt (Figure 4).

Figure 4. SNG consolidated gross debt % GDP



Source: computed by authors based on processing data of Eurostat (European Commission, 2019a), using Stata 14.0

An important prudential rule is that total debt representing annual instalments due on loans contracted and / or guaranteed, interest and fees, including the loan to be contracted and / or guaranteed that year, do not exceed 30% of the arithmetic mean of own revenues, reduced with the income from the capitalization of goods, the last 3 years preceding the year in which the authorization repayable funding to be contracted and / or guaranteed (Act 273/2006 on local public finance). However, prudence is recommended when employing local indebtedness because the practice of local indebtedness in the context of a big central government debt stock can generate the unfulfilment of the convergence criteria (Bilan and Cigu, 2008).

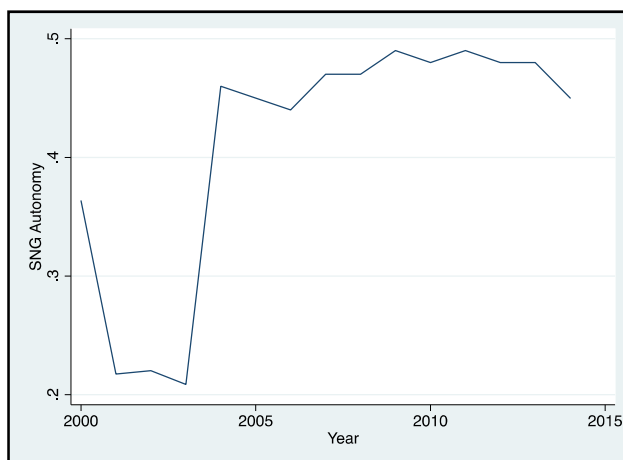
The autonomy indicator (*AI*) defined as the subnational government's own revenue share of its total revenue (Vo, 2009; Aristovnik, 2012) is considered another important indicator of fiscal decentralization.

$$AI = \frac{\sum_{i=1}^n OR_i}{\sum_{i=1}^n LTR_i} \quad (4)$$

The autonomy indicator (Figure 5) in Romania at the county level is under 0.5 showing a significant weak fiscal decentralization. Also, as an aspect of the local public financial management, local public authorities in Romania must consider how reliable and how sustainable the services are provided. This

question must be taken into consideration due the problems identified, respectively the payment of services which are not executed by contractors, but are invoiced and paid. Another negative aspect is the acceptance for payment of work statements containing larger amounts than those actually executed on certain items of expenditure, of materials that are priced well above the market price. Another practice with negative impact is the acceptance for settlement documents that do not contain the information necessary to certify the amounts claimed reality; or settlement several times of services, which are contained in successive work situations, etc. In many cases the local authorities try to recover a part of money, but most often these companies fall into bankruptcy and the possibility of recovery of amounts is very low.

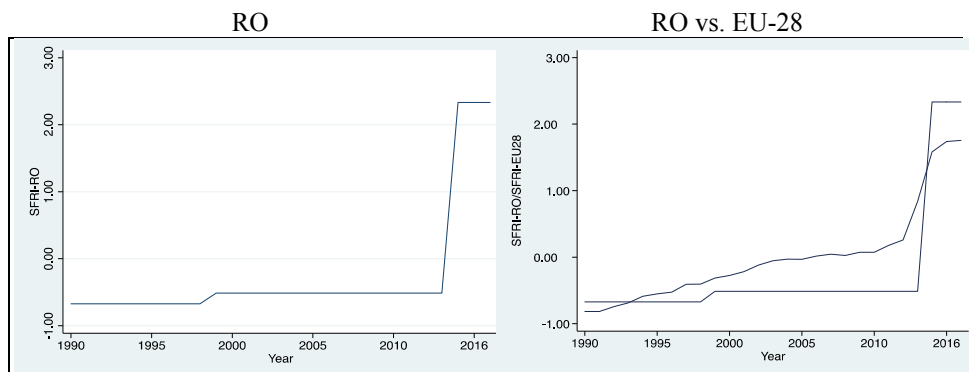
Figure 5. The autonomy indicator in Romania (at the county level) during 2000-2014



Source: computed by author processing data of the Directorate for Fiscal Policies and Local Budgeting, Ministry of Regional Development and Public Administration and European Grants (2019), using Stata 14.0

European Commission based on its own methodology created a database on domestic fiscal rules in force since 1990 across the European Union (EU) countries, covering all types of numerical fiscal rules (budget balance, debt, expenditure, and revenue rules) at all levels of government (central, regional, and local, general government, and social security).

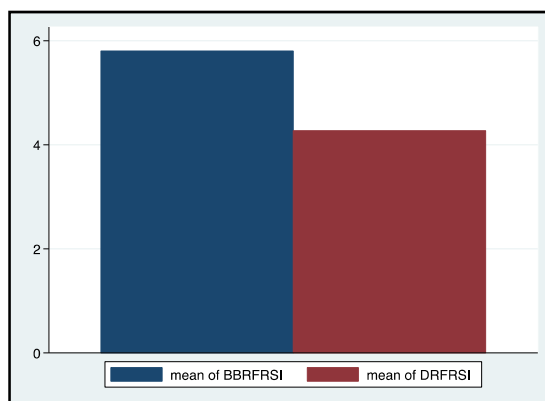
Figure 6. Standardised fiscal rules index for Romania and EU-28, 1990-2016



Source: computed by authors based on European Commission (2019b) database, using Stata 14.0

Standardised fiscal rules index for Romania (Figure 6) over the period of time 1990-2016 shows a positive relationship between the fiscal rule index and budgetary outcomes. Starting with 2014 the high index values (2.33) shows better budgetary outcomes on average, exceeding the EU average (1.76).

Figure 7. FRSI – budget balance rule (BBR) vs. FRSI- debt rule (DR), 2000-2015



Source: computed by authors based on European Commission (2019b) database, using Stata 14.0

Fiscal rule strength index (FRSI) for subnational governments regarding budget balance rule (BBR) is better positioned than fiscal rule strength index (FRSI) for subnational governments regarding debt rule (DR) in Romania, over the period of time 2000-2015 (Figure 7).

3. DATA AND METHOD

Our study analyses the relationship between fiscal decentralization and fiscal rules for Romanian over the period 2004-2015. The data for our study come from official national and international data sources, as Eurostat (European Commission, 2019a), World Bank's World Development Indicators database (World Bank, 2019), Tempo-online database (National Institute of Statistics, 2019), and The Directorate for Fiscal Policies and Local Budgeting, Ministry of Regional Development and Public Administration and European Grants (2019).

One of the primary objectives of fiscal decentralization is fiscal discipline. The hypothesis tested here is that the effectiveness of fiscal decentralization in attaining fiscal discipline, measured by budget deficits (*DebtSNG*), increases with the presence of fiscal policy rules. To show the overall extent of fiscal decentralisation, we will use expenditure decentralisation (*FDexp*) as the share of subnational government expenditure in general government expenditure, and revenue decentralisation (*FDrev*) as the proportion between subnational and general government revenues.

To provide essential guide in selecting variables, we conduct the whole research taking into account other models that have been used in previous research (Neyapti, 2013; Baskaran, Feld and Schnellenbach, 2016). In order to examine the relationship between fiscal decentralization and fiscal rules, the model adopts the following form as depicted in equation (5).

$$y_{i,t} = \alpha_i + \beta_1 SFRI_{i,t} + \beta_2 G_{i,t} + \beta_3 gov_{i,t} + \beta_5 GDP_reg_{i,t} + \beta_5 trade_{i,t} + \beta_6 infl_{i,t} + \beta_7 lPop_{i,t} + \delta X_{i,t} + \vartheta_i + \varepsilon_{i,t} \quad (5)$$

where:

i refers to the country ($i = \overline{1,42}$); t refers to the year ($t = \overline{1,12}$); y is the dependent variable being subnational government consolidated gross debt in GDP (*DebtSNG*); *SFRI* is Standardised fiscal rules index; G is the government size measured as the share of overall subnational government spending in regional GDP; *gov* is governance measured by averaging the six indices of governance (Kaufmann *et al.*, 2010): control of corruption, rule of law, political instability, governmental efficiency, voice and accountability, and regulatory quality; *GDP_Reg* is total GDP per region; *trade* is trade openness, i.e. the combined share of imports and exports in GDP; *infl* is inflation rate; *lPop* is the county size measured by the log of population; X is the independent variable expressing the degree of fiscal decentralisation of each county; $\beta_1, \beta_2, \dots, \beta_7$ and δ are the coefficients of the explanatory variables; α is the constant term; ϑ_i are the country-specific intercepts and $\varepsilon_{i,t}$ are the observation-specific errors. All variables are described in Table 1.

Table 1. The variables of the analysis

| VARIABLE | DEFINITION | DATA SOURCE |
|-----------------|--|---|
| <i>DebtSNG</i> | Subnational government consolidated gross debt in GDP (%) | Eurostat |
| <i>FDrev</i> | Fiscal decentralization – the share of subnational government revenue in general government expenditure | The Directorate for Fiscal Policies and Local Budgeting, Ministry of Regional Development and Public Administration and European Grants – authors' calculations |
| <i>FDexp</i> | Fiscal decentralization – the share of subnational government expenditure in general government revenue | The Directorate for Fiscal Policies and Local Budgeting, Ministry of Regional Development and Public Administration and European Grants – authors' calculations |
| <i>IPop</i> | The county size measured by the log of population (Millions of people) | National Institute of Statistics |
| <i>SFRI</i> | Standardised fiscal rules index | European Commission database |
| <i>G</i> | The government size measured as the share of overall subnational government spending in regional GDP | The Directorate for Fiscal Policies and Local Budgeting, Ministry of Regional Development and Public Administration and European Grants – authors' calculations |
| <i>gov</i> | Governance measured by averaging the six indices of governance (Kaufmann <i>et al.</i> , 2010): control of corruption, rule of law, political instability, governmental efficiency, voice and accountability, and regulatory quality | World Bank |
| <i>GDP_Reg</i> | Total GDP per region (Millions of people) | National Institute of Statistics |
| <i>trade</i> | Trade openness, i.e. the combined share of imports and exports in GDP | World Bank |
| <i>infl</i> | Inflation rate | World Bank |
| <i>IPop</i> | The county size measured by the log of population | National Institute of Statistics |

Source: computed by authors

Given the quite high number of cross-sectional units (42 counties) and the issue of heterogeneity, the fixed effects estimation technique for panel data models was selected. Formally, we base our choice of the fixed-effects vis-à-vis the random-effects model on the Hausman test (Hausman, 1978), which in each case rejects the null hypothesis that the regressors and the disturbances are not correlated. The results of the Hausman test confirmed that the fixed effects estimation technique is to be preferred to random effects. In order to test for the presence of heteroskedasticity we employ the Pesaran (2004) cross-sectional dependence test and also the Breusch and Pagan (1980).

4. EMPIRICAL RESULTS AND DISCUSSIONS

The results of the linear regression analysis are summarized in Table 2. Along with some other determinants, model (1) includes as explanatory variable the revenue decentralisation, while model (2) includes the expenditure decentralisation.

Table 2. The results of the regression analysis

| | Model (1) | Model (2) |
|-----------------------|--|--|
| <i>SFRI</i> | -0.20645*** (0.02994) | -0.21678*** (0.02899) |
| <i>FDrev</i> | -0.17031*** (0.03652) | |
| <i>FDexp</i> | | -0.37132*** (0.05023) |
| <i>G</i> | 0.74625*** (0.14365) | 0.75965*** (0.13889) |
| <i>gov</i> | -0.03557*** (0.00762) | -0.03625*** (0.00737) |
| <i>GDP_Region</i> | 0.00000*** (0.00000) | 0.00000*** (0.00000) |
| <i>infl</i> | -0.21113*** (0.01081) | -0.21896*** (0.01043) |
| <i>trade</i> | 0.00363 (0.00340) | 0.00424 (0.00306) |
| <i>lPop</i> | 3.72793*** (0.85139) | 3.81598*** (0.82284) |
| <i>_cons</i> | -45.17949*** (10.73044) | -46.18255*** (10.37427) |
| <i>N</i> | 504 | 504 |
| <i>R</i> ² | 0.74846 | 0.76473 |

Note: Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: computed by authors using Stata 14

According to the results of the FE model (model (1) and model (2)), the coefficients of both variables of fiscal decentralization (*FDrev* and *FDexp*) are negative and statistically significant. In our case, approximately 75% of the variance in dependent variable can be predicted from the independent variables, when we run the regression including revenue decentralization (as explanatory variable) and approximately 76% of the variance when we run the regression including expenditure decentralization (as explanatory variable).

Standardised fiscal rules index (*SFRI*) is significantly negative in the above model. The main finding that provides support for the hypothesis of this paper is the interactive effect of fiscal decentralization and fiscal rules, which imply that fiscal decentralization generally fails to achieve fiscal discipline in the absence

of fiscal rules. The government size measured as the share of overall subnational government spending in regional GDP (G) has a positive effect on deficits because large governments can be associated with low fiscal discipline.

The test for multicollinearity shows VIFs of 3.09 for model (1) and 3.15 for model (2), meaning a tolerance of $1/\text{VIF}$ lower than 0.1 comparable to a VIF of 10, which means that the variable could be considered as a linear combination of other independent variables.

The above findings are in support of the recent literature that point out the important role of fiscal institutions for the effectiveness of fiscal decentralization in delivering economic efficiency (Neyapti, 2013).

An interesting element is related to the situation in which we introduce the lag analysis in order to test the implications over time, in this case, the $SFRI$ are also significant and the coefficient is negative, which means that the effect over time also depends on other factors: the administrative capacity, the nature of the political conjuncture or the corroboration of the Romanian law system at the international coordinates.

5. CONCLUSIONS

Romanian SNGs have a management of public funds that need some improvements. The start point is a better law on the formation, administration, recruitment and use of public funds.

The main deficiencies regard significant arrears accumulation fund in local governments that are not able to provide a control system of budgetary commitments and efficient management of public funds. Consequently, there are problems in hiring costs and payments due to lack of funding by developing local budgets unrealistic, based on potential resources and not certain, leading to the end of the impossibility to cover expenditure committed and the accumulation of arrears payments.

We conclude that it is imperative for policy-makers to design fiscal rules that can help improving the decentralization management process in Romania, thus leading to fiscal discipline and can help attain a sustainable fiscal decentralization; the central authority should remove a number of constraints.

As future research direction we intend to extend the analysis at macroeconomic level, by evaluating relationship between fiscal decentralization and fiscal rules of different developed and developing countries.

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FROM PROMISE TO PERMISSION: THE RIGHT TO VAT DEDUCTION

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Abstract

The right to VAT deduction is the support pillar of the entire taxation system and the guarantee of a neutral and fractional collection mechanism. Our study aims to analyse the right to deduct as a guarantee of VAT collection, under two dimensions; on one hand, its legal nature and the obvious recognition and protection of it in order to ensure VAT flow between good faith professionals; on the other hand, the frequent conditionality deriving from regulatory and jurisprudential additions meant to fight VAT evasion and fraud. As the study will show, this duality is centred on the good faith axis, with elements regarding cause of legal acts, preventive behaviour and interrogations on the rules of evidence in this matter. The study attempts to identify and capture the borderline nuances of these determinants, for a projection as close as possible to reality of the content of the right to deduct.

Keywords: VAT; right to deduct; abuse; proof; conditions.

JEL Classification: K34, K41

1. PRELIMINARY ASPECTS. THE CAUSE OF THE LEGAL ACTS

The study will import a civil law notion – the cause of the legal act – and will build on this premise an analysis of the legal nature of the right to deduct in VAT matter. This premise generates effects in VAT matter as VAT is an accessory to the economic activity of the taxable person, economic activity that takes shape through the legal acts concluded by such a taxable person. As VAT is a tax with fractionated payment, due in every stage of the economic chain of transactions, it verifies a profound dependency to the legal acts that form the chain of transfer of a value (incorporated in a good or a service) from a taxable person to another until it meets the final consumer. The legal acts involved in this process fuel both the deductible tax (the VAT accessory to the legal acts concluded upstream) and the collected tax (the VAT accessory to the legal acts

concluded downstream). A legitimate interrogation will push to identify the sphere of legal acts (the study will accidentally review some aspects regarding quasi-contracts and quasi-delicts as source of obligations) that generate VAT effects. One significant step is to underline the filters that allow us to characterize an economic operation as a taxable operation. The economic activity is usually based on the mutual consent of the parties, two taxable persons or a taxable person and a consumer (Costea, 2019, p. 205). This legal relation is bilateral, onerous, involving reciprocal benefits (C-16/93, R.J. Tolsma v. Inspecteur der Omzetbelasting Leeuwarden, par. 14), VAT being owed only if the service is delivered with payment (C-154/80, Staatssecretaris van Financiën v. Association coopérative “Coöperatieve Aardappelenbewaarplaats GA”). However, these conditions cannot be read as creating limitations *per se* in civil law, meaning that fiscal provisions do not and cannot limit the principle of contractual freedom. This means that a taxable person may conclude contracts (legal acts) that verify only in part the conditions of the right to VAT deduction, whereas the rest of the operation either does not give rise to the right to deduct, or is not an economic activity. Such acts are fully valid in terms of civil law, but have different consequences in terms of tax law, meaning that VAT deduction will be subjected to the pro-rata system. This condition excludes from criteria of defining a taxable person the contractual gifts (Codrea, 2016) and any other liberalities that imply patrimonial effects. The gift in itself is compatible with an economic activity in a limited manner (for the symbolic value of the gift, see Codrea, 2014); its social and cultural function permitting some economic roles, such as promoting a product, offering samples etc. These legal acts have no effect in generating collected VAT as the operation is not taxable, nor deductible VAT as the receiver of the gift will not harness any VAT.

Excluded from the object of the present study are some VAT effects that are generated by quasi-contracts and quasi-delicts, such as accidents, self-consumption and effects of tort liability. These effects are not object of the present study as their volitional dimension is diminished and treated through specific legal provisions.

VAT is also a neutral tax; this characteristic extrapolates the cause element beyond an individual analysis of every legal act concluded by the taxable person and forms a cause-effect bond between the acts fuelling deductible VAT with those providing collected VAT. The current study will focus also on this second dimension of the legal cause as a filter for exercising the right to VAT deduction.

The cause is a condition for the valid formation of the legal civil act, according to article 1235 Civil Code. The cause is defined as *the reason that determines every party to conclude the legal act*. The parties have a certain purpose when concluding a legal act (Ungureanu, 2016, p. 161) and that purpose has to exist at the formation of their mutual will agreement. The purpose is not

to be met at the contracting moment. The cause has two elements: an immediate purpose and a mediated one. The immediate purpose is the cause of the obligation, having an abstract, invariable dimension, identical within a certain type of contracts (Ungureanu, 2016, p. 162); the mediate purpose is the cause of the legal act, having a concrete, variable content, determined by and decisive for the party. The cause must fulfil a number of conditions: it must exist, be licit and moral.

The present study will import this lens of analysis from the general legal theory regarding legal acts and correlate it with the mechanism of deduction in VAT matter. The study will use an empirical method of analysis as it will identify different working hypotheses from the jurisprudence of the Court of Justice of the European Union. As the jurisprudence will underline, the purpose is the foundation stone of the deduction right and allows both taxable persons and state authorities to analyse legal content in economic activities and define the right to deduct. The study will subsequently identify specific conditions applied to the right to deduct (material and formal conditions) and also a certain number of limitations deriving from the theory of abuse of right, national limitations and the pro-rata system.

2. GENERAL JURISPRUDENTIAL ASPECTS REGARDING THE RIGHT TO DEDUCT

In a long jurisprudential tradition, the Court defined the legal regime of VAT as it follows: “it (VAT) applies generally to transactions relating to goods or services; it is proportional to the price charged by the taxable person in return for the goods and services which he has supplied; it is charged at each stage of the production and distribution process, including that of retail sale, irrespective of the number of transactions which have previously taken place; the amounts paid during the preceeding stages of the process are deducted from the tax payable by a taxable person, with the result that the tax applies, at any given stage, only to the value added at that stage and the final burden of the tax rests ultimately on the consumer (see, to that effect, C-347/90, *Bozzi*)” (Joined Cases C-338/97, C-344/97 and C-390/97, *Erna Pelzl and Others v. Steiermärkische Landesregierung, Wiener Städtische Allgemeine Versicherungs AG and Others v. Tiroler Landesregierung, STUAG Bau-Aktiengesellschaft v. Kärntner Landesregierung*; C-475/03, *Banca popolare di Cremona Soc. coop. arl v. Agenzia Entrate Ufficio Cremona*).

This system of taxation is built on the right to deduct as a mean of ensuring tax neutrality and the equitable distribution of the economic burden. The Court constantly underlines that: “In that regard, it must be recalled, first, that the right to deduct provided for in Articles 167 and 168 of Directive 2006/112 is an integral part of the VAT scheme and in principle may not be limited. The right to deduct is exercisable immediately in respect of all the taxes charged on

transactions relating to inputs” (C-368/09, *Pannon Gép Centrum*, par. 37 and case-law cited). The deduction system is meant to relieve the taxable person entirely of the burden of the VAT payable or paid in the course of all its economic activities. The common system of VAT consequently ensures complete neutrality of taxation of all economic activities provided that they are themselves subject in principle to VAT (C-408/98, *Abbey National*, par. 24; C-25/03, *HE*, par. 70; and Joined Cases C-439/04 and C-440/04, *Kittel and Recolta Recycling*, par. 48)” (C-392/09, *Uszodaépítő kft v. APEH Központi Hivatal Hatósági Főosztály*, par. 34, 35).

The right to deduct as mentioned above is as a legal construct built on “the existence of a direct and immediate link between a particular input transaction and a particular output transaction or transactions” (C-98/98, *Commissioners of Customs and Excise v. Midland Bank plc.*). This link can be interpreted through the theory of the cause of the legal act, as the existence of such link involves both an objective and subjective position of the parties when concluding a contracting generating VAT. But this “link” is not always an objective and universal dimension. Of course, for the majority of transactions the cause is obvious, e.g. buying goods in order to sell them; the immediate cause requires little analysis as it is given by the typology of contractual bond, regardless of their name and even of the legal norms governing them. Title IV of the Council Directive 2006/112/CE defining the taxable transactions organises the relevant legal operations in the field of VAT according to their effects and the geographical dynamics of transactions, without taking into account national legislative provisions regulating a certain type of contract. All these types of taxable operation have identical immediate cause. As to the mediate cause, this is widely refined by the subjective position of the parties and needs a thorough investigation of the contracting circumstances in order to confirm or infirm the direct and immediate link.

3. MATERIAL CONDITIONS

3.1. Purpose. Direct Link

The concept of purpose is omnipresent in the jurisprudence as a way of validating or invalidating the right to VAT deduction. This concept is used by the Court both in a general and in a particular manner.

As a general condition for exercising the right to deduct, purpose appears as a self-centred concept: “The deduction system is intended to relieve the trader entirely of the burden of the VAT payable or paid in the course of all his economic activities. The common system of VAT consequently ensures neutrality of taxation of all economic activities, whatever the purpose or results of those activities, provided that they are themselves subject in principle to VAT (see, *inter alia*, Joined Cases C-110/98 to C-147/98, *Gabalfriša and Others*, par.

44; C-255/02, Halifax and Others, par. 78; Joined Cases C-439/04 and C-440/04, par. 48; and C-438/09, Dankowski, par. 24)” (Joined Cases C-80/11 and C-142/11, Mahagében kft v. Nemzeti Adó- és Vámhivatal Dél-dunántúli Regionális Adó Főigazgatósága and Péter Dávid v. Nemzeti Adó- és Vámhivatal Észak-alföldi Regionális Adó Főigazgatósága); “Under Article 168 of the VAT Directive, a taxable person has the right to deduct VAT provided that goods and services are used for the purposes of his taxed transactions. It is therefore necessary at the outset to categorise the activities at issue in the main proceedings in the light of the concept of ‘taxable transaction’. The effect of Article 168(a) of the VAT Directive is that a taxable person may deduct input VAT in respect of goods or services provided that those goods or services are used for the purposes of his economic activity. It is necessary to recall, in that regard, that the deduction system established by the VAT Directive is meant to relieve the trader entirely of the burden of the VAT payable or paid in the course of all his economic activities. The common system of VAT seeks to ensure complete neutrality of taxation of all economic activities, whatever their purpose or results, provided that they are themselves subject, in principle, to VAT (see, inter alia, C-515/07, Vereniging Noordelijke Land- en Tuinbouw Organisatie, par. 27)” (C-118/11, Eon Aset Menidjmunt OOD v. Direktor na Direktsia Obzhalvane i upravlentie na izpalnenieto – Varna pri Tsentralno upravlentie na Natsionalnata agentsia za prihodite).

The objective condition is clearly stated by the Court under the statute of a jurisprudential principle having a vital function in the VAT system – the neutrality of taxation. The concept of purpose used by the Court is identical in our opinion to the cause of the legal act generating deductible VAT in relation to other legal acts generating collected VAT. This purpose has a general dimension, a public one, opposable to the fiscal administration with source in the *causa proxima*, but requires also a more profound analysis regarding the *causa remota*, the inner dimension of the will of the parties as expressed or implied in the circumstances surrounding the conclusion of the contract.

For example, a thorough analysis of the cause of the legal act generating input VAT is present in number of cases; the Court ruled that: “as regards the conditions for the exercise of the right to deduct and more specifically the scope of that right, the expenditure incurred for the purpose of the acquisition of the shares of the target company must be regarded as being attributable to the performance of that economic activity which consisted in carrying out transactions giving rise to a right to deduct. On that basis, that expenditure has a direct and immediate link with that economic activity as a whole and, consequently, is part of its general costs” (C-249/17, Ryanair Ltd v. The Revenue Commissioners, par. 31); “In order to assess whether such a link exists, it is for the referring court to ascertain, in particular, whether the horses belonging to the person operating the racing stables are actually intended for sale

or whether their participation in races is, from an objective point of view, a means of promoting the economic activity of operating those stables” (C-432/15, *Odvolačí finanční ředitelství v. Pavlína Bašťová*, par. 49); “It is clear from the order for reference that, without the reconstruction of that pump station, it would have been impossible to connect the buildings which Iberdrola planned to build to that pump station, with the result that that reconstruction was essential for completing that project and that, consequently, in the absence of such reconstruction, Iberdrola would not have been able to carry out its economic activity” (C-132/16, *Direktor na Direktsia ‘Obzhalvane i danachno-osiguritelna praktika’ Sofia v. ‘Iberdrola Inmobiliaria Real Estate Investments’ EOOD*, par. 33); “It is apparent from the case-law of the Court that, in the context of the direct-link test that is to be applied by the tax authorities and national courts, they should consider all the circumstances surrounding the transactions concerned and take account only of the transactions which are objectively linked to the taxable person’s taxable activity. The existence of such a link must thus be assessed in the light of the objective content of the transaction in question (see, to that effect, judgment in C-104/12, *Becker*, par. 22, 23 and 33 and the case-law cited)” (C-126/14, *‘Sveda’ UAB v. Valstybinė mokesčių inspekcija prie Lietuvos Respublikos finansų ministerijos*, third party: *Klaipėdos apskrities valstybinė mokesčių inspekcija*, par. 29); “It is common ground that in the case in the main proceedings PPG acquired the services in question for the purpose of the administration of its employees’ pensions and the management of the assets of the pension fund set up to safeguard those pensions. By setting up the fund, PPG complied with a legal obligation imposed on it as an employer, and, in so far as the costs of the services acquired by PPG in that connection form part of its general costs, which is for the referring court to verify, they are, as such, component parts of the price of PPG’s products (see, to that effect, C-465/03, *Kretztechnik*, par. 36). In those circumstances, it may be considered that the exclusive reason for the acquisition of the input services lies in the taxable person’s taxable activities, and that there is a direct and immediate link” (C-26/12, *Fiscale eenheid PPG Holdings BV cs te Hoogezand v. Inspecteur van de Belastingdienst/Noord/kantoor Groningen*, par. 25, 26); “In those circumstances, as the German government claimed, the fact that the existence of the direct and immediate link between a supply of services and the overall taxable economic activity must be determined in the light of the objective content of that supply of services does not preclude that the exclusive reason for the transaction at issue can also be taken into account, since that reason must be considered as a criterion for determining the objective content” (C-104/12, *Finanzamt Köln-Nord v. Wolfram Becker*, par. 29); “In that regard, it is apparent from the case-law that it is in particular a taxable person’s intention, confirmed by objective evidence, to use an item or a service for business purposes which makes it possible to determine whether, at the time when he carries out the input

transaction, the taxable person is acting as such and must therefore be entitled to deduct the VAT payable or paid in respect of that item or services (see, to that effect, C-97/90, Lennartz, par. 8 and C-400/98, Breitsohl, par. 34)” (C-334/10, X v. Staatssecretaris van Financiën, par. 19); “Where goods or services acquired by a taxable person are used for purposes of transactions that are exempt or do not fall within the scope of VAT, no output tax can be collected or input tax deducted (see C-184/04, Uudenkaupungin kaupunki, par. 24, and C-515/07, Vereniging Noordelijke Land- en Tuinbouw Organisatie, par. 28)” (C-118/11, par. 44).

We can extract from the examples above a series of rules in order to determine the existence of the right to deduct: (1) the general condition that the outcome transaction falls within the scope of VAT; (2) the direct link between the income and outcome transaction must always exist; (3) this existence is verified throughout all the circumstances surrounding the transactions; (4) one significant element is the taxable person’s intention, confirmed by objective evidence; (5) another element is given by the normative constraints that dictate specific activities to the taxable person; (6) the referring court must ascertain in particular the *causa remota* of the legal act based on all evidence presented.

3.2. Variables of the right to deduct given by the economic dynamics

A certain number of nuances regarding the right to deduct are extracted through the Court’s jurisprudence, taking into account economic and legal variables generated by the contractual context. These nuances take into account time, geographical mobility and general VAT principles, such as proportionality and also objective conditions imposed to the taxable person by the management of its activity.

The right to deduct arises “at the time when the deductible tax becomes chargeable” (Joined Cases C-459/17 and C-460/17, SGI and Valériane SNC v. Ministre de l’Action et des Comptes publics, par. 34); in the absence of a delivery of goods or a performance of services, there is no actual right to deduct, even if the formal condition is present and an invoice has been delivered (Joined Cases C-459/17 and C-460/17, p. 37). Also, the exercise of that right does not extend to VAT which is due exclusively because it features on an invoice (C-628/16, Kreuzmayr GmbH v. Finanzamt Linz, par. 43).

The right to deduct exists in correlation to chronological dynamics of the contractual bond even if in time, the cause of the legal act and the conditions taken into account when concluding the contract have not been confirmed by the actual evolution of the future supply, if “all the relevant information concerning the future supply could be regarded as known to that buyer and the supply of those goods appeared to be certain” (Joined Cases C-660/16 and C-661/16, Finanzamt Dachau v. Achim Kollroß and Finanzamt Göppingen v. Erich Wirtl, par. 51). Such right will be refused if at the time of the payment the buyer knew

or should reasonably have known that that supply was uncertain. Such a subjective position emerges explicitly from the *causa proxima* of the contract and inquires even the core of the transaction, as civil law demands an existing cause at the moment of the transaction.

The right to deduct contains the direct link even if the succession in time of the income and outcome operation is spaced in time. The link is not annulled by a succession of events specific to the economic activity of the taxable person, if the purpose (the cause) existed at the moment of the transaction. This link is not diluted even within a partnership, where the partners “incurred, before registration and identification of the partnership for the purposes of VAT, investments necessary for the future exploitation of immovable property by the partnership”. If, for specific conditions, “the partners, even though they may be considered taxable persons for the purposes of VAT, are unable to rely on the taxable transactions effected by Polski Trawertyn in order to relieve the cost of the VAT on investment transactions effected for the purposes of and with the view to the activity of that partnership, the latter must, in order to ensure the neutrality of taxation, be entitled to take account of those investment transactions when deducting VAT” (C-280/10, *Kopalnia Odkrywkowa Polski Trawertyn P. Granatowicz, M. Wąsiewicz spółka jawna v. Dyrektor Izby Skarbowej w Poznaniu*, par. 31, 35).

The moment in relation to which the purpose is analysed is in both civil and tax law, the moment of the transaction, when the parties use specific elements to externalize their will, such as contractual provisions and other factual elements; “... That intention was confirmed by objective evidence, since, on acquisition of the buildings at issue in the main proceedings, a demolition permit had been transferred to GVM and, before even submitting its VAT return, it had carried out demolition works on those buildings and a planning certificate had been issued to it, with a view to obtaining a building permit to develop the residential complex” (C-257/11, *SC Gran Via Moinești SRL v. Agenția Națională de Administrare Fiscală (ANAF), Administrația Finanțelor Publice București Sector 1*, par. 33).

The direct link between the income and outcome transactions is more of a diligence matter as to their economic result. The right to deduct cannot be limited though the economic input of the activity; “the taxable person supplied goods at a price which did not cover its full cost, it should be noted that the Court has held that the result of an economic transaction is irrelevant for the right to deduct provided that the activity itself is subject to VAT” (C-267/15, *Gemeente Woerden v. Staatsecretaris van Financiën*, par. 40). This link between transactions is not ruptured by a disproportion of prices, “even if the supply price is considerably lower than the cost price, unless it is purely symbolic” (C-267/15, par. 41). This assertion of the Court does not affect the theory of the

cause, nor denies the relevance of the purpose of a taxable operation; it merely gives credit to the unforeseen to variables within an economic activity.

As to the geographical dynamics in exercising the right to deduct, this problem is frequently connected with the issue of categorising transactions as deliveries of goods or supplies of services. This correlates to the right of deduction as: “The right to deduct input VAT for certain transactions in respect of other output transactions carried out in another Member State therefore depends, under that provision, on whether that right to deduct exists where all of those transactions are carried out within the territory of the same Member State. In the main proceedings, since the German tax authorities did not collect VAT when the leasing transactions were carried out, RBSD cannot purport to be entitled, in the United Kingdom, to deduct the input VAT on the purchase of the vehicles.” (C-277/09, *The Commissioners for Her Majesty’s Revenue and Customs v. RBS Deutschland Holdings GmbH*, par. 32, 34).

In the context of an intra-Community transactions, if the geographical movement of the goods did not occur, neither has the right to deduct been born; “However, in circumstances such as those at issue in the main proceedings, it is common ground that the goods which are taxed as intra-Community acquisitions deemed to have been made in the Member State which issued the identification number, in accordance with the first subpar. of Article 28b(A)(2) of the Sixth Directive, did not actually enter that Member State. In those circumstances, those transactions cannot be regarded as giving rise to a ‘right to deduct’ within the meaning of Article 17 of the Sixth Directive.” (Joined Cases C-536/08 and C-539/08, *Staatssecretaris van Financiën v. X* and *and fiscale eenheid Facet BV / Facet Trading BV*, par. 41, 42).

When it comes to holding companies, the Court has traditionally stated that if the sole purpose of the holding company is to acquire holdings in other undertakings and if it does not involve itself directly or indirectly in the management of those undertakings, then the holding company is not a taxable person, hence, it does not have the right to VAT deduction (C-60/90, *Polysar Investments Netherlands BV v. Inspecteur der Invoerrechten en Accijnzen*, par. 17; C-142/99, *Floridienne SA and Berginvest SA v. Belgian State*, par. 17; C-16/00, *Cibo Participations SA v. Directeur régional des impôts du Nord-Pas-de-Calais*, par. 18). This reasoning is based on the fact that the mere acquisition and the mere holding of shares are not regarded as economic activities, since they do not involve the exploitation of property for the purpose of obtaining income on a continuing basis, as the dividend is simply a result of ownership of the property (C-333/91, *Sofitam SA (formerly Satam SA) v. Ministre chargé du Budget*, par. 12; C-80/95, *Harnas & Helm CV v. Staatssecretaris van Financiën*, par. 15; C-16/00, par. 19). Therefore, the Court is rather consistent with the idea that an economic activity implies a proactive approach from the taxable person

and that passive income generated by property ownership is not an economic activity.

The right to deduct can suffer a series of limitations, even in the form of a refusal to recognize it as a sanction for breaching VAT provisions. The Court stated that the national court must determine whether the measures imposed are compatible with the European law and that “in so far as they affect the extent of the right to deduct, those rules are liable to undermine the principle that the tax burden must be neutral in relation to all economic activities if, inter alia, the procedure for determining the amount of the sanction and the conditions under which the facts relied on by the tax authorities in order to apply that sanction are recorded, investigated and, as the case may be, adjudicated upon effectively render meaningless the right to deduct VAT” (C-188/09, *Dyrektor Izby Skarbowej w Białymstoku v. Profaktor Kulesza, Frankowski, Józwiak, Orłowski sp. j, formerly Profaktor Kulesza, Frankowski, Trzaska sp. j*, par. 34). Withholding an amount of 30% of the input tax paid is “neither excessive nor inadequate for the purpose of ensuring that the sanction in question is deterrent and, therefore, effective” (C-188/09, par. 35).

The right to deduct can be evaluated by taking into account special circumstances, which characterize the *causa remota*. Some specific legal or material conditions are imposed to the taxable person and influence the decision to conclude a certain legal act in order to acquire specific goods or services. Such is the case with incoming transactions that ensure expenses deriving from the due diligence of the employer; “in special circumstances, the requirements of the business may make it necessary for the employer to take responsibility for the provision of transport for employees between their homes and the workplace, with the result that the transport is organised by the employer for purposes which are not other than those of the business” (C-118/11, par. 52).

The right to deduct in correlation to the cause of the legal act can also determine a split deduction, when the acquisition is serving multiple purposes; “The taxable person may, for the purposes of VAT, either (i) allocate those goods wholly to the assets of his business, (ii) retain them wholly within his private assets, thereby excluding them entirely from the system of VAT, or (iii) integrate them into his business only to the extent to which they are actually used for business purposes (see, to that effect, C-291/92, *Armbrecht*, par. 20, and C-434/03, *Charles and Charles-Tijmens*, par. 23 and case-law cited)” (C-118/11, par. 53).

3.3. Abuse of right. Burden of proof. Standard of diligence

The exercise of a right, such as the right to deduct is linked to the factual context generated by the transactions concluded by the parties. This factual context is reconstitutable through external and internal elements of proofs, including presumptions, such as the presumption of good faith. Tax law is a

context famous for the search of minimal taxation event through manipulative means. A taxable person has an innate appetite for reducing the due amount of tax, appetite which is legitimate in a certain framework (Costea, 2011). Beyond this fine border, exercising this quest for diminishing taxation transforms in tax evasion or tax fraud. The latest two are seldomly dressed up and respect the specific formal conditions for outgoing transaction. The core of the illicit elusion resides in dissimulating the material content of the transaction. The “dissimulation produces an appearance with a certain relationship with true or false state of affairs in reality (...) That is to say, the difference between appearance and reality is transparent, since there is always the background of reality to verify the success of a simulacrum which only masks the reality” (Codrea, 2015, p. 153).

The right to deduct will flood the field of abuse in the context of dissimulation; “That said, it must be borne in mind that the prevention of tax evasion, tax avoidance and abuse is an objective recognised and encouraged by Directive 2006/112. In that connection, the Court has held that European Union law cannot be relied on for abusive or fraudulent ends. It is therefore for the national courts and authorities to refuse the right of deduction, if it is shown, in the light of objective evidence, that that right is being relied on for fraudulent or abusive ends” (C-18/13, Maks Pen EOOD v. Direktor na Direktsia ‘Obzhalvane i danachno-osiguritelna praktika’ Sofia, par. 26). The dynamics of collecting taxation will reorganize in order to prevent prejudicial legal effects for the national budget and indirectly for the European budget. The will of the parties, specifically the cause founding the transactions and indirectly the right to deduct will be scrutinized by tax authorities in order to confront the appearance with the state of affairs in reality. The right to deduct will be limited or even refused by the intervention of the public authority. This conflict in interpreting legal content is a source of litigation and hence of certain intervention of the Court of Justice of the European Union, in order to guide national jurisdictions.

As to the burden of proof, as long as the right to deduct is a true principle of the taxation system in VAT matter, we can assert at a first level analysis that if the material and formal conditions are met, the presumption is against any limitation (C-408/98, Abbey National plc v. Commissioners of Customs & Excise). The national court must assert input and output transactions through the filter of dissimulation and establish the reality of the VAT transactions (C-285/11, Bonik EOOD v. Direktor na Direktsia ‘Obzhalvane i upravlennie na izpalnenieto’ – Varna pri Tsentralno upravlenie na Natsionalnata agentsia za prihodite, par. 44). Consequently, the burden of proof rest on the shoulders of the tax authorities; “It is for the tax authorities (...) to establish, on the basis of objective factors and without requiring the recipient of the invoice to carry out checks which are not his responsibility, that that recipient knew, or should have known, that the transaction on which the right to deduct is based was connected

with VAT fraud, this being a matter for the referring court to determine (see, to that effect, judgments in C-285/11, Bonik, par. 45, and in C-643/11, LVK – 56, par. 64)” (C-277/14, PPUH Stehcamp sp. J. Florian Stefanek, Janina Stefanek, Jarosław Stefanek v. Dyrektor Izby Skarbowej w Łodzi, par. 50). Thus, the burden of proof is explicitly given to the tax authority and the Court establishes even a standard of control: objective factors; “the determination of the measures which may, in a particular case, reasonably be required of a taxable person wishing to exercise the right to deduct VAT in order to satisfy himself that his transactions are not connected with fraud committed by a trader at an earlier stage of a transaction depends essentially on the circumstances of that particular case” (Joined Cases C-80/11 and C-142/11, par. 59).

The substrate of the proof issue is the standard of diligence that devolves upon the taxable person. This taxable person cannot be charged with supplementary responsibilities such as identifying by itself and conserving proof of the viability of the transaction; “Although such a taxable person could be obliged, when there are indications pointing to an infringement or fraud, to make enquiries about the trader from whom he intends to purchase goods or services in order to ascertain the latter’s trustworthiness, the tax authorities cannot, however, as a general rule, require that taxable person, first, to ensure that the issuer of the invoice relating to the goods and services in respect of which the exercise of that right to deduct is sought was in possession of the goods at issue and was in a position to supply them and that he has complied with his obligations as regards the declaration and payment of VAT, in order to be satisfied that there are no irregularities or fraud at the level of the traders operating at an earlier stage of the transaction or, second, to be in possession of documents in that regard (see, to that effect, judgments Joined Cases C-80/11 and C-142/11, par. 60 and 61; C-642/11, Stroy trans, par. 49, and order in C-33/13, Jagiełło, par. 38 and 39)” (C-277/14, p. 52).

Also, the Court elaborates and maintains throughout all jurisprudence one subjective standard for refusing the right to deduct “that that recipient knew, or should have known, that the transaction on which the right to deduct is based was connected with VAT fraud” (C-285/11, par. 45). This standard of proof for abuse contradicts the *bona fides* presumption. It implies that in a subjective manner, the taxable person had knowledge about the fraudulent elements included in the upstream transactions and that distorted his will when contracting; the cause of the legal act is either missing entirely or is including the intent to participate in that fraud or being governed by a culpable omission to avoid the contractual context.

Nevertheless, when the input transaction occurred in reality, other distortions in correlation to the formal discourse of the transactions (documents, patrimonial state of the supplier, public registers etc.) will not exclude the right to deduct; “In that regard, if it were simply to be the case that, in the main

proceedings, a supply made to Maks Pen was not actually made by the supplier mentioned on the invoices or by its sub-contractor, inter alia because they did not have the personnel, equipment or assets required, there was no record of the costs of making the supply in their accounts and the identification of persons signing certain documents as suppliers was shown to be inaccurate, that would not, in itself, be sufficient ground to exclude the right to deduct relied on by Maks Pen” (C-18/13, par. 31). In the case that the documents also contain irregularities, the national court will do an overall assessment; “With regard to the main proceedings, it is necessary, however, to take account of the fact that, according to the order for reference, the documents submitted by the recipient of the invoices at issue also contained irregularities, which are factors to be taken into consideration by the national court when carrying out its overall assessment” (C-643/11, LVK – 56 EOOD v Direktor na Direktsia ‘Obzhalvane i upravljenje na izpalnenieto’ – Varna pri Tsentralno upravljenje na Natsionalnata agentsia za prihodite, par. 63).

The refusal of the right to deduct is intended as a sanction and requires the existence of the subjective position of the sanctioned taxable person; “On the other hand, it is incompatible with the rules governing the right of deduction under Directive 2006/112 to impose a penalty, in the form of refusal of that right, on a taxable person who did not know, and could not have known, that the transaction concerned was connected with fraud committed by the supplier or that another transaction forming part of the chain of supply, downstream or upstream of the transaction carried out by the taxable person, was vitiated by VAT fraud (see, to that effect, Optigen and Others, par. 52 and 55; Kittel and Recolta Recycling, par. 45, 46 and 60; and Mahagében and Dávid, par. 47)” (C-285/11, par. 41).

Irregularities that surround the economic transactions, regarding legal authorisations, declarations, payments of tax obligations are not relevant in determining the existence of the right to deduct; “... that they preclude the tax authority from refusing a taxable person the right to deduct VAT due or paid for services provided to him solely on the ground that the business operator’s licence of the issuer of the invoice had been withdrawn before he provided the services in question or issued the invoice for them, where that invoice contains all the information required by Article 226 of Directive 2006/112, in particular the information necessary to identify the person who drew up the invoice and the nature of the services supplied” (C-324/11, Gábor Tóth v. Nemzeti Adó- és Vámhivatal Észak-magyarországi Regionális Adó Főigazgatósága, par. 34).

4. FORMAL CONDITIONS

As for the formal condition of VAT deduction, the existence of a valid invoice would be similar to an *ad validitatem* condition in civil law. However, as proven by the judgments of the Court, we argue that meeting the material

conditions of VAT deduction is a priority, since the Court systematically chose to save the right to deduct the VAT in order to observe the principles of neutrality and effectiveness, even when the formal condition was not strictly fulfilled.

The challenges in meeting the formal condition usually derive from an improperly invoiced VAT that can typically be adjusted in conditions determined by the Member States. In many cases, the unduly invoiced VAT results from failing to comply with the reverse taxation system and does not correlate in any way to suspicions of fraud. The prevalence of the principles of neutrality and effectiveness mean that a purchaser who bore the tax invoiced in error has to be able to obtain the reimbursement of the sums unduly paid; “the Court has accepted that a system in which, first, the seller of the property who has paid the VAT to the tax authority in error may seek to be reimbursed and, secondly, the purchaser of that property may bring a civil law action against that seller for recovery of the sums paid but not due, observes the principles of neutrality and effectiveness” (C-564/15, *Tibor Farkas v. Nemzeti Adó-és Vámhivatal Dél-alföldi Regionális Adó Főigazgatósága*, par. 51; C-35/05, *Reemtsma Cigarettenfabriken GmbH v. Ministero delle Finanze*, par. 38, 39).

In the case VAT reimbursement becomes impossible or excessively difficult, particularly due to the insolvency of the seller, “the principle of effectiveness may require that the purchaser of the property concerned be able to address his application for reimbursement to the tax authority directly. Thus, the Member States must provide for the instruments and the detailed procedural rules necessary to enable the purchaser to recover the unduly invoiced tax in order to respect the principle of effectiveness” (C-564/15, par. 53; C-35/05, par. 41).

This methodical approach of the Court towards saving the right to deduct the VAT when the formal condition is not met can only be applied if the material conditions are completely satisfied and proof of that fact is available to the national courts; “in the context of the reverse charge procedure, the principle of fiscal neutrality requires deduction of input tax to be allowed if the substantive requirements are satisfied, even if the taxable person has failed to comply with some of the formal requirements” (Joined Cases C-95/07 and C-96/07, *Ecotrade SpA v. Agenzia delle Entrate – Ufficio di Genova 3*, par. 63, and C-392/09, par. 39). However, “The position could be different if the effect of breach of failure to satisfy formal requirements is to prevent the production of conclusive evidence that the substantive requirements have been satisfied (C-332/15, *Astone*, paragraph 46 and the case-law cited). Refusal of the right to deduct depends more on the lack of information necessary to establish that the substantive requirements have been satisfied than it does on failure to comply with a formal requirement (see, to that effect, C-590/13, *Idexx Laboratories Italia*, par. 44 and 45)” (C-159/17, *Întreprinderea Individuală Dobro M. Marius*

v. Ministerul Finanțelor Publice – A.N.A.F. – D.G.R.F.P. Galați – Serviciul Soluționare Contestații and A.N.A.F – D.G.R.F.P. Galați – A.J.F.P. Constanța – Serviciul Inspecție Fiscală Persoane Fizice 2 Constanța, par. 35).

At times, national provisions require the parties to take measures to put formal omissions in order, yet that is independent to the substantive condition that once again prevails: “besides the fact that the invoice at issue does not meet the formal requirements provided for by the national legislation, a substantive condition of the reverse charge regime has not been satisfied” (C-424/12, Fatorie SRL v. Direcția Generală a Finanțelor Publice Bihor, par. 37). However, such formalities laid down by Member States which must be complied with by a taxable person in order to be able to exercise the right to VAT deduction, “should not exceed what is strictly necessary for the purposes of verifying the correct application of the reverse charge procedure” (C-90/02, Finanzamt Gummersbach v. Gerhard Bockemühl, par. 50, C-392/09, par. 38).

5. LIMITATIONS

In the mechanism of the VAT directives, Member States were authorized to establish the means necessary to meet the scope of the directive. In some cases, wishing to enhance the protection of their financial interests, Member States were quick to impose additional conditions that in practice had the finality of making the right to VAT deduction ineffective.

The same fundamental principle of fiscal neutrality find its application in VAT deduction in terms of allowing the deduction if the substantive requirements are met and it precludes national legislations from adopting additional conditions that would affect the right to deduct the VAT: “where the tax authority has the information necessary to establish that the taxable person, as the recipient of the supplies in question, is liable to VAT, it cannot, in relation to the right of that taxable person to deduct that tax, impose additional conditions which may have the effect of rendering that right ineffective for practical purposes” (C-90/02, par. 51, and Joined Cases C-95/07 and C-96/07, par. 64). In a more applied manner, this means that a tax authority “cannot refuse the deduction of input VAT to a taxable person on the sole ground that that taxable person used a tax identification number as a non-resident entity without a fixed establishment at the time of the formation of an EIG (economic interest group) and used the tax identification number of its branch located in that State for the re-invoicing of the costs of that group” (C-16/17, TGE Gas Engineering GmbH – Sucursal em Portugal v. Autoridade Tributária e Aduaneira, par. 47).

National limitations cannot go beyond what is necessary to achieve the objectives pursued, which means that tax authorities “may not oblige a taxable person to undertake complex and far-reaching checks as to that person’s supplier, thereby *de facto* transferring their own investigative tasks to that person” (Joined Cases C-80/11 and C-142/11, par. 65; C-642/11, Stroy trans

EOOD v. Direktor na Direktsia 'Obzhalvane i upravlentie na izpalnenieto' – Varna pri Tsentralno upravlentie na Natsionalnata agentsia za prihodite, par. 50).

The issue at stake is more nuanced when it comes to the taxable person being required to carry out due diligence in order to avoid participating in tax evasion (Costea and Ilucă, 2018). In such case, limitations arising from national legislations are permitted, since “it is not contrary to EU law to require a trader to take every step which could reasonably be required of him to satisfy himself that the transaction which he is carrying out does not result in his participation in tax evasion” (C-409/04, *The Queen, on the application of Teleos plc and Others v. Commissioners of Customs & Excise*, par. 65, 68; *Joined Cases C-80/11 and C-142/11*, par. 54; *C-101/16, SC Paper Consult SRL v. Direcția Regională a Finanțelor Publice Cluj-Napoca, Administrația Județeană a Finanțelor Publice Bistrița-Năsăud*, par. 52).

6. PRO-RATA

The right to deduct in correlation to the cause of the legal act can also determine a split deduction, when the acquisition is serving multiple purposes, as mentioned above (C-118/11, par. 53). The pro-rata system establishes that in the case of goods or services used by a taxable person both for transactions in respect of which VAT is deductible and for transactions in respect of which VAT is not deductible, the VAT is deductible only in the proportion attributable to the former transactions. The typical mechanism for calculating the proportional deduction consists of a mathematical operation, more specifically of a fraction comprising the following amounts: as numerator, the total amount (without VAT) of turnover per year attributable to transactions in respect of which VAT is deductible; as denominator, the total amount (without VAT) of turnover per year attributable to transactions included in the numerator and to transactions in respect of which VAT is not deductible. Both Directives leave room for Member States to establish certain measures of determining proportions and making deductions on the basis of the use made or provided that the taxable person keeps separate accounts for each sector and it is exactly these provisions that gave birth to a number of preliminary rulings of the ECJ regarding the pro-rata system.

In holding dynamics, as an exemption, if the holding company has a direct or indirect involvement in the management of the company in which the holding has been acquired, such involvement constitutes an economic activity where it entails carrying out transactions subject to VAT, such as the supply by a holding to its subsidiaries of administrative, financial, commercial and technical services (C-16/00, par. 22) and involves a deduction right; “When those services are used in order to perform both transactions in respect of which VAT is deductible and transactions in respect of which VAT is not deductible, the deduction is allowed only for the part of the VAT which is proportionate to the amount attributable to

the former transactions and Member States are authorized to provide for one of the methods of determining the right to deduction set out in Article 17(5) of the Sixth Directive” (C-496/11, *Portugal Telecom SA v. Fazenda Pública*, intervener *Ministério Público*, par. 43).

A different problem arises when it comes to the pro-rata deduction per sector. As we were previously explaining, Member States’ tax authorities can lay down the method for determining the right to deduct, permitting them to provide for determination of a separate proportion for each sector of business or deduction on the basis of the use made of all or part of the goods and services for a specific activity, or they may even exclude the right of deduction in certain circumstances. One of the most important aspects held by the Court in this ruling is that the reference to “sectors of business” used in the Directives cannot be interpreted as referring to geographic areas and that the term “activities” refers to different forms of economic activities such as the activities of producers, traders and persons supplying services; “Since the methods of calculation of the proportion constitute a fundamental element of the deduction system, account cannot be taken, in calculating the proportion applicable to the principal establishment of a taxpayer established in a Member State, of the turnover of all of the taxable person’s fixed establishments in the other Member States, without seriously jeopardising both the rational allocation of the spheres of application of national legislation in VAT matters and the rationale of the aforesaid proportion” (C-388/11, *Le Crédit Lyonnais v. Ministre du Budget, des Comptes publics et de la Réforme de l’État*, par. 35).

More issues arise when combining the per sector concept with the method of actual use on the problem of including subsidies in the mathematical calculation of the proportional deduction. The Court condemned the tendency of Member States to limit the right to VAT deduction and, in our opinion, gave effect to the principle of legal certainty: “It is not disputed that, with regard to the main proceedings, *Varzim Sol* was authorised to make the deduction according to a method other than the method whereby a proportion is determined under Article 19 of the Sixth Directive, namely on the basis of the use of all or part of the goods and services for a specific activity, a method set out in the third subpar. of Article 17(5) of that directive” (C-25/11, *Varzim Sol – Turismo, Jogo e Animação SA v. Fazenda Pública*, par. 40).

In the pro-rata sphere of relevant issues, the flat-rate method was also under evaluation concerning the use of vehicles for both business and private purposes; “In the light of the above observations, the answer to the questions must be that Article 6(2)(a) of the Sixth Directive, read together with Article 11A(1)(c) of the same directive, must be interpreted as precluding national fiscal legislation which initially authorises a taxable person whose passenger vehicles are used for both business and private purposes to deduct input VAT immediately and in full, but which subsequently provides, as regards private use of those vehicles, for

annual taxation based — for determining the taxable amount of VAT owed in a given financial year — on a flat-rate method of calculating expenses relating to such use which does not take account on a proportional basis of the actual extent of that use” (C-594/10, T.G. van Laarhoven v. Staatssecretaris van Financiën, par. 38).

7. CONCLUSIONS

In an overall view, the study embroiders on the bone structure of the concept of *causa*, given by the contractual foundation of VAT input and output transactions, a series of nuances that filter not only the right to deduct, but also the content and shape of this cause in order to generate tax consequences. The contractual cause is confirmed through the present study as the red thread that guides all relevant participants in evaluating the fiscal dimension: parties, tax authorities, national courts and even the European Court of Justice.

Our study is based on a thorough analysis of the jurisprudence of the Court in order to observe these nuances and provide an inventory of legal contexts for business dynamics. In systemizing these, we found that the Court has created its own set of rules for the taxable person to apply when deducting the VAT, that are independent from those in national provisions of the Member States. Even so, the Court is consistent in ensuring that the principles of neutrality and effectiveness prevail, condemning the tendency of Member States to limit the right to VAT deduction and, in doing so, also giving effect to the principle of legal certainty.

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EU STRUCTURAL FUNDS AND THE ECONOMIC GROWTH OF ROMANIA

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Abstract

Since the very beginning, the European Union (EU) aimed at promoting a greater convergence of the economic growth between the member countries. This is why, during time, several investment policy tools have been developed. The purpose of the present paper is to analyse the EU structural and investment funds attracted by Romania between 2007 and 2013, from the point of view of their amount, destinations and impacts. In order to achieve this goal, the research methods we have used are both qualitative and quantitative. While the documentary investigation helped us formulate the research hypothesis, the statistical analysis of the secondary data, based on a linear multiple regression model, allowed us to conclude about the acceptance/rejection of this hypothesis. Our results underline the fact that the EU funds attracted by Romania have a positive impact on its economic growth, an increase with one unit in the funds leading to a 0.264% growth in GDP.

Keywords: *EU structural funds; economic growth; Romania.*

JEL Classification: F36; O47

1. INTRODUCTION

Greater convergence of the economic growth between the EU member states has been one of the central goals of the European Community, since the beginning of the economic integration process. In order to achieve this goal, various policy measures have been introduced, such as the cohesion policy or the regional policy – the EU's main investment policy. With the purpose of promoting the harmonious development of the EU and targeting all regions and cities of the member states, the regional policy supports the goals of the Europe 2020 Strategy for smart, sustainable and inclusive growth (European Commission, 2019a) through two main funds: the European Regional Development Fund (ERDF) and the Cohesion Fund (CF). These funds, together

with European Social Fund (ESF), the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF), create the European Structural and Investment (ESI) Funds, which represent the EU's major investment policy tool.

The ERDF and Cohesion Fund financed a wide range of projects, such as the development of enterprises, infrastructure, agriculture, education, environmental protection, employment and training (European Commission, 2014). According to the report released by the European Commission (2014), the amount spent through these two funds for each of the receiving state was equivalent to between 20% and 60% of the government capital investment, during the 2007-2013 programming period.

The impact of all the ESI funds presented by the European Commission in different reports has largely been debated. Some of the researchers brought empirical evidence to underline the positive consequences of the ESI funds on the economic growth (Eggert *et al.*, 2007; Cappelen *et al.*, 2003). However, other analysts, such as Dall'erba and Le Gallo (2008) or Garcia-Mila and McGuire (2001), concluded that these investments have no impact on the economic environment of the analysed states/regions. These different results might be explained through the fact that, in some countries, the data regarding the structural funds either is partly missing or has a low quality (Mohl and Hagen, 2010). Other explanations might be related to the fact that the funds are not efficiently allocated, are badly managed or are used for unproductive investments (Marzinotto, 2012).

Considering the aspects, the purpose of the present paper is to analyse the EU structural and investment funds attracted by Romania between 2007 and 2013, from the point of view of their amount, destinations and impacts.

2. THEORETICAL BACKGROUND

As mentioned before, the opinions regarding the impact of the ESI funds on the economic growth are divided.

Among those who found a positive impact of the European structural funds can be mentioned Bussoletti and Esposti (2004), who analysed 15 EU states during the period 1989-2000, by adopting a dynamic panel-data specification. However, they concluded that an increase (or a lower decrease) of the agriculture employment share reduces the effect of the payments made through the structural funds. Cappelen *et al.* (2003) highlighted that the EU regional support had a significant and positive impact on the growth performances of nine EU states. Their results also suggested that the economic effects of such support are stronger in more developed environments, fact that underlines the necessity of adequate policies, able to improve the competences of the receiving economies. Cappelen *et al.* (2003) also argued that their findings indicate that

the major reform of the structural funds from 1988 made the EU regional policy more effective.

Becker, Egger and von Ehrlich (2018) analysed the effects of the EU regional policy for the four programming periods: 1989-1993, 1994-1999, 2000-2006 and 2007-2013, focusing their attention on the impact of these funds during the economic and financial crisis. Their study suggests that the funds generated positive effects during all the four periods, even in the context of the economic downturn. However, during the recession, the impact was weaker in the most affected countries. Fiaschi, Lavezzi and Parenti (2018) have investigated the efficiency of the European Cohesion Policy in 12 EU states, during the period 1991-2008, on the basis of a spatial growth model. They suggest that, while Objective 1 funds have strong spatial externalities and a positive effect on the growth of the GDP per worker, Objective 2 and Cohesion funds have no-significant impact. Meanwhile, all the other funds generate positive and significant consequences, but very limited in size. Another interesting finding of their study is that the efficiency of the EU Cohesion Policy has increased during time. Similar results regarding the impact of the Objective 1 funds have been found on the case of UK. Trying to identify the consequences of the interruption of the EU financial support after Brexit, Di Cataldo (2017) argues that the structural funds are very efficient in improving the socio-economic conditions of the poorer regions of UK. He gives the example of the South Yorkshire region, which lost Objective 1 eligibility in 2006 and, consequently, it was unable to sustain the gains obtained in previous years.

Aiming at identifying the importance of the EU Structural Funds for the convergence process in Portugal in terms of per capita income, Antunes and Soukiazis (2006) considered two areas: “Littoral” and “Interior”. Showing that the convergence is slightly faster in the regions of “Interior”, they argued that the structural funds have a significant impact on the harmonious economic development of Portugal since these funds are helping the “Littoral” area to grow faster.

In contrast with these studies, some authors do not find a statistically significant impact of the structural funds on the regional growth rates (Dall’erba and Le Gallo, 2008). However, in some cases the impact might be conditioned by certain aspects. For example, some studies suggest that the local conditions, such as the overall regional level of development and, therefore, the intensity of the EU support, might influence the efficiency of the EU structural funds (Mohl and Hagen, 2010). Ederveen, Groot and Nahujs (2006) underline the importance of the institutional quality in the efficiency of these funds. Similar conclusions were drawn in the studies conducted by Rodríguez-Pose and Garcilazo (2015) and Crescenzi, Di Cataldo and Rodríguez-Pose (2016). Other local particularities that might influence the impact of the EU structural funds might be the human capital (Becker, Egger and von Ehrlich, 2013), the territorial capital (Fratesi and

Perucca, 2014), or even the regional industrial structure (Percoco, 2017). Percoco (2005) indicates that, in the case of Italy, the best results were found in those regions that allocated the cohesion policy funds according to the hierarchy of marginal productivities in different policy fields. Starting from this idea, Carfora *et al.* (2017) argue that the ability of some regional governments to direct the EU funds towards the efficient production of renewable energy is reduced. This explains why, in some cases, the structural funds have limited or even no impact.

Meanwhile, in a study conducted in 2004, Rodríguez-Pose and Fratesi (2004) conclude that only those structural funds attracted for education and investment have positive consequences in the medium run (Rodríguez-Pose and Fratesi, 2004).

In the case of Romania, the literature regarding the impact of the EU structural funds on the economic growth and development is limited. A large part of the studies is focused on the factors that influence the absorption rate capacity or on the institutional issues (Zaman and Georgescu, 2009; Zaman and Cristea, 2011; Ciobanu, 2017). Zaman and Georgescu (2009), bringing empirical evidence, argue that the structural funds allocated to Romania could enhance the economic growth, sustainable development and financial stability of the country. However, a few others suggest that these funds might represent an obstacle for the economic development, since they involve a lot of bureaucratic procedures for the entrepreneurs (Beldiman, Perpelea and Perpelea, 2016).

3. EMPIRICAL EVIDENCE REGARDING THE IMPACT OF THE EU FUNDS ON ROMANIA'S ECONOMIC GROWTH

3.1. Research methodology

In order to reach our goal, the research methods we have used are both qualitative and quantitative. While the documentary investigation helped us formulate the research hypothesis, the statistical analysis of the secondary data allowed us to conclude about the acceptance/rejection of this hypothesis.

Therefore, the next two subsections include: Subsection 3.2 illustrates the facts and figures regarding the EU funds allocated and attracted by Romania and Subsection 3.3 presents the results of the statistical analysis.

We have used the data obtained from several sources, for the period 2007-2016. The data referring to the EU funds absorbed by Romania (Table 1) was collected from the European Commission database, while the information regarding the evolution of the gross domestic product (GDP), foreign direct investment (FDI) and the government expenditure was taken from World Bank Open Data database (see Table 2).

Table 1. EU funds attracted by Romania between 2007 and 2016 (in EUR)

| Year | Amount |
|------|------------------|
| 2007 | 417,022,849.39 |
| 2008 | 641,915,331.62 |
| 2009 | 909,124,666.96 |
| 2010 | 505,729,070.16 |
| 2011 | 698,562,149.18 |
| 2012 | 1,137,662,486.99 |
| 2013 | 2,884,470,134.12 |
| 2014 | 3,536,806,630.61 |
| 2015 | 2,591,361,157.7 |
| 2016 | 3,663,963,114.63 |

Source: adapted by European Commission (2019b)

Table 2. Indicators used in the analysis

| Indicator | Abbreviation | Measure unit | Source |
|--|--------------|---------------------------------|-----------------------------|
| Gross Domestic Product | GDP | PPT (current international USD) | World Bank (2019) |
| EU funds absorbed by Romania | EF | EUR | European Commission (2019b) |
| Foreign direct investment, net inflows | FDI | Current USD | World Bank (2018a) |
| General government final consumption expenditure | Ge | Current local currency unit | World Bank (2018b) |

Source: own processing

We have used a linear multiple regression analysis. Almost all the indicators from Table 2 were used as independent variables in the model presented below, the only exception being “Gross domestic product” (GDP), which was the dependent variable.

Our linear multiple regression model is:

$$\text{GDP} = \beta_0 + \beta_1 \text{EF} + \beta_2 \text{Ge} + \beta_3 \text{FDI} \quad (1)$$

Prior to conducting the regression analyses, the stationarity of the data in all the considered variables was verified.

3.2. EU funds allocated to Romania – facts and figures

Romania had the opportunity to benefit from the Community funds under the Cohesion Policy after the adhesion to the European Union, in 2007. For the period 2007–2013, Romania has been allocated 19.7 billion euros under the

Convergence Objective (concerning regions characterized by low levels of GDP and employment), through seven programs, from which three received funding from the ERDF – the ‘Regional’ programme, the ‘Increase in Economic Competitiveness’ programme and the ‘Technical Assistance’ programme, two will be financed by the ESF and will focus on human resources development and improving administrative capacity and the other two are infrastructure-oriented programmes (European Commission, 2009). From this entire amount allocated from the EU budget, the structural funds (including the cohesion funds) represented EUR 19.2 billion euros. According to the criteria used in the Convergence Objective, all the Romanian regions were eligible for receiving funds (European Commission, 2016a).

According to a report of the European Commission (2009), the major priorities of the Cohesion Policy in Romania for the 2007-2013 programming period were: improving basic transport infrastructure and accessibility (with a funding of almost 5.3 billion euros, equivalent to 28% of the total allocation), enhancing research and innovation (2.6 billion euros), offering business support, with a particular focus on small and medium enterprises (570 million euros), developing modern broadband networks and e-services for business and citizens (445 million euros), improving employment measures (940 million euros), enhancing a knowledge-based society through education and training measures (1.2 billion euros), supporting the social inclusion of disadvantaged groups (1.2 billion euros), improving the environment (8.6 billion euros) and mitigating the climate change through energy efficiency and renewable energy projects (2.8 billion euros).

Regarding the macroeconomic evolution of the country, it can be noted that Romania registered a significant economic growth during the period 2000-2008, which was followed by a decrease, in the context of the global crisis. However, the recovery began after 2011, the GDP increasing by more than 2% (European Commission, 2016b). Meanwhile, in the context of the economic downturn, the employment rate declined between 2009 and 2011, but it increased again in the following years, reaching 66% in 2015.

From the entire amount allocated through the ERDF and Cohesion Fund between 2007 and 2013, Romania attracted 15,374 million euros, equivalent to 25.1% of the Government capital expenditure and to 1.7% of the GDP (European Commission, 2016a). This financial aid was mainly used to for transport and environment and, to a lesser extent, for the enterprises. From the point of view of the transport infrastructure, according to a report of the European Commission (2016a), 367.9 km of new road were constructed and 1892.8 km were improved until the end of 2014. Moreover, the funds also led to the improvement of 122.3 km of railways lines (European Commission, 2016a). One of the most important achievements was Cernavoda-Constanța motorway, which opened for the traffic in the end of 2012.

Other achievements of the funds spent through the regional policy in Romania consisted in creating 51,203 new jobs, especially since 2010 (European Commission, 2015), through the support given to help firms' investments, for business start-ups and for cooperation projects between enterprises and research centres. Among these jobs, over 13,000 were full-time in small and medium enterprises.

From the point of view of the investments made to protect the environment, 4.2 billion euros of the ERDF and Cohesion Fund were allocated, representing one of the largest amounts from all the Member States. Almost two thirds of this amount went to investments in clean water supply and wastewater treatment (European Commission, 2016b). The same report of the European Commission (2016b) mentions that 104 projects were supported for financing energy efficiency schemes and the Additional capacity of renewable energy production totalled 523. The funds allocated for culture and tourism aimed on strengthening social cohesion and innovating the tourist sector.

For the period 2014-2020, Romania has been allocated 30.84 billion euros from ESI funds, through eight national and regional programmes (European Commission, 2016c). According to an European Commission (2016c) report, the major priorities of these programmes consist in improving country's competitiveness, supporting SMEs, farms and cooperatives, fishery and aquaculture holdings, protecting the environment through investments in energy, climate change and resource efficiency, improving transport accessibility, increasing labour market participation, promoting social inclusion and combating poverty and discrimination, reducing early school leaving and enhancing the institutional capacity of the public authorities.

Considering all these aspects, our research hypothesis is:

H1: There is a positive relationship between the EU funds attracted by Romania and the country's economic growth.

3.3. Results and discussions

In order to identify the impact of the EU funds attracted by Romania on the country's economic growth, we have tested the above-mentioned equation of the regression model. The robustness tests showed that all the indicators we have chosen influence the economic growth.

Using the fixed effects method, we have obtained the results presented in Table 3. As it can be seen from Table 3, our model is statistically significant (F-statistic $p < 0.05$ for all the indicators). The relationship between the independent variable, on one hand, and the dependent ones, on the other hand, is very strong ($R^2=0.813$, adjusted $R^2=0.786$). These results show that the chosen indicators explain the evolution of the GDP to a large extent.

Table 3. The results of the model (using fixed effects method)

| Indicator | Estimate | P-value |
|-------------------|----------|---------|
| EF | 0.264 | 0.01 |
| FDI | 0.243 | 0.02 |
| Ge | 0.134 | 0.00 |
| R | 0.842 | |
| R-square | 0.813 | |
| Adjusted R-square | 0.786 | |

Source: own calculations

Analysing the above data, we can argue that the EU funds attracted by Romania have a positive impact on its economic growth, an increase with one unit in the funds leading to a 0.264% growth in the GDP. Actually, as it results from Table 3, the EU funds have the highest impact on the economic growth of the country, an increase with one unit in each of the other variables leading to a lower growth of the GDP: 0.243% – if the foreign direct investment augments with one unit and 0.134% – in the case of one unit growth of the government expenditure.

Considering all these results, our research hypothesis – *H1: There is a positive relationship between the EU funds attracted by Romania and the country's economic growth* – is accepted.

4. CONCLUSIONS

As shown in the literature, the EU structural funds may have positive consequences on the economic growth of the receiving state. However, local particularities, such as the overall regional level of development, the quality of the institutions, the stock of human capital or the industrial structure of the receiving country might influence the efficiency of these funds.

The results of our study underline the fact that the attracted EU funds have a positive and significant impact on the economic growth of Romania, fact that allowed us to accept the research hypothesis. Therefore, we may argue that the absorption of the European funds represents a chance for reducing the economic gap between Romania and the other member states.

Considering these aspects, the findings of the paper could be very useful for Romania's policy makers, in order to improve the absorption capacity of these funds. Some measures which could be implemented might be focused on encouraging the cooperation between public and private institutions, offering training programs for the persons seeking access to European funds, facilitating the access to the information for all the institutions or providing an updated database regarding the regional development.

Starting from the results obtained in this paper, a similar study could be conducted for the period 2014-2020. Moreover, a future research could be focused on the efficiency of the EU funds in each Romanian region.

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ACCOUNTING REVALUATION AND THE TAX ON BUILDINGS IN ROMANIA

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Abstract

The rules applied in the calculation of the building tax, in the case of Romania legal persons were constant enough along the Romanian post-revolution period. Until 2015, the connection between the tax base and the accounting value of buildings was almost complete. The tax system accepted the accounting value as a tax base, in the conditions that the high rates of inflation in the 1990s and the early 2000s made the revaluation of buildings very frequent. To avoid the calculation of a building tax on a tax base based only on the historical cost, the tax rule introduced, in 2002, higher tax rates for the building non-revaluated in the last period. This rule, in different forms, is in force until today. However, starting with 2016, an important modification of the tax rules lead to an almost complete separation between the fiscal base of this tax and the accounting value for the buildings non-revaluated. The revaluation applied only to determine a tax base of the buildings, and not the fair value. For the non-revaluated buildings the tax rate is higher: 5%, comparing to a rate between 0.3% and 1.2%, for the revaluated buildings. The revaluation is not any more recognized in accounting, because the accounting revaluation impose to establish the fair value of the asset and not the tax base of such an asset. That creates the possibility, for the Romanian legal person, to change the accounting method concerning the subsequent measurement of tangible assets.

Keywords: *building tax; cost, accounting revaluation; book-tax (dis)connection.*

JEL Classification: M41, H71

1. INTRODUCTION

The Romanian accounting and the Romanian taxation systems have many elements in common. The literature on the (dis)connection between the net income accounting and tax rules is extremely rich. The models used to assess this relationship (for example, Lamb, Nobes and Roberts, 1998, developed on the Romanian case by Istrate, 2012; Cuzdriorean and Matis, 2012) propose a lot of variables to measure the connection/disconnection and these variables relates to, non-deductible expenses, tax deductions, other tax reintegration, the tax loss treatment, etc. In some sophisticated accounting and financial reporting standards, the rules are, sometimes, very difficult to understand and the information provided is also very complex for many users. Another tax for

which there are debates in the accounting literature is the value added tax. In this case, accounting rules quite accurately follow the fiscal rules, without any risk of pollution of the information provided in the financial statements, as in the case of the income tax. Beyond these issues very present in literature (income accounting and taxation or VAT accounting), there are some other topics in the relationship between accounting and taxation, much less spectacular, much less approached in the literature – it is about building taxes. A very long time, this tax was based on accounting data, so we can say that we are in a 3' case as described by Lamb, Nobes and Roberts (1988): accounting leads, but with a reverse effect. Building tax is a component local taxes, and the accounting literature does not develop very much this topic, whatever in books or in research journal papers. We can assume that legal and taxation literature is more generous with this tax. In terms of contribution of this tax to the local budget revenues, from the Romanian Statistical Yearbook we extracted data allowed us to calculate the percentages shown in Table 1. The data in Table 1 present them separately two periods, from which the data are not comparable, due to the different presentation of the official statistical reporting. The data are available only from 1999, which leaves the period 1990-1998 outside the analysis. In the first period presented (1999-2005), the share of building and land taxes in local tax revenues is very important. In the second period (2006-2017), in the statistical yearbook data are only for building tax paid by all the persons, without a separation between legal persons and individual persons; we do not compare the two periods! The proportions in both periods depend on the law on financing the local budgets, on the structure of the local budgets expenses, on the transfers from the central budget, and probably on other reasons that are not discussed in this text. The fact is that the tax on buildings paid by legal person contributes in a significant way to the revenues of the local authorities (Gyorgy, Câmpeanu and Gyorgy, 2011) and hence of legal regulation of this tax is sufficiently important as to be worth exploring (however, local taxes do not cover public expenditures of local authorities, so transfers from the state budget for balancing are needed – Profiroiu and Profiroiu, 2007).

Table 1. Percentage of the building (and land) tax in the local budget revenues

| Year | Share of taxes on buildings and land from legal entities in the total local tax revenues | Year | Share of the tax and the building tax in the total tax revenues of the local budgets |
|-------------|---|-------------|---|
| 1999 | 17.57% | 2006 | 5.88% |
| 2000 | 27.44% | 2007 | 5.41% |
| 2001 | 32.05% | 2008 | 5.24% |
| 2002 | 36.88% | 2009 | 5.55% |

| Year | Share of taxes on buildings and land from legal entities in the total local tax revenues | Year | Share of the tax and the building tax in the total tax revenues of the local budgets |
|------|--|------|--|
| 2003 | 32.02% | 2010 | 6.07% |
| 2004 | 32.88% | 2011 | 6.24% |
| 2005 | 36.13% | 2012 | 6.22% |
| | | 2013 | 6.22% |
| | | 2014 | 5.88% |
| | | 2015 | 5.23% |
| | | 2016 | 5.43% |
| | | 2017 | 5.53% |

Source: Tempo Online Statistics Database (National Institute of Statistics, 2019)

At European level, most statistics include property taxes, i.e. they include several categories of taxable assets (Mykolaichuk, 2017). Not all local authorities have the same tax rates. Cozmei and Onofrei (2012) centralizes the differences between the rates applied in several major cities in Romania in 2012 and finds the maximum rate of 1.5% as the most present, but in some situations it falls to 1% and even below this limit. Coman *et al.* (2001) confirm the structure of the main sources of revenues of the local authorities in Romania and notes that it differs from an authority to another depending on the economic development, and the ability to finance budget deficits.

In this article, our aim is to describe the evolution of the building tax regulation and the connections of this regulations with the Romanian accounting standards, especially with the initial and subsequent measurement of the buildings. Thus, in the next section, we will describe the changes in the buildings tax, after 1990; the following section is reserved to the description of the evolution of the specific regulation on the revaluation of the fixed assets, especially the buildings. We continue with a section on the accounting rules about the revaluation of fixed assets, before concluding and presenting the references.

2. EVOLUTION OF THE TAX RULES ABOUT THE TAX BASE OF THE TAX BUILDINGS

In Table 2, we present the main laws establishing obligations on the buildings tax. The name of the laws, and the title of the specific chapter are presented in their original version; in the text, we will present the modifications of this regulations, with an impact of some formal or substance topics regarding the tax on buildings paid the legal persons.

The interval we analyse start in 1990, so we have a period of five years of application of a law stemming from the communist period of Romania.

To achieve our objective, we analyse in the laws presented in Table 2, the main elements of the tax base of the buildings tax and, if necessary, the tax rates applied to the tax base.

Table 2. Laws regulating the building tax in Romania

| The normative act | The interval in which it was applied* |
|--|---------------------------------------|
| 5. Law 227/2015 on the Fiscal Code, Title IX <i>Local taxes</i> , Chapter 2 <i>Taxes on buildings</i> | 1.01.2016 – present |
| 4. Law 571/2003 on the Fiscal Code, Title IX, <i>Local taxes</i> , Chapter 2 <i>Taxes on buildings</i> | 1.01.2004 – 31.12.2015 |
| 3. Government Ordinance no. 36/2002 Local taxes, Chapter 2 <i>Tax on buildings</i> | 1.01.2003 – 31.12.2003 |
| 2. Law 27/1994 on Local Taxes, Chapter 2 <i>Tax on Buildings</i> | 1.01.1995 – 31.12.2002 |
| 1. Law 25/1981 Local Taxes, Chapter 2 <i>Tax on buildings</i> ** | 1.01.1982 – 31.12.1994 |
| *In some normative acts, there are provisions whose entry into force at some different dates from those given in the table. We have retained the date of validity of the building tax regulations. | |
| ** During this period appeared GO 15/1992 on Local Taxes, but it does not set down rules for calculating taxes, so we will not keep it in the analyses below. | |

Source: computed by author

2.1. Period 1990-1994 – application of the rules established by a law of the communist regime

Law 25/1981 establishes some general rules on taxation of buildings owned by legal entities. In fact, in the law, we could not find the formulation *legal persons*, but a term specific to the communist society: art. 9, al. 2 “*the tax on buildings belonging to the state economic units, to cooperative units and to other entities is determined by applying the tax rate to the inventory value of buildings subject to payment of this tax*”. The law does not include explicit rates, but states that they are established by decree of the Council of State and that there are differentiate according to the destination of the buildings, to their location, and to the category of the taxpayer. The law also obliges the tax rates to be revised every five years. The tax base is **the inventory value of inventory the building**. To know what is this value, we must refer to the accounting regulation in force at that time: (Government Decision 1885/1970 *on the organization of the accounting system, and the responsibilities of the head of the financial-accounting department* (Rusu *et al.*, 1971, p.30; Petriș, 1988): the inventory value of fixed assets represented the entry value (the cost), i.e. the value attributed on the initial accounting recognition of the asset. Technically, the

inventory value is the amount that appears in the specific account of that asset and changes are made only in case of corrections of some errors, subsequent expenses that were added to the entry value or revaluations imposed by law. From the corroboration of the two rules – tax and accounting – it follows that the building tax was based on the calculation of the value recognized in the accounting. It thus ensures a full accounting connection with the taxation of buildings. Although events in 1989 changed the political regime of Romania – the transition from dictatorship to democracy – the modification in the accounting rules and in the taxation rules took some more time. Thus, in a first stage, after the 1990, the calculation of the buildings tax has been made in the same manner as before, in the conditions of the application of the same law 25/1981 of the limited corrections of the accounting rules.

2.2. The beginning of the application of modern accounting rules in Romania, after 1990

In the original version of the Accounting Law no. 82/1991 (entered into force on 01.01.1992), it is established that the accounting for fixed and current assets is made at the acquisition cost, production cost or market price, as the case may be. Thus, from the accounting standard disappears the formulation of *inventory value*, with the meaning that it had until then. With the implementation of GD 704/1993 (Accounting Law Implementing Regulation), the notion of *inventory value* means the value that is attributed to the asset and liability items on inventory, and not the initial cost. Also, the same GD 704/1993 specifies that, when entering in the entity, the fixed assets are recorded at cost (entry value). This creates the conditions for a disconnection of the accounting rules from the tax on buildings rules. However, this disconnection is only apparent, because the tax rules (the original version of Law 27/1994) state that the tax on buildings is calculated by applying the tax rate on the value with which the buildings are recognized in the accounting of the legal persons, which leads us to exact the situation prior to 1990. The rule according to which the basis for calculating the building tax is the gross accounting value of buildings is also valid for buildings fully depreciated.

This way of defining the tax basis for the buildings tax lasts until the coming into force of GEO 62/1998 (01.01.1999). In this last law, the legislator returns to the old formula of *inventory value*: “the tax on buildings, in the case of legal persons [...], is calculated by applying the [...] tax rate of the inventory value of the buildings, updated according to the legal provisions and recorded in accounting”. Immediately after this change comes into force, the wording changes, in that no reference is made to the update of the inventory value, but only to the amount recognized in the accounting, according to the legal provisions (GEO 15/1999). The substance of the rule does not change, the tax rate is still applied to the accounting value of the account, the change being

rather formal. Removing the reference to updating the inventory value is not essential, given that the inventory value is determined in accordance with the accounting rules, which also accepts the revaluation. This is all the more so since, until 2000, the re-evaluation could only be made as a result of the provisions of an explicit normative act – usually a government decision.

2.3. Preparation for the 2004 Fiscal Code – rules only applicable in 2003

On 01.01.2003, GO 36/2002, which abrogates the previous laws comes into force and will only apply in 2003, because from 01.01.2004 it is replaced by the Tax Code approved by Law 571/2003. The part of the ordinance referring to the building tax is largely the same as before: “the tax on buildings [...] is calculated by applying the tax rate set by the local councils, which can be between 0.5% and 1.5% on the inventory value of the building, recognized in the accounting records, according to the legal provisions in force”. So far, everything is simple and consistent with the previous law. However, in GO 36/2002, a rule is introduced for the first time establishing a relationship of dependence between the tax rate and the revaluation or not of the buildings subject to taxation. According to it, the tax rate increases significantly for buildings that have not been revalued since 1998. The exact wording in the law is: “if legal entities have not carried out any revaluation of buildings since 1998 until the date of entry into force of this ordinance, the building tax is between 3.0% and 5.0% applied to the building’s inventory value recorded in the accounting books”. We can add this law to the fact that the inflation rate from 1998 to 2002 was high and, in the absence of revaluation, the entry values of the buildings remained insignificant from the point of view of the revenues that buildings tax brought to local budgets. Also, since 2000, firms – particularly private ones – have gone through a kind of free revaluation without the need for a special government decision to do so.

It is understood that the application of the increased tax rate is valid until the date of the first revaluation – the adjustment in this sense of the GO 36/2002 appears through the law approving the ordinance (Law 522/2003).

The introduction of the increased tax rate for the buildings that have not been revaluated has convinced many entities to revalue the buildings and even have been – and still are – the view that building revaluation is mandatory, and this obligation is imposed by local authorities. This is not true – revaluation is not mandatory, even if it seems to be imposed and even if some local authorities have claimed in this direction.

It should be noted that GO 36/2002 does not refer to any revaluation method, but we can assume that, implicitly, the accounting revaluation is sufficient.

Apart from the tax consequences of this new rule on the tax basis of the building tax, there are also serious implications in the sense of a significant increase in the demand for valuers and, implicitly, for their market.

In order to confirm the connection between accounting and taxation in the case of the buildings tax, GD 1278/2002 confirms that the *inventory value* of buildings is their entry value, with exactly the same descriptions as used in the accounting law (acquisition cost, production cost, current value, value resulting from revaluation). However, a sign of disconnection arises from the fact that the value of elements that could be recognized as individual assets should be added at the actual value of the building. The wording of GD 1278/2002 is that “when determining the *inventory value* of the buildings, it is intended to sum up the values of all its elements and functional facilities, such as terraces, stairways, lifts, lighting installations, sanitary installations, heating installations, telecommunication by wire and so on...”

2.4. First Full Tax Code – 2004-2015

The preparation for EU accession of Romania was also reflected in the amendment of the tax legislation. Thus, Law 571/2003 on the Tax Code regroups the rules on the main taxes and duties applied in Romania. In the part reserved for the local taxes, the wording of the previous law continues, but this is supplemented with some details on the case of revalued vs. unrevalued buildings. It remains valid that the basis for calculating the building tax is the inventory value of the building, defined as the entry value of the buildings in question, or the accounting value of the owner’s immediately after revaluation in the case of revalued buildings (Article 253). We are still in a context of connecting accounting and taxation. The increased tax rates for building that were not revalued is still valid (at a level between 5% and 10%), but only for buildings acquired before 1 January 1998 and which have not been revalued after that date. This increased rate applies until the date of the first revaluation. We are still in a legal and fiscal context that stimulates the accounting revaluations of fixed assets, not just for reasons of a better accounting information, but also for fiscal reasons.

The revaluation formulation in the original version of Law 571/2003 was valid for a short time (only in 2004), as GO 83/2004 (in force on 01.01.2005) eliminates the condition that the increased tax rates apply only to buildings procured before 1998. This generalizes the increased tax rates for unrevalued buildings. The explicit wording of Government Ordinance 83/2004 is: “In the case of a building that has not been revalued in the last 3 years prior to the reference fiscal year, the tax rate on buildings is set by the local council / the General Council of Bucharest between 5% and 10% and shall be applied to the inventory value of the building recorded in the accounts of a legal persons by the end of the month in which the first revaluation was carried out”. This tax law

provision once again stimulates the accounting option for revaluation of buildings.

The increased rate set between 5% and 10% was applied until 31.12.2011. The GO 30/2011 (effective for the party that interests us on 01.01.2012) establishes two rows of quotas for unrevalued buildings, according to the duration since the last revaluation, as follows: “in the case of a building has not been revalued, the tax rate on buildings is set by the local council / the General Council of Bucharest between:

a) 10% and 20% for buildings not revalued in the last 3 years preceding the reference tax year;

b) 30% and 40% for buildings that have not been revalued in the last 5 years prior to the reference year”.

The rules for establishing the tax base on buildings as they were adjusted by GO 30/2011 were also adjusted in 2011 (through GEO 125/2011, valid from 01.01.2012), for the special situation of the banks which were to apply IFRS in 2012. The addition is as follows: “For buildings belonging to credit institutions applying International Financial Reporting Standards and choosing the cost model, the taxable amount is the value resulting from the revaluation provided by an authorized evaluator, submitted to the local public administration department”. It is the first sign of a real disconnection of the tax revaluation from the accounting revaluation of buildings. Considering the fact that in mid-2012 the authorities extend the application of IFRS and in the individual financial statements of the Romanian companies listed on the regulated market, which is added to the banks, the fiscal rule has also changed (through GEO 102/2013, in force from 1.01.2014), extending the obligation to establish the taxable amount as the value resulting from an revaluation report issued by an authorized evaluator to all firms applying IFRS if they opt for the cost model in the case of the subsequent measurement of buildings.

2.5. Disconnecting accounting and taxation of the buildings: starting with 2016

Law 227/2015 on the Fiscal Code replaces the old law 571/2003 with the same name and brings significant changes in the building tax. A new classification of buildings, depending on the owner, also takes into account their destination (residential vs. non-residential) as well as the activity in which they are used. As regards the subject of our paper, the wording of Law 227/2015 reads as follows: “for non-residential buildings owned or held by legal persons, the tax on buildings is calculated by applying a rate of between 0.2%-1.3% on the taxable value of the building”. The old reference to the inventory value disappears in favour of a more appropriate notion of *taxable value* (tax base), defined as:

a) the last taxable value recorded in the entity's records – this may be the old inventory value;

b) the value resulting from an evaluation/revaluation report drawn up by an approved evaluator in accordance with the valuation standards applicable at the valuation date;

c) the final value of construction works in the case of new buildings built during the previous fiscal year;

d) the value of the buildings resulting from the act transferring ownership in the case of buildings acquired during the previous fiscal year;

e) in the case of buildings financed under a finance lease contract, the value resulting from an evaluation report drawn up by an approved evaluator in accordance with the valuation standards applicable at the valuation date;

f) in the case of buildings for which the building tax is due, the value recorded in the account of the owner of the building and communicated to the concessionaire, the lessee, the holder of the administration or use right, as the case may be.

We see that the accounting separation is not total – there are several situations where the accounting value is still a calculation basis for building tax.

However, for most of the cases, even though in the first three years of use the book value may be equal to the taxable amount of the building, the Fiscal Code establishes that the latter is updated every three years on the basis of an evaluation report of the building made by an authorized evaluator in accordance with the valuation standards applicable at the valuation date to the local tax authority until the first payment date of the reference year.

However, this suggestion of revaluation is not so mandatory, since the Fiscal Code establishes below that if the owner of the building has not updated the taxable value of the building in the last 3 years prior to the reference year, the tax rate on buildings is 5%. Again, we come back to the old situation where the lack of revaluation can increase the building tax. However, the difference is important with respect to the regulation in force until 31.12.2015: the buildings tax no longer uses the information from the accounting revaluation, which means that the revaluation of the buildings from a tax point of view (the tax on buildings) is made for establishing the taxable value and not the fair value, as is the case of the accounting rules.

Disconnecting the taxable value from the carrying value results in a disconnection of the tax revaluation from the accounting revaluation. Indeed, the latter can only be made at fair value, which is why it would be necessary for the evaluator to report two values – the taxable and the fair one – or to produce two valuation reports for different purposes. This creates the conditions for Romanian companies to abandon the periodic accounting revaluation, maintaining only the fiscal revaluation required by the local tax authorities for calculating the buildings tax.

3. SPECIFIC ACCOUNTING RULES ON THE REVALUATION OF TANGIBLE FIXED ASSETS IN THE PERIOD 1990-2003

The specific nature of the pre-1990 centralized Romanian economy has made the entities wait for explicit legal rules for the various actions they wished to pursue. In this case, there is the revaluation of the assets: the communist system created the procedure after which, for such an operation, a normative act was needed.

3.1. First revaluations in the 1990s

Businessmen and government officials were so convinced of the need for authorities to intervene, and the state was so present in the economy as a major shareholder or sole shareholder in almost all companies operating in the 1990s, that it is no wonder that the initiative of the first revaluation after the fall of communism the government had it – it is the GD 945/1990 *regarding the inventory and revaluation of the state economic entities*, which came into force in 120 days from 15.08.1990 and regarding the assets owned by the involved companies on 30.06.1990.

This GD refers to the revaluation of all assets and liabilities, and not just to tangible fixed assets. From the point of view of the values involved, GD 945/1990 establishes that for fixed assets, revaluation means the determination of the remaining value updated on 30.06.1990; for the calculation of this value, reference is made to the replacement cost and the degree of wear. No explicit reference to fair or market value.

In 1992, come into force GD 26/1991 *on the revaluation of some assets and liabilities as a result of the unification of the ROL exchange rates and the price and tariff regime*. By this decision nothing special is fixed for fixed assets, but only the obligation to update the values of assets and liabilities denominated in foreign currency taking into account the exchange rate of 10.11.1991. It was unlikely to find some buildings in this situation.

3.2. The most complete revaluation of the 1990s – GD 500/1994

The evolution of prices in the first half of the 1990s was spectacular, adjusting according to the events on the international market and the new Romanian realities. It is certain that the accounting costs of many fixed assets held by Romanian companies had become insignificant in relation to the market values, so the government came with GD 500/1994 *regarding the revaluation of tangible assets and the change in the share capital*.

For the wholly or partially state-owned companies, as well as for other state owned entities, the revaluation established by GD 500/1994 was mandatory. The option of the authorities was that the revaluation was carried out on the basis of coefficients determined by price index on 30 June 1994 and by the average use of industrial production capacities in 1993. One of the particular features of this

revaluation was that differences from the revaluation occurred were directly transferred to the share capital of the companies involved, which would cause further difficulties, with the adaptation of the accounting and legal norms to the international requirements. The term used to designate the result of the revaluation was the remaining value.

3.3. Partial adjustments towards the late 1990s

The political changes at the end of 1996 led to a reorientation of the Romanian economic policies, in the sense of a more liberalization, of a more active privatization, all realized with the support of international financial institutions. These new economic conditions have led to high inflation rates. Once again, the accounting values of the fixed assets became insignificant, as compared to the market and, in the absence of inflation accounting, the accounting information was not the most credible possible.

In this context, there is GD 983/1998 *regarding the revaluation of buildings, special constructions and lands*, which, in the original version, obliges all companies, irrespective of the form of ownership, to revalue the buildings, special constructions and the existing land on 30.06.1998. The decision changed quickly (by GD 95/1999), the revaluation becoming, from the mandatory, optional. The value reached was called an actual value, determined by the application of updating coefficients established by the authorities, but it was stated that it was necessary to correlate it with the utility of the goods and the market value. We found there a first reference to the market value, i.e. we are closer to fair value.

A new rule introduced by this decision is the permission given to firms to revalue buildings, special constructions and land at the end of each financial year on the basis of the annual inflation index, if the latter exceeds 5%. This is the premise of a free revaluation at the level of companies.

This possibility of revaluation at the initiative of companies is confirmed by GD 403/2000, which introduces a new condition directly from IAS 29 *Financial reporting in hyperinflationary economies*: the cumulated inflation rate for the last three consecutive years exceeds 100%. The rule is maintained that the revalued amount of property, plant and equipment is related to the usefulness and market value of those assets. The formula used to designate the resulting value was the current cost or the updated input value. The market value to be correlated with the result of the revaluation was defined as the fair value in IAS: “the market value of a tangible asset is the price that can be obtained in an active market when the market assets are relatively homogeneous and there are sufficient such traded assets so that potential buyers and sellers can be found at any time”.

3.4. Consecrating the notion of *fair value* in the specific accounting revaluation rule

Towards the end of 2003, it was quite clear that the three-year cumulative inflation could hardly exceed 100% (cumulative inflation rate for the three-year period ending in 2002 was 140.05%, while at the end of 2003 it was “only” 89.97%, which made the initial version of GD 403/2000 inapplicable). Under these conditions, GD 1553/2003 was issued regarding the revaluation of tangible assets and the determination of the fixed assets minimum cost, which establishes that the revaluation is made to take into account the inflation, the usefulness of the good’s condition and the market price, without any conditions strictly linked to the inflation rate.

On the same coordinates as the immediately preceding regulations, GD 1553/2003 does not impose revaluation, but indicates that the entities *may* proceed to the revaluation of their tangible assets held on 31.12.2003. At the same time, explicit reference is made to the fair value as follows: “revaluation of tangible assets is carried out in order to determine their fair value”, without removing references to the use of inflation rate. Taking into account that the fair value is difficult to determine by persons without specific competences, GD 1553/2003 also introduces the rule according to which “the revaluation of tangible assets is usually carried out by authorized evaluator”, but it is also possible to determine it by specialized personnel of each entity who revalue. In fact, the same wording (revaluation of tangible assets is usually carried out by authorized evaluator) also appears in the accounting standard in force for smaller enterprises (Order Ministry of Public Finance – OMPF 306/2002). Jianu (2009) provides us with a description of how to use the fair value in various situations, including the revaluation of the fixed assets.

4. EVOLUTIONS IN THE STRICTLY ACCOUNTING RULES ON REVALUATION OF TANGIBLE FIXED ASSETS

The accounting revaluation of fixed assets is a technique commonly used by Romanian companies to keep accounts after 1990. As we have seen above, until 2003, the carrying out and accounting for a revaluation of tangible assets could be made only by virtue of an explicit governmental decision in this regard. There were several such normative acts, especially since the 1990s and the first part of the 2000s, Romania was considered a hyperinflationary economy with cumulative inflation rates over three years higher than 100%. In the absence of inflation accounting – very complicated, in fact – the only possibility to bring as much of the company’s assets to a value closer to reality was the revaluation.

4.1. The first full accounting rule regarding the revaluation of fixed assets – GD 704/1993

After the original version of the Accounting Law establishes that “the valuation of the patrimonial items on the basis of the inventory and their recognition in the accounting is made according to the rules established by the Ministry of Economy and Finance”, detailed rules regarding the revaluation of the immobilizations can be found in the first Regulation for the application of the accounting law no. 82/1991 (approved by GD 704/1993). It creates the technical device for accounting for asset revaluation. However, from the point of view of the revaluation initiative, the Regulation specifies that this operation is carried out according to the regulations in force, i.e. it sends to a special normative act (see section 3 above).

For the accounting recognition of the revaluation, an equity account is created for revaluation differences, which receives the differences between the present value (higher) and the net carrying value (lower) for the asset items subject to revaluation. We note that the value that is attributed to the revaluation is called the current value. It is also important to note that this account proposes to collect the differences from the revaluation of assets and liabilities, i.e. not just of fixed assets.

The actual value was established on the basis of the usefulness of the good, the market price, and the degree of wear of the asset on the revaluation date. At the same time, the Regulation determines that the revaluation reserve is transferred to other equity structures (share capital, reserves or other) in accordance with the regulations in force, i.e. with specific rules that go beyond the accounting rules. The confirmation that the revaluation is only based on a specific normative act comes from the rule that lists the forms that the fixed assets can take as input value: the last one is the “value resulting from the revaluation for fixed assets revalued on the basis of an express legal provisions”.

4.2. Apparition of the fair value in the Romanian accounting rules

By GEO 37/2011 the concept of fair value is introduced in the accounting law: “the revaluation of tangible assets is made at fair value, in accordance with the provisions of the applicable accounting regulations”. This introduction of fair value in accounting regulation is probably due to the influence of international accounting standards (IAS). It is known that the second stage of the Romanian accounting reform was on the co-ordination of the collaboration between the Romanian authorities and international bodies such as the World Bank (BM) and the International Monetary Fund (IMF). One of the recommendations of these bodies was the introduction of IAS for certain categories of Romanian companies. The first normative act in this respect was OMPF 403/1999 *for the approval of the Accounting Regulations harmonized with the Fourth Directive of the European Economic Communities and the International Accounting*

Standards. This order was not effectively applied, being replaced by OMPF 94/2001, with the same name, applicable from the financial statements of the financial year 2000 for certain categories of entities explicitly stated in the content of the order (197 listed companies or national companies). Referring to IAS from this normative act made it necessary to use fair value in terms of revaluation, so changing the accounting law is natural.

We can assume, however, that most companies, regardless of the accounting rules they applied, took into account the specific regulation of revaluation, i.e. the government decisions mentioned in the previous section.

Until 2005, the accounting rules applied by the Romanian companies were different according to the category of companies:

- OMPF 94/2001 applies to listed and large firms – under this order, references to IAS required the use of the fair value determined reliably in the case of revaluation; however, the wording of the order is close to that established by the specific normative acts (the aforementioned GD): “the revalued amount is the fair value or the current cost of tangible assets at the date of the financial statements. These values are determined on the basis of evaluations carried out, as a rule, by authorized evaluators”;

- OMPF 306/2002 applies to small companies (starting with 2003), in which explicit formulations are almost identical to those in OMPF 94/2001: “revaluation [...] is done, with the exceptions provided by legal regulations, at fair value. The fair value is determined on the basis of evaluations carried out, as a rule, by authorized evaluators”.

4.3. Unification of accounting rules to join the EU and the current state of revaluation of buildings

2005 was the last year when different Romanian firms applied different rules depending on their size and/or their particular situation. It will return to such a situation, but later on, starting in 2012... OMPF 94/2001 and OMPF 306/2002 were repealed and replaced by OMPF 1752/2005 *for the approval of accounting regulations compliant with European directives*. In the latter, fair value is the reference for the revaluation of tangible assets. The same is true of OMPF 3055/2009 and OMPF 1802/2014.

With the change in tax law – in force in 2016 – tax revaluation is completely disconnected from the accounting one, which is why the latter can lose interest in some firms. Under these circumstances, some entities may change the accounting policy for subsequent measurement of tangible assets, moving from the fair value model to the cost model. OMPF 1802/2014 noted this and greatly simplified the accounting procedures applied in this case of accounting policies shift. Thus, it is established that this change in accounting policy general rules about the method changes – i.e. fully retrospectively, with restatement of comparative information – but it is sufficient to close the

revaluation difference account by lowering the value of the asset and/or the transfer to the retained earnings. This option is more important as many companies no longer want to pay two valuations – a tax one for building taxes – and an accounting one used to update the value of the assets.

5. CONCLUSIONS

Building tax – a component of local taxes – is an important source of revenue for local authorities. Our intention was to keep track of how the tax base was calculated for buildings owned by legal entities, taking into account the relationship between this basis of calculation and the amounts reported in the financial accounts of those entities. We analysed the period after 1990 and found that at the beginning, local tax rules remained the same as in the previous period, characterized by a centralized economy and discretionary outside the market.

For a very long time, the Romanian law establishes that the basis of calculation of the building tax due by legal entities is the inventory value of these buildings, i.e. their gross value, recorded in the accounting of the respective building. Specifically, this inventory value was the value attributed to that asset at the initial recognition. This ensures a complete connection between the accounting and taxation of buildings taxes. Until 1994, the inventory value came from the application of the old accounting rules that were adapted to the beginnings of the market economy. The first detailed accounting standard approved by the Romanian authorities after 1990 came into force on 1 January 1994 and renamed some accounting notions, including the value at which the assets in the accounts are recognized. The latter becomes an entry value or an accounting value. From the building tax point of view, the calculation base remains the same, as the law establishes that the tax is calculated by applying the tax rate on the entry value with which buildings are recorded in the accounting. In 1999, it is shortly for the inventory value formula to designate the tax base for building taxes, but again it is defined as the value recorded in the accounting, including when buildings are revalued. Thus, we come to a serious problem of the period after 1990: the rapid rise in prices, which made the costs of buildings (and other assets and liabilities) no longer representative of their real values. The authorities noticed this and either forced them to revalue (as in 1995) or allowed them (1998, 1999, and 2000), so that the amounts calculated as tax on buildings are, as far as they are up to date. Probably, however, some entities chose not to revalue for various reasons, so the authorities changed the law by introducing in 2002 a statement stating that, in the absence of revaluation within a certain interval, the tax rates on buildings were much higher (up to ten times higher). The condition for establishing the tax rate according to the revaluation or not of the buildings remained valid, in various forms and with different quotations, until today. This turn of the fiscal regulation has strongly stimulated the Romanian revaluation market. We do not have figures for all Romanian

companies, but in the case of those listed on 31 December 2015 (the last year of total connection between the accounting and taxation of buildings taxes), the data is as follows:

- for companies listed on the AeRo market, of the 256 observations explicitly declaring the subsequent method for the measurement of the fixed assets, 205 (80%) revalue and 83 (40%) revalue only buildings and/or land; in 2017, the percentage reaches 77% and 44% respectively;

- in the case of companies listed on the regulated market, 84 (81%) companies declaring the policy for the subsequent valuation of tangible assets revalue, and 30 (44%) revalue only buildings and land; in 2017, the percentages are 82% and 46%, respectively.

It is only in 2016 that the rules have changed and the basis for calculating the tax on buildings becomes the taxable value (tax base) of the buildings, which is the same as the book value only just after their acquisition. Subsequently, the new tax rule says that in order to qualify for the standard tax rates, the taxable value is updated every three years, otherwise, the tax is calculated at the increased rates. Because the accounting revaluation must to be made at the fair value and the tax revaluation report only shows the taxable value, it results in a disconnection of the accounting revaluation from the fiscal one. This is a normal situation because taxation and accounting have different objectives and create the conditions for companies to abandon their accounting revaluation in order to reduce their costs of paid services to authorized evaluators.

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TAX REVENUE, CORRUPTION AND GOOD GOVERNANCE IN EAST EUROPEAN COUNTRIES

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Abstract

Financing public spending in the vital areas of social life by generating sufficient income is the main function of a national tax system. The efficiency of the fiscal system is the adequate capacity to tax the firms, both administrative and economic, and involves increased fairness and lower corruption. This article analyzes the influence of corruption and good governance on tax revenue collection in three East European countries: Bulgaria, Romania and Hungary. The methodology used was the time series analysis, ARDL method, for the period 1995-2018. The results show that good governance has a positive impact and corruption a negative one for collecting tax revenues from these economies. Reducing the rate of corruption and improving the quality of government are the necessary steps to increase revenue collected in the budget.

Keywords: *tax revenue; corruption; ARDL model.*

JEL Classification: C22, D73, H50

1. INTRODUCTION

Generating sufficient revenue to finance public spending is the main function of each national tax system. For countries that have the ability to tax both administrative and economical, tax revenue growth substantially increases (Acemoglu and Verdier, 1998). A fair and less corrupt fiscal system is the basis for the efficiency of obtaining appropriate tax revenues (Aghion *et al.*, 2016). This study analyzes the influence of corruption and good governance on tax revenue collection in three Eastern European countries: Bulgaria, Hungary and Romania.

Corruption is the misuse of public function for personal benefit, World Bank considering it to be the most important impediment to the harmonious development of the state. For developing countries it is a matter of great importance, especially because of its negative effects (Tanzi and Davoodi, 1998). Recent studies have shown that this phenomenon has negative and harmful effects on human capital formation and economic growth (Pulok and Ahmed, 2017), causing malfunctioning of the public and private sector, increasing poverty and thus increasing citizens' involvement in fighting it.

The quality of government is another important factor in the proper development of the state. Many studies analyze the link between tax collection and the quality of government, with negative implications of maladministration and corruption. The efficiency of the tax system is largely influenced by the governance structure and the political system, with various studies supporting a positive relationship between the quality of governance and taxation (Attila, 2008; Bird, 2013; Gaspar, Jaramillo and Wingender, 2016; Moore, 2004).

The analysis uses as a methodological method series of data for the period 1995-2018, the analysis being the classic one: root unit test, cointegration and causality link. The study focuses on improving the quality of governance and reducing the corruption rate, with Eastern European countries having to implement some general structural reforms, such as increasing the efficiency and strictness of the judiciary, introducing collectors of financial incentives to reduce the opportunity for corruption; broadening the tax base by including all participants in the economic circuit.

The remaining part of the study is organized as follows; the second part briefly explains previous studies that have been conducted on the similar issue; the third part presents the methodology that describes the data and statistical techniques used to formulate the results; part 4 deals with the empirical findings of the study. Part 5 ends the study with political implications and future recommendations.

2. LITERATURE REVIEW

Regarding tax systems, the concepts of fiscal revenue performance and the resilience of the tax system to administrative and governance shocks are subject to various functions, such as income distribution, economic stabilization, public dispositions and legitimacy. Outside the amount of revenue collected, administrative shocks affect revenue stability, the extent of its predictability and the provision of public services. In addition, such shocks can change the distribution capacity of existing tax systems, thus undermining their legitimacy. Some previous studies have been carried out to solve this problem; some of them are listed below.

Ghura (1998) analyzes 39 countries from Africa in 1985-1996 using a composite index for corruption measurement and macroeconomic variables (structure of value added, macroeconomic and structural policies, level of public spending, external aid) and shows that the level of income tax on GDP is influenced by increased corruption; the findings of the study advocate increasing tax revenues by reducing generalized corruption.

Tanzi and Davoodi (1998) analyze 97 countries and establish the relationship between corruption and GDP: a 1% increase in corruption leads to a 1.5% decrease in tax revenues, 2.7% in tax revenues and 1.3% in non-tax revenues. The authors point out that a determinant factor of corruption is the

abundance of natural resources, with non-tax revenues being prone to its influence. The tax structure is also influenced differently by corruption: income tax is negatively influenced (0.63% decrease), VAT (0.34% drop) and customs duties (0.03%), corruption having a stronger impact on direct taxes. Strong anti-corruption measures to reduce 4% would result in tax revenue increases of 7.2% of GDP.

Gupta (2007) analyzes the determinants of tax revenues for 86 countries over a 25-year period: the share of foreign trade, GDP per capita, external aid, and public debt. Corruption significantly affects the performance of tax revenues, with stronger direct tax effects than indirect taxation.

Bird, Martinez-Vazquez and Torgler (2008) show that the level of tax revenues depends more on government institutions than on natural wealth; improving the control of corruption and the accountability of tax officials is the key requirement of countries with high tax revenues.

Potanlar, Samimi and Roshan (2010) analyze the impact of corruption on tax revenues in 27 developing countries for the period 2002-2006. The variables taken into account are the Corruption Perceptions Index (CPI), the panel methodology, and the conclusion is that there is a positive relationship between the level of corruption and the tax revenues. The higher the corruption, the lower the tax revenues, the developing countries have to apply the fiscal reforms and corruption reduction policies at the same time.

Ghosh and Neanidis (2010) study the effects of corruption on the rate of tax revenue, and shows that this phenomenon reduces tax revenue generated by households. The increase in corruption acts indirectly: due to the drop in tax revenues, the state has to raise the income tax rate, which will generate a future vicious circle.

Dissou and Yakautsava (2012) present two models of endogenous growth (one linear and one concave); the linear model fails to fully explain the effects of anti-corruption measures; instead, the nonlinear model best explains how combating corruption and implicitly reducing it leads to an increase in tax revenues, and ultimately to a lowering of the tax rate.

Imam and Jacobs (2014) analyzes the Middle East countries about the impact of corruption on the different tax revenue categories, showing that taxes with a large interaction between the tax body and taxpayers are more prone to manifesting this phenomenon. The authors' conclusion is that tax reforms should be implemented to reduce corruption in the direct taxes category.

For Eastern Europe, there is only one article, Braşoveanu and Obreja Brasoveanu (2009) that analyzes the relationship between corruption and tax revenue relative to GDP for the 27 EU Member States in the period 1995-2008. The authors' conclusion is that there is a negative relationship between the two components, this relationship being stronger for the first 12 EU countries.

3. METHODOLOGY

The existence of the correlation between the level of tax revenue in GDP and good governance is given using the following mathematical model (equation 1) (Arif and Rawat, 2018; Barreto and Alm, 2003).

$$Y_t = f(\text{GDP per capita}, \text{corruption}, \text{good governance}, N) \quad (1)$$

where: Y_t measures taxation (fiscal revenues to GDP), Corruption indicates the perceived corruption index, Good governance indicates how the public institutions manage public affairs, while N represents the existence of certain exogenous factors.

For the taxation the indicator is the percentage of revenues to GDP (expressed in %), for the corruption and good governance the indicators are those from World Bank (expressed with 0-100). In non-linear regression, the model (equation 2) would be:

$$\ln(\text{taxation}) = \alpha_1 + \alpha_2 \ln(\text{Gdp per capita}) + \alpha_3 \ln(\text{Corruption}) + \alpha_4 \ln(\text{Good governance}) + \varepsilon_t \quad (2)$$

In this function, if the α_3 has negative sign the corruption has a negative impact on the GDP; if the α_4 has negative sign the good governance has also a negative influence on the GDP.

In the case of time series, often some of them are $I(0)$ and some are $I(1)$, which means that Johansen's traditional cointegration technique cannot be applied. However, in the literature, another technique has been developed by Pesaran, Shin and Smith (2001), the ARDL model, which allows cointegration testing for series with different degrees of integration. Consequently, the previous model (equation 3) becomes:

$$d(\text{taxation}) = c + \alpha_1 d(\text{taxation}(-1)) + \alpha_2 d(\text{GDP per capita}(-1)) + \alpha_3 d(\text{Corruption}(-1)) + \alpha_4 d(\text{Good governance}(-1)) + \alpha_5 d(\text{GDP per capita}(-1)) + \alpha_6 d(\text{Corruption}(-1)) \quad (3)$$

Analysis of the ARDL model is common: series correlation, normality and heteroscedasticity are performed. In order to establish the cointegration relationship, the null hypothesis of non-existence cointegration will be rejected if the statistic F is higher than the threshold critical value, and this hypothesis is invalid and if F -statistics is lower than the lower threshold. The zero hypothesis of the lack of cointegration between variables is admitted only if F -statistics is between the two minimum and maximum values (Zivot and Andrews, 2002).

4. EMPIRICAL RESULTS

Data on the level of taxation on GDP and GDP per capita were obtained from Eurostat (European Commission, 2019); for Corruption, Corruption Perception Index (CPI) was used by Transparency International (2019); for Good Governance the indicators from the World Bank (2019) were used.

Table 1 shows the descriptive statistics for the analyzed series. As we can see, all series are normally distributed. The average corruption index varies between 3.8 (Bulgaria) 5.0 (Hungary) and 3.62 (Romania), with minimum points for Romania (2.60) and maximum, Hungary (5.50). Romania (30.48) has the smallest value for the tax revenue to GDP indicator; Bulgaria (34.78) has a bigger value for indicator; Hungary has the largest value (44.53); the minimum value is for Romania (28.00), the maximum is for Hungary (41.55).

Table 2 shows the results of structural breakdown analysis using the Zivot Andrews test. During the financial crisis 2007-2009 there were most breakpoints for the analyzed series.

Table 2. Zivot-Andrews test statistics

| Country | Series | Chosen break point | Zivot-Andrews test statistic t-Statistic | Prob. * |
|----------|--------|--------------------|---|---------|
| Bulgaria | REV | 2006 | -6.769 | 0.002 |
| | GDP | 2014 | -2.682 | 0.736 |
| | COR | 2008 | -4.198 | 0.029 |
| | GOV | 2005 | -3.521 | 0.060 |
| Hungary | REV | 2007 | -4.774 | 0.002 |
| | GDP | 2008 | -4.003 | 0.012 |
| | COR | 2007 | -4.452 | 0.031 |
| | GOV | 2002 | -3.626 | 0.049 |
| Romania | REV | 2014 | -4.802 | 0.093 |
| | GDP | 2012 | -4.476 | 0.169 |
| | COR | 2002 | -4.627 | 0.197 |
| | GOV | 2007 | -4.248 | 0.017 |

Source: own calculations

Table 3 shows the critical values of the Bounds test calculated by Pesaran, Shin and Smith (2001) and Narayan (2005); because the size of the sample is relatively small ($n = 25$), we decided to report the critical values of the Bounds test, which were specifically calculated for the small size of the Narayan (2005) samples.

Table 1. Descriptive statistics

| | Bulgaria | | | | Hungary | | | | Romania | | | |
|-------------|----------|--------|----------|--------|---------|--------|----------|--------|----------|----------|----------|--------|
| | COR | REV | PIB | GOV | COR | REV | PIB | GOV | COR | REV | PIB | GOV |
| Mean | 3.803 | 34.784 | 4383.671 | 58.685 | 5.002 | 44.539 | 9619.371 | 79.011 | 3.620870 | 30.48713 | 5343.075 | 45.680 |
| Median | 4.000 | 34.920 | 3893.690 | 59.716 | 5.100 | 44.743 | 11205.97 | 80.288 | 3.600 | 30.875 | 4676.315 | 45.902 |
| Maximum | 4.300 | 36.783 | 7853.335 | 65.385 | 5.500 | 48.020 | 15739.74 | 83.981 | 4.800 | 32.772 | 10136.47 | 54.808 |
| Minimum | 2.900 | 30.257 | 1148.494 | 50.777 | 4.120 | 41.550 | 4172.765 | 71.585 | 2.600 | 28.005 | 1323.104 | 30.570 |
| Std. Dev. | 0.396 | 1.811 | 2691.268 | 4.185 | 0.327 | 1.953 | 4158.584 | 3.952 | 0.680 | 1.481 | 3530.050 | 5.644 |
| Skewness | -0.838 | -1.089 | 0.093 | -0.335 | -0.800 | 0.085 | -0.174 | -0.508 | 0.274 | -0.191 | 0.118 | -1.439 |
| Kurtosis | 2.628 | 3.430 | 1.250 | 2.170 | 3.494 | 1.907 | 1.346 | 2.066 | 1.894 | 1.755 | 1.229 | 5.370 |
| Jarque-Bera | 2.825 | 4.725 | 2.968 | 1.090 | 2.691 | 1.172 | 2.736 | 1.824 | 1.460 | 1.625 | 3.058 | 13.315 |
| Probability | 0.243 | 0.094 | 0.226 | 0.580 | 0.260 | 0.556 | 0.254 | 0.402 | 0.481 | 0.443 | 0.216 | 0.001 |

Source: own calculations using Eviews 10

The F calculated for Model A is for Bulgaria (-2.139), Hungary (5.408) and Romania (-0.335), respectively. The F value for model A is very high and above the critical values I (1) of the Pesaran and Narayan limits to a significance level of 1%. Therefore, it is concluded that the null hypothesis of no cointegration can be rejected in both cases.

In Table 3, the results of the ARDL cointegration test demonstrate that the null hypothesis of its alternative is slightly rejected at the significance level of 1%. Statistical statistics F calculated at -2.139, 5.408 and -0.335 are higher than the lower critical threshold value of 3.74, indicating a long-term relationship between tax revenue to GDP, corruption, GDP per capita and good governance.

Also in Table 3, Diagnostic tests, such as the Breusch-Godfrey serial correlation LM test and the RESET specification test were used to test the robustness of the model. All tests revealed that the model has the correct econometric properties, it has a correct functional form, and the model residues are uncorrelated in series, normally distributed and homoskedastic. Therefore, reported results are serially uncorrelated, normally distributed and homoskedastic; the reported results are valid for a reliable interpretation.

Table 3. ARDL Bound tests and Breusch-Godfrey Serial Correlation LM Test

| Country | Optimal lag length | F-statistics | Breusch-Godfrey Serial Correlation LM Test | Ramsey RESET Test |
|----------|--------------------|--------------|--|-------------------|
| Bulgaria | 2, 2, 0, 3 | -2.139 | 0.410 0.394 | 0.524 0.487 |
| Hungary | 2, 0, 0, 0 | 5.408 | 1.201 0.194 | 0.004 0.945 |
| Romania | 1, 2, 0, 1 | -0.335 | 0.466 0.545 | 4.658 0.045 |

10% 3.62; 5% 4.335; 1% 6.028

Source: own calculations

The Bounds test allows us to test the significance of a $Y(-1)$ dependent variable period with a long period for the models and the estimated values of these variables are -0.370, -0.409 and -0.034 for Bulgaria, Hungary and Romania.

The results of our model regarding the impact of corruption on taxation revenues are presented in Table 4. The negative impact of corruption on economic growth is observed and is statistically significant at a significance level of 1%. This shows that a 1% increase in corruption influence the taxation revenues with -1.312% in Bulgaria, with -2.106% in Hungary and -0.333% in Romania, maintaining the constant of other things. These findings are in line

with Attila (2008), Bird (2013); Gaspar Jaramillo, and Wingender (2016); Moore, (2004).

Table 4. Estimated long-run coefficients

| Country | Bulgaria | Hungary | Romania |
|------------------|-------------------------------|-------------------------------|-------------------------------|
| LNCOR | -1.312 (3.865) [0.003] | -2.106 (2.389) [0.030] | -0.333 (-3.039) [0.007] |
| LNPIB | 0.001 (0.159) [0.122] | 0.001 (1.225) [0.239] | 0.082 (2.673) [0.016] |
| LNGOODGOVERNANCE | 0.074 (2.746) [0.020] | 0.024 (1.491) [0.156] | 0.012 (-2.158) [0.045] |
| CointEq(-1)* | -0.370 (-3.275) [0.008] | -0.409 (-5.848) [0.000] | -0.034 (-2.236) [0.038] |
| R-squared | 0.625 | 0.749 | 0.290 |

Source: own calculations

Table 5 presents the results of the Granger causality test which offer information about short-term relationships (the hypothesis of feedback exists between corruption and taxation revenues through a bidirectional relationship, between corruption and taxation revenue through a two-way causal relationship for all the 3 countries: Bulgaria (0.675 and 0.138), Hungary (0.153 and 2.385) and Romania (0.144 and 2.266). The long-term and short-term joint analysis confirms the long-term and short-term causality relationships between variables such as taxation revenues and corruption, like in another studies (Bahl and Bird, 2008; Everest-Phillips, 2010; Knack, 2009).

Table 5. Granger causality coefficients

| Country | Bulgaria | Hungary | Romania |
|---------|------------------|------------------|------------------|
| COR→REV | 0.675 (0.522) | 0.153 (0.858) | 0.144 (0.866) |
| REV→COR | 0.138 (0.871) | 2.385 (0.124) | 2.266 (0.135) |
| PIB→REV | 0.420 (0.663) | 4.636 (0.025) | 1.854 (0.188) |
| REV→PIB | 7.764 (0.004) | 2.149 (0.149) | 0.013 (0.986) |

Source: own calculations

5. CONCLUSIONS

This article explored the relationship between corruption and taxation revenues using data from Bulgaria, Hungary and Romania for the period 1995-2018. Methodologically, we applied the ARDL co-integration approach to examine the long-term relationship between corruption, taxation revenues and economic growth. The causal relationship between the series was tested by applying the Granger causality approach and we have found that long-term relationships exist between variables; especially that corruption influences negatively taxation revenues.

Our findings indicate the negative impact of corruption on taxation revenues; governments must take action to reduce corruption by improving governance in Eastern European countries. Improving governance will not only control corruption but also improve the quality of domestic institutions that will have a positive impact on taxation.

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STATE AIDS – FINANCIAL INSTRUMENTS ACCEPTED IN THE EUROPEAN UNION

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Abstract

State aid is a country's financial practice whereby it seeks to support or enhance certain areas of economic or social activity or even certain subjects operating on a market with regular supply and demand relationships. This practice is embodied in various forms of financial support that are provided directly from public budgets, or indirectly from different public or mixed nature (public and private) financial sources.

The paper aims to analyze the conditions under which the European Union, through its institutions, the European Commission and the European Court of Justice, embraces the use of these financial support instruments, which are frequently exercised – in order to enhance economic or social development – in the praxis of modern public finances. However, such a practice cannot be carried out freely, outside a box of rules and principles. It is strictly controlled by the Commission, taking into account the risk for negative competitive and commercial distortions.

Conjunctively with the introductory conceptual clarifications, essential to such an approach, the paper examines in detail the conditions and circumstances in which certain financial instruments may be considered to be State aid under the provisions of the TFEU, but also the conditions and circumstances in which a State aid is declared by The European Commission and by the European judicial authorities as incompatible with the European common market or, on the contrary, perfectly accepted at this level. In this respect, the most well-known and important decisions of the European jurisprudence, used to interpret the existing European legal provisions in this field, are highlighted. The paper also presents the most important categories of state aid compatible with the European common market and regulated as such by our national legislation.

Keywords: *State aid; compatible or incompatible State aid; public funds; public and private enterprises.*

JEL Classification: H60, H84, H89.

1. PRELIMINARY CONSIDERATIONS ON STATE AIDS

State aids are state or administrative – territorial units financial instruments that help the surveillance of different objectives, starting with the salvation and restructuring of some enterprises found in difficulty, to the development of un – favored areas and unemployment fight, on to the wish of promoting research or

innovation. They are selective measures of public financial support given to enterprises, areas or activities, in order to reach some general interest objectives, as the protection of the environment, the development of small and medium enterprises, a.o.

State aid policy is a component of the free competition policy called upon to substantially shade this concept. The financial support measures initiated by the authorities are, at the same time, effective tools for achieving the objectives of national interest. If well-targeted, they can correct certain market failures and contribute to increasing the competitiveness of companies that carry out activities that are relevant at national level

On the other hand, a wrong or excessive use of the state aids might lead to distortions in the normal concurrencial relations, because the enterprises benefiting from the state aid are no longer in competition with the other pawns of the same market, in equal conditions, thus, the EU allows their use only with respect to some requirements. For that, the European Commission closely monitors all EU member states regarding the way they use these financial mechanisms from public funds to support different economic or social, public or private sectors of activity.

2. THE LEGAL BASE OF THE MATTER

Taking into account the special attention the EU manifested for these practices, the legal existing sources in this matter are numerous and varied.

A. The European legislation

- a) Treaty on the Functioning of the European Union (TFEU);
- b) Commission Regulation 1407/2013 on the application of Art. 107 and 108 of the TFEU, de minimis aid;
- c) Regulation (EU) No. 651/2014 of 17 June 2014 Commission declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the TFEU;
- d) Regulation (EU) No.330/2010 of 20 April 2010 Commission on the application of Article 101 (3) of the Treaty on the Functioning of the European Union to categories of vertical agreements and concerted practices;
- e) Regulation (EU) No. 461/2010 of 27 May 2010 Commission on the application of Article 101 (3) of the Treaty on the Functioning of the European Union to categories of vertical agreements and concerted practices in the motor vehicle sector.

These publications took the form of “Regulations”, “Communications”, “Framework”, “Guidelines” and “Letters” to the Member States.

B. National legislation

The main normative acts applicable in this area are:

- a) GEO no. 77/2014 on national procedures in the field of State aid;

- b) Law no. 20/2015 for approval of GO no. 77/2014 on national procedures in the field of State aid.

C. Practice of the European Court of Justice

3. CONCEPTUAL CLARIFICATIONS

State aid was defined by the Romanian legislator in article 2, paragraph (1), lit. (d) of GEO no. 77/2014 on State aid procedures, as amended as being the economic advantage granted from State sources or resources or managed by the State in any form that distorts or threatens to distort competition by favoring certain enterprises or production sectors to the extent that it affects trade between Member States.

State sources and resources are also public funds or authorities, institutions or public enterprises.

State aids are therefore considered to be financial measures adopted by the State which cumulatively fulfill the conditions established by art. 107, par. (1) of the Treaty on the Functioning of the European Union, namely:

A. Transfer of state resources. From this point of view, it is useful to say that these are public resources belonging both to the state and to the administrative-territorial units, but also to other structures with public capital;

B. Thus, state aid may also be granted by a joint public-private body, or even by a state intermediary, which in turn can be both a public body and a private one.

It is also important to note that financial transfers from public funds to different bodies may take different forms, such as: grants, loan guarantees, capital injections, tax exemptions, accelerated depreciation allowances, interest or commissions reduction, etc.

In the category of state or state-controlled sources comes:

- state budget;
- local budgets;
- special budget funds;
- budgets of State / state-administered institutions / authorities, organized at national, regional or local level;
- resources managed by banks or financial institutions with state capital;
- state-run investment funds;
- other government-managed budget sources (including European funds);
- the resources of state-owned companies.

The aid is granted by the state or from **state resources**. The notion of state is broad and includes all levels of public authorities, regardless of central, local or regional authorities (Case C-248/84 Germany v. European Commission, 1987).

No distinction should be made between State aid (state source) and State resources aid: “The prohibition referred to in Art. 107 (1) refers to all aid granted by the State or by State resources, without distinction being made whether the aid is granted directly by the State or through public or private entities designated to administer the aid” (Case 78/76 *Steinike & Weinlig vs. Germany*, 1977, Case 290/83 *European Commission v. France*, 1985).

The distinction is important only to identify the aid granted directly from the indirect grant. A typical example of indirect aid refers to aid granted through economic agents (Directive 111/2006 / EC on the transparency of financial relations between Member States and public companies, defines public companies as “any undertaking over which the State may exercise, directly or indirectly, a dominant influence through shareholding, financial participation in the company or the rules governing it). In this regard, we mention the case of *Stardust Marine* (Case C-482/88 *France v. European Commission*, 2002), an occasion with which the Court of First Instance first establishes that all resources of public companies can constitute state resources within the meaning of Art. 107 TFEU.

The provisions of Article 107 (1) TFEU also cover all the forms by which public authorities can support enterprises, whether or not they are permanently available to the State. Thus, even if the amounts involved in the aid are not always available to the State, simply because they are under public control and thus available to the competent national authorities, it is sufficient to be categorized as State resources. The State can exercise its dominant influence over these public companies and direct some of their resources to provide an economic advantage, when necessary, to other enterprises. This does not mean that, when a public company drops some of its revenue, the measure is state aid. It is necessary to demonstrate the imputability of the State, ie whether the company’s divestiture of that income is the result of the exercise of its dominant influence by the State. In this respect, also in *Stardust Marine*, the Court of First Instance established the following: “Even if the State controls and can exert a dominant influence on the operations of a company, the effective exercise of that influence must not be presumed automatically.” A public company can also act independently, in keeping with the level of independence the state allows. Therefore, the mere fact that a public company is controlled by the State is not sufficient for the company’s actions, such as the financial measures in question, to be attributable to the State. It has to be considered whether the public authorities were involved, in every way possible, in adopting these measures. “

Jurisprudence has shown that the State’s imputability is separate from the existence of state resources. The two conditions are separate but must be met cumulatively in order to be in the presence of a state aid measure (Case C-482/99 *France v European Commission*, 2002, ECR p. I-4397, para 52, T-

351/02 Deutsche Bank v European Commission, 2006, ECR p. II-1047, para 103).

Last but not least, it should be stressed that Member States sometimes grant special or exclusive rights to certain enterprises or make payments or offer other types of compensation to enterprises entrusted with the operation of a service of general economic interest. These enterprises are often in competitive relationships in the same markets with other enterprises. In accordance with the requirements of the Treaty, the Commission has an obligation to ensure that Member States do not grant public or private enterprises aid incompatible with the common market.

Public authorities can exert a dominant influence on the behavior of public enterprises, not only if they have the ownership or majority ownership, but also by virtue of their powers in the management or supervisory bodies, either by the status of the enterprise or by way of distribution of shares. Public funds can be allocated directly or indirectly to public enterprises. Transparency must be ensured regardless of how public funds are allocated. It may also be necessary to make public information on why public funds are allocated and how they are actually used.

According to art. 2, lit. (b) of Directive No. 111/2006 / EC on the transparency of financial relations between Member States and public enterprises as well as the transparency of financial relations within certain enterprises, the term “public enterprise” is defined as any enterprise over which the public authorities may directly or indirectly exert influence the ownership of the shares held by the authorities in those enterprises or under the rules governing them. It assumes that there is a dominant influence when the authorities, directly or indirectly, in relation to public enterprises:

- hold the majority of the subscribed capital of the enterprise concerned;
- control the majority of the votes attaching to the shares issued by the enterprises;
- may appoint more than half of the members of the administration, management or supervisory body.

At the same time, the concept of an enterprise must not be confused with the concept of an economic agent. At Community level, the Court of Justice has defined **enterprises** as entities carrying out an economic activity, irrespective of the legal status and the manner in which they are financed (Joined Cases C-180/98-C-184/98 Pavlov and Others, Rec. 2000, p. I-6451). The classification of a particular entity as an enterprise depends entirely on the nature of its activities. The definition given by the Court of Justice has three important consequences.

Firstly, the status of the entity in national law or its mode of financing is not determinant. For example, an entity which, under national law, has association or sports club status may nevertheless be regarded as an enterprise within the meaning of Article 107 (1) TFEU. The only criterion that will be

considered will be the fact that the entity does or does not have an economic activity. Enterprises also include both private-funded and state-funded entities.

Secondly, the application of the State aid rules itself is not conditional on the existence of a profit-making purpose of the entity. According to the jurisprudence of the Court of Justice and the Court of First Instance, even non-profit entities can provide goods and services on a market (Joined Cases 209/78 to 1515/78 and 218/78 *Van Landewyck* (1980) ECR 3125, paragraph 21, Case C-244/94 *FFSA and Others* (1995) ECR I-4013, paragraph 20, and Case C-49/07 *MOTOE* (2008) ECR I-4863, paragraphs 27 and 28.)

Third, the classification of an entity as an enterprise is always in relation to a specific activity. An entity carrying out both economic and non-economic activities must be considered as an enterprise only in respect of the first category of business. From this point of view, if an entity conducts both economic and non-economic activities, accounting separation of activities is essential in order to avoid cross-subsidization of economic activities by apparently subsidizing non-economic ones.

A. We also mention that the definition given by the Court of Justice to the concept of **economic activity** states that this category includes any activity consisting in the supply of goods and services in a market. Therefore, the existence of a market open to competition is decisive for classifying an activity in the category of economic activities. Given the complexity of European architecture and the diversity of ways of organizing economic systems, European jurisprudence does not provide a clear and exhaustive classification of economic and non-economic activities.

There are, however, a number of criteria which Community jurisprudence takes into account when classifying an activity as non-economic activities, namely:

a. the cases in which the State acts “by exercising the powers of public authority” or the cases in which the authorities in that State act “in their capacity as public authorities”. In this respect, activities related to the exercise of the following functions of the State are not considered to be of an economic nature:

- army or police;
- safety and control of air navigation;
- control and safety of maritime traffic;
- anti-pollution surveillance;
- the organization, financing and execution of prison sentences.

b. certain activities in the social security sector. In this respect, the European Court of Justice and the Court of First Instance use a series of criteria to determine whether a social security system is based on the principle of solidarity and therefore does not involve an economic activity:

- whether affiliation to the system is mandatory or not;
- whether the system pursues an exclusively social objective or not;

- whether or not the system has a lucrative purpose;
- whether the benefits granted depend on the contributions made;
- whether the benefits are not necessarily proportionate to the earnings of the insured person;
- whether the system is subject to State control or not.

c. certain health care activities. The European Court of Justice and the General Court have established that public hospitals which are an integral part of a national health service and are almost entirely based on the principle of solidarity are directly financed by social security and other state resources and provide the services free of charge for affiliated persons, based on the principle of universal coverage, can be considered not to provide economic activity. If this structure exists, even those activities that may be of an economic nature but which are carried out only for the purpose of providing another non-economic service are not economic in nature.

d. certain activities in the field of education. According to ECJ jurisprudence, public education organized under the nationally funded and state-controlled education system can be considered a non-economic activity. The non-economic nature of public education is not, in principle, affected by the fact that students and their parents sometimes have to pay enrollment or studies fees that contribute to the running costs of the system. On the other hand, public institutions can also offer educational services which, given their nature, their financial structure and the existence of competing private organizations, must be considered as economic. This category includes commercial enterprises offering university education courses entirely funded by students.

B. Economic advantage. The State aid must result in an economic advantage enjoyed by only one of the market players or a clearly identified and delimited group. The Romanian legislator defines the **economic advantage** as any form of granting a quantifiable advantage in money, according to article 2, paragraph (1), let. (h¹) of GEO no. 77/2014 on State aid procedures, as amended regardless of its form: subsidies, debt cancellation or loss taking, exemptions, reductions or delays in paying fees and taxes, giving up normal earnings from public funds, including the granting of preferential interest-rate loans, guarantees granted on preferential terms, state equity participations, central or local public authorities or other bodies managing state or local authority sources, if the profit rate of these investment is lower than normal, anticipated by a prudent private investor, price reductions in supplies and services provided by central or local public authorities, or by other bodies managing state or community sources including the sale of land belonging to the private domain of the state or local public authorities, below the market price, the creation of a market or the strengthening of the beneficiary's position on a market, etc.

The advantage is any economic benefit that the enterprise in question would not have obtained under normal market conditions, that is, in the absence of state intervention. Only the effect of the measure on the enterprise is relevant, as the cause or purpose of State intervention is not important. Whenever an enterprise's financial situation is improved as a result of State interference, it is considered that it has been granted an advantage. It should be noted that the term economic advantage is not limited to the amounts granted directly to the beneficiaries (non-reimbursable grants, grants, etc.).

A way often used by states is to **exempt them from the financial and tax burdens** they incur. From this point of view, there are specialists who include in the category of facilities that create an economic advantage for enterprises the following financial instruments, also:

- debt cancellation or takeover of losses;
- tax exemptions / reductions / deferrals;
- granting loans with preferential interest;
- guarantees granted by the state on preferential terms;
- state-owned participations in the concerned enterprise, if the rate of return on these investments is lower than the normal rate;
- price reductions on supplied goods and services provided to the enterprise (including the sale of land belonging to the private domain of the state or local public authorities, below market price).

We consider this approach to be easy, because tax measures such as tax exemptions, fees or contributions are for certain categories of subjects who all benefit equally from these measures, in which case there is no distortion of the competitive relationship between them. On the other hand, most of the fiscal incentives are social and not economic. In addition, most often, the beneficiaries of the fiscal incentives are individual persons, which makes them not to be considered state aid, according to the European Commission.

Regarding the process of payment facilities (either in the form of deferrals or in the form of payment schedules), the legislator has the reason to provide forms of financial support designed to preserve the right of the budgetary creditor to receive tax or budget receivables. By means of such measures, the legislator protects the possibility of receiving, even late, the amounts due to the state or the administrative-territorial units, as against the hypothesis forcing them to be collected from debtors who are temporarily facing financial difficulties and who could in such circumstances declare their insolvency. In this hypothesis, the budget lender risks not being able to collect anything, either immediately or in the long run, if the legal entity ceases to exist as a result of the insolvency proceedings. The aim pursued by the legislature is not, therefore, to support certain economic enterprises, but to preserve its financial interests in collecting budgetary claims which are of public utility.

Other financial instruments such as lending, collateralisation or price reductions to goods or services provided by public enterprises to certain categories of subjects, to the extent that their preferential treatment can be demonstrated, may be included in the category of State aid, since they are likely to cause distortions in the competitive relationship on the market.

Along with these, other less well-known instruments are also used to grant economic benefits, such as:

- creating a market for a particular supplier of goods or services;
- providing declarative support to an enterprise, which has the effect of consolidating its position at a given moment in a market (Case France Telecom, 2001).

Examples of situations that are considered as hidden or less obvious state aids can be given, such as the purchase or rental of a building at a noticeable price smaller than the market. Also, if a private company sells to the state assets of any kind at significantly higher prices than the market level, or privileged access of a company to a public infrastructure without the payment of a fee, or paying a reduced fee. Last but not least, when an enterprise obtains risk capital from the state on more advantageous terms than would be obtained from a private investor, it is a situation considered to be state aid.

C. Selectivity. State aid must be selective, thus affecting the balance between certain firms and their competitors on the same markets. Selectivity is what differentiates State aid from general measures that apply to all subjects in all the economic sectors of a state. Thus, a State aid scheme is considered selective if the managing authorities enjoy some discretionary power or if that scheme only applies to a part of the territory of a State. More precisely, a measure is selective if it concerns certain businesses, locations, types of companies (e.g. SMEs), regions or a specific sector of activity.

De jure selectivity results directly from the legal criteria for granting a measure which is formally reserved for certain enterprises (eg those that have a certain size, are located in a certain area, operate in certain sectors, have a certain legal form, enterprises formed in a given period belonging to a group with certain characteristics or enterprises to which certain functions have been entrusted inside a group).

By comparison, *de facto* selectivity can be established if, although the formal criteria for applying the measure are formulated in general and objective terms, the structure of the measure is such that its effects significantly favor a particular group of enterprises. *De facto* selectivity may be the result of some conditions or obstacles imposed by the Member States to prevent certain enterprises from benefiting from the measure. For example, applying a fiscal measure (such as a tax credit) only for investments above a certain threshold could mean that the measure is *de facto* reserved for enterprises with significant financial resources.

D. Effect on competition and trade. The State Aid must have a **potential effect** on free competition and on trade between Member State companies. For that purpose, it is sufficient if it can be shown that the beneficiary (the nature of the beneficiary is not relevant) [1] is involved in an economic activity and that he operates in a market where there is trade between the Member States. In this respect, one of the most well-known judgments of the ECJ is that of Philip Morris (Case 730/97 Philip Morris Holland BV v European Commission, 1980, ECR 2671). In this situation, competition is distorted when the aid measure in question strengthens the competitor's competitive position by reducing its costs compared to its competitors. Distortion must not be effective, it is sufficient to have a potential character.

In principle, there can be no distortion of competition where the market is not liberalized. From this point of view, it should be stressed that most products and services are marketed between the Member States and thus a measure of support for an enterprise or industry also has an effect on trade between Member States. Public support is likely to distort competition even if it does not help the recipient enterprise expand and obtain market shares. It is sufficient that the aid allows it to maintain a stronger competitive position than it would have maintained if the aid had not been granted. In this context, in order for the aid to be likely to distort competition, it is normally sufficient for the aid to provide the beneficiary with an advantage by exempting the expenditure which it would, otherwise, have had to bear in the course of commercial transactions routine.

The definition of State aid does not imply that the distortion of competition or the effect on trade is significant or material. However, the fact that the amount of the aid is low or that the beneficiary enterprise is small will not in itself rule out a distortion of competition or its threat.

Public support may be considered as capable of affecting trade within the European Union, including where the beneficiary is not directly involved in cross-border trade. For example, the subsidy may hinder market penetration for operators in other countries by maintaining or increasing local supplies. Even a public subsidy granted to an enterprise providing only local or regional services and not providing services outside its home State may nevertheless affect trade between Member States if enterprises in other Member States are able to provide those services and such a possibility is not only hypothetical.

As demonstrated in Tubemeuse, aid may distort competition even if the recipient firm exports all production outside the European Union. Nor does the Commission need to demonstrate that the aid distorts competition or affects trade between Member States. There is no need for the European Commission to define the relevant market and distortion of competition and trade must not be demonstrated (Joined Cases T-204/97 and T-270/97 Empresa para a Agroalimentacao e Cereais, SA v European Commission, 2000, ECR II-2267, para 85).

At the same time, it should be pointed out that low European aid (de minimis aid) at European Commission level does not have a potential effect on competition and free trade between Member States. The Commission therefore considers that such aid does not fall within the scope of the prohibitions laid down in Art. 107 par. (1) TFEU. At the same time, according to Community jurisprudence, **there is no threshold** or percentage below which competition can not be considered to be affected.

The relatively small amount of the aid or the beneficiary enterprise does not, a priori, mean that the aid does not distort competition or affect trade between Member States. The only exception is de minimis aid. However, in some cases, the Commission considered that, given the specific situation, certain activities had a purely local impact and, as a consequence, did not affect trade between Member States. Here are some examples:

- sports facilities and other recreational facilities mainly for a local area;
- museums or other cultural infrastructures that are less likely to attract cross-border visitors; hospitals and other medical facilities exclusively for the local population;
- media and / or cultural products that, for geographic and linguistic reasons, have a limited audience at local level;
- a conference center where it is unlikely that the location and potential effect of the aid on prices will divert users from other centers in other Member States.

The Romanian legislator also defines other notions complementary to State aid, ie the concept of **exempted aid** (State aid measure fulfilling the criteria set out in **Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the national market in application of Articles 107 and 108 of the TFEU**), unlawful aid (State aid granted without respecting national and European Union State aid procedures) or misused aid (the aid used by the beneficiary without complying with the legal conditions for granting).

4. CATEGORIES OF STATE AID

A. State aid incompatible with the European common market

Aid measures fulfilling the criteria set out in Article 107 (1) TFEU are, in principle, incompatible with the Common Market. However, the principle of incompatibility does not go as far as a total ban.

B. Compatible State Aid (Accepted) in the European Common Market

Article 107 (2) and (3) of the TFEU specifies a number of cases where State aid can be considered acceptable (the so-called “exceptions”), i.e. compatible aid. Existence of these exceptions also warrants verification by the European Commission of draft state aid measures as set out in Article 108 of the TFEU.

This Article provides that **Member States must notify the Commission of any intention to grant State aid prior to its implementation**. The Article also confers on the Commission the power to decide whether the proposed aid measure is compatible or to decide “the suspension or modification of the aid by the State concerned”.

In the exercise of its prerogatives, the Commission has developed specific approaches according to the size of the firm, its location, the industry concerned, the purpose of the aid, etc. In order to ensure transparency, predictability and legal certainty, the Commission has made public the criteria it uses when checking the compatibility of the notified aid measures.

We can distinguish the following main categories of **compatible State aid** under Article 107 (3) (a) and Article 107 (3) (c) TFEU [2]:

- a. Regional aid
- b. Article 107 (3) (a) and 107 (3) (c) of the TFEU provide a basis for the acceptance of State aid measures addressing regional issues:
 - Article 107 (3) (a) of the TFEU applies to State aid to promote the development of “regions where the standard of living is abnormally low or where there is a very low employment rate”;
 - Article 107 (3) (c) of the TFEU treats aid for other types of problem (national) region, “aid to facilitate the development of ... certain economic regions”. This article gives Member States the opportunity to help regions that are disadvantaged compared to the national average. The list of regions qualifying for this exception is also decided by the Commission, but on a proposal from the Member States. Member States may use national criteria to justify their proposal.

The European Commission has established, through an official document called *Regional Aid Guidelines for 2014-2020*, the conditions under which regional aid can be used. Under the conditions set out in these European Commission communications, it is stated that regional aid is accepted as compatible with the internal market if there is are fair competition conditions between Member States.

For this, measures and criteria must be adopted to prevent the rush of subsidies that may occur when trying to attract or maintain enterprises in deprived areas of the Union. From this point of view, it is necessary to underline that a mapping of the EU’s less-favored areas was made at the proposal of the Member States and on the basis of two fundamental criteria, namely the GDP per capita and the density of the population in relation to the average density at EU level. It is time to highlight the special case of Romania that has one of the poorest regions of the EU, namely the North-East Region with a GDP of 29.33%, and the South-West Oltenia Region with a GDP of 35.67% and the Region South-East with a GDP of 37.67% can be considered disadvantaged.

The poorest region in the EU is, however, in Bulgaria with a GDP of 27.00% per capita.

Regional aid can only play an effective role if used moderately and proportionally and focuses on the most disadvantaged regions of the European Union. In particular, the permissible aid ceilings should reflect the seriousness of the problems affecting the development of the regions concerned. In addition, the benefits created by aid in terms of the development of a less favored region must be more significant than the distortions of competition resulting from their granting.

Regional aid aimed at reducing current expenditure on an enterprise constitutes operating aid and will not be considered compatible with the internal market unless it is granted to combat specific or permanent handicaps faced by enterprises in less-favored regions. Operating aid can only be considered compatible if it is aimed at reducing certain specific difficulties faced by SMEs in particularly disadvantaged areas covered by Article 107 (3) (a) TFEU or in order to compensate additional costs for conducting an economic activity in the outermost regions, or to prevent or reduce depopulation in areas with a very low population.

Regional aid can only be considered compatible with the internal market if it has an incentive effect. There is an incentive effect when aid modifies the behavior of an enterprise in such a way that it initiates an additional activity by which it contributes to the development of an area which it would not have initiated in the absence of its aid or which it would have carried out in a different or limited manner or in another place. The aid does not have to subsidize the costs of an activity which an enterprise would have incurred in any case and should not compensate for the normal commercial risk of an economic activity.

b. State aid established by horizontal rules

The “horizontal” rules set out the Commission’s position on certain categories of aid which are intended to address problems that may arise in any industry and region. So far, the Commission has adopted the criteria to be applied to the following categories of aid:

- aid to combat climate change and protect the environment;
- aid for research, development and innovation;
- aid for rescuing and restructuring firms in difficulty;
- aid to small and medium-sized enterprises;
- aid for employment;
- training aid;
- risk capital aid;
- aid for services of general economic interest.

c. State aid established by sectorial rules

The Commission has also adopted industry-specific rules (sectoral rules) which define its approach to state aid in certain industries. The most important in this context are the following:

- Specific sectors. Over the years, special rules have been adopted for a number of sectors characterized by a series of problems or exigencies that had to be addressed through a specific set of rules. These include the audiovisual, broadcasting, coal, electricity (stranded costs), postal services and shipbuilding sectors. There are also specific restrictions on aid to the steel industry and the synthetic fiber industry.
- Agriculture, forestry, fishing and aquaculture. The rules applying to these sectors are set out principally in the Community Guidelines on State aid to the agriculture and forestry sector for 2007-2013 and in the Community Guidelines for the examination of State aid to fisheries and aquaculture.
- Transport. In the road transport sector, most of the general State aid rules, including the *de minimis* Regulation, apply, although there are a number of exceptions (eg transport equipment is generally not eligible for aid, aid for the purchase of road freight transport vehicles is excluded from the *de minimis* Regulation and the *de minimis* ceiling is reduced to EUR 100 000 for the road transport sector).
- Sectoral State aid rules apply to other transport sectors (rail, air, sea and river transport).

d. Specific aid tools

The Commission has published a number of communications to provide guidance on the use of specific aid instruments (guarantees, tax aid, capital injections) or for calculating the amount of aid (15 Regulation (EU) No. (EC) No 651/2014) [3].

State funding fulfilling the criteria set out in Article 107 (1) TFEU constitutes State aid and should therefore be notified to the Commission pursuant to Article 108 (3) of the Treaty. However, in accordance with Article 109 of the Treaty, the Council may determine the categories of aid exempted from this notification obligation. Also, in accordance with Article 108 (4) of the Treaty, the Commission may adopt regulations on these categories of State aid.

Council Regulation (EC) No 994/98 empowers the Commission to declare, in accordance with Article 109 of the Treaty, that, under certain conditions, the following categories may be exempted from the notification requirement: aid to small and medium-sized enterprises (SMEs), for research and development, aid for environmental protection, employment and training aid, and aid compliant with the map approved by the Commission for each Member State for regional aid.

The Commission extended the exemptions to new categories of aid for which clear compatibility conditions can be defined. These new categories of aid exempted from the notification procedure include:

- aid to repair damage caused by certain natural disasters;
- social aid for the transportation of residents from remote regions;
- aid for broadband infrastructure;
- aid for innovation, aid for culture and heritage preservation;
- aid for sports infrastructures and multifunctional leisure facilities.

Through its regulations and communications on the modernization of state aid in the EU, the Commission launched a wider process of revision of state aid rules. The main objectives of this modernization are:

- achieving sustainable, smart and inclusive growth in a competitive internal market, while contributing to the efforts made by Member States towards more efficient use of public finances;
- focusing ex ante control of Commission aid measures on cases that have the greatest impact on the internal market, while enhancing Member State cooperation in ensuring compliance with State aid rules;
- streamlining the simplification of rules and quicker adoption of better and more robust decisions, based on clear economic logic, a common approach and clear obligations (Review of Regulation (EC) No. 800/2008) [4].

5. CONCLUSIONS

In the European Union, the problem of State aid is treated with great care and in a very nuanced manner. At a first glance, State aid is rejected because it is considered that it distorts the fair competitive relationships between different subjects operating on the same market. In fact, the vision on this issue has gradually undergone many nuances due to some well-known Decisions of the European Court of Justice. The latter generated the European legislation to which I referred in the paper and which now explains the forms of state aid that are fully accepted in the European Union as engines for the development of poorer areas or for strengthening certain economic or socio-cultural sectors.

NOTES

- [1] The nature of the beneficiary is not relevant in this context. Even a non-profit organization can engage in economic activities and may therefore benefit from state aid.
- [2] According to art. 107, par. (3) TFEU can be considered compatible with the internal market following forms of state aids:
 - a) aid intended to promote the economic development of region where the standard of living is abnormally low or where there is a very low level of

- employment and the regions referred to in Article 349, having regard to their structural, economic and social situation;
- b) aid intended to promote the realisation of an important project of common European interest or to remedy serious disturbances in the economy of a Member State;
 - c) aid intended to facilitate the development of certain economic activities or of certain economic areas, where they do not adversely affect trading conditions to an extent contrary to the common interest.
- [3] 15 Regulation (EU) No. (EC) No 651/2014 declaring certain categories of aid compatible with the internal market pursuant to Articles 107 and 108 of the TFEU. Regulation (EU) No 1407/2013 of 18 December 2013 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to de minimis aid.
- [4] Review of Regulation (EC) No. 800/2008 is a central element in the modernization of State aid.

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- 4) Case 730/97 Philip Morris Holland BV v European Commission, 1980, ECR 2671.
- 5) Case C-482/99 France v European Commission, 2002, ECR p. I-4397, para 52, T-351/02 Deutsche Bank v European Commission, 2006, ECR p. II-1047, para 103.
- 6) Commission Regulation 1407/2013 on the application of Art. 107 and 108 of the TFEU.
- 7) GEO no. 77/2014 on national procedures in the field of State aid.
- 8) Joined Cases T-204/97 and T-270/97 Empresa para a Agroalimentacao e Cereais, SA v European Commission, 2000, ECR II-2267, para 85.
- 9) Joined Cases C-180/98-C-184/98 Pavlov and Others, Rec. 2000, p. I-6451.
- 10) Law no. 20/2015 for approval of GO no. 77/2014 on national procedures in the field of State aid.
- 11) Regulation (EU) No.330/2010 of 20 April 2010 Commission on the application of Article 101 (3) of the Treaty on the Functioning of the European Union to categories of vertical agreements and concerted practices.
- 12) Regulation (EU) No. 461/2010 of 27 May 2010 Commission on the application of Article 101 (3) of the Treaty on the Functioning of the European Union to categories of vertical agreements and concerted practices in the motor vehicle sector.
- 13) Regulation (EU) No. 651/2014 of 17 June 2014 Commission declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the TFEU.
- 14) Treaty on the Functioning of the European Union (TFEU).

RULE OF LAW AND GOOD GOVERNANCE – PREREQUISITES FOR ATTAINING THE DEVELOPMENT GOALS

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Abstract

Given the fact that Rule of Law and strong legal systems are considered a pre-condition for sustainable development, contemporary period shows that development trends take into account the transition to a new kind of democratic state of care that brings together the best qualities of both the rule of law and the social one. The rule of law as a philosophical-legal concept, which corresponds to the practice of organizing a constructive political power and guaranteeing the rights and freedoms of citizens, is one of the most important achievements of modern civilization. At present, the rule of law is not only one of the most important human values that are meant to endorse humanist principles, justice, but also an effective institute for the protection of the rights and freedoms, the honour and dignity of the person, the means of fighting against bureaucracy, provincialism and departmentalism, the form of realization and the existence of real democracy. The paper summarizes an extensive bibliographical search by presenting the legal obstacles to good governance consolidation and the existence of a relationship between rule of law, the status of good governance and achieved development goals. The link from rule of law to development runs through the incentives individuals and policy makers have to consolidate and include legal framework, capable

to assure contractual certainty as well as dispute resolution mechanisms that support economic growth and development.

Keywords: *good governance; rule of law; development goals.*

JEL Classification: G2, K2, O11, P51

1. INTRODUCTION

The analysis of major factors that have an impact on state reform programs is an important topic for researchers, being demonstrated by the significant number of empirical studies which investigate the justice based on the full acceptance of human dignity and establishment of democratic, accountable state institutions (Agnafors, 2013; Johnston, 2016; Kingsbury, 2009; Krygier, 2012; Rajkovic, 2012; Rothstein, 2010; Rothstein and Teorell, 2008). As regards state capacity with implications for reform programs, the rule of law is highlighted as an essential condition (Fukuyama, 2007; Peerenboom, 2003) and one of the most important ideal in the field of democratic values (Castellano, 2012).

Good governance is defined by Besançon (2003) as the effective provision of services to all citizens. Such services could include security, rule of law, civil freedom, health care, education, infrastructure, fiscal system, and an enabling regulatory environment. Good governance plays an important role in development studies and presents a shift in the way governments are managed and also includes quality of governance (Abdellatif, 2003). Theoretical literature has explored the breakdown in government decisions and the status of development in different formulations. Considering regional planning as a part of national planning and as an important aspect of guided change in social and economic systems, John Friedman analyse the development process by considering its spatial dimension and highlight the importance of a framework of rules capable to regulating social conflicts (Friedmann, 1967). Dam Kenneth (2006a, 2006b) considers that even if the rule of law is an essential factor to unlocking the developing full growth potential, it is important to select and to know what exactly legal institutions matter in this equation and how can this improve policy maker's knowledge. An interesting point of his study consists in fact to reflect on the opinion according to which legal systems originated in the English common law recorded superior per capita income growth compared with so-called civil law countries, whose law is based on European codes, especially those countries whose law is based on the Napoleonic codes and hence on French law (Dam, 2006a, 2006b; Hare, 2007). Theoretical approach to this problem could be seen in different situation, when the rule of law principles are the result of harmonization and common standards in good practices or when the concept is recognized as the ability of the government to fulfil its obligations and to simply adopt rules. International harmonization of economic regulation is an important part of rule of law consistency, by reducing regulatory diversity in economic policy areas, it can be eliminated the possibility that states to act in base of autonomous regulatory jurisdiction (Nakagawa, 2012).

While the development goals need to be set in a SMART manner and some of the ideas in these smart definitions draw upon the good management practices tradition, the fundamental concern is to improve the partnerships between state and society and to sustain this partnership through good governance (the capacity to use public power and resources in the pursuit of widely-accepted social goals), rule of law (standards capable to assure public support and support social values), transparency and accountability (following the outcomes of established rules and demonstrate the viability of those rules).

Talking about a strong rule of law does not necessarily mean a multitude of laws, but rather a strong state through the force of law, in which citizens respect the law not by fear, but because they have a stake in its efficiency. In other words, any state can enact laws and adopt legislation for eradicate the corruption, but the rule of law requires the bidirectional relationship between state and society and need to have the outcome in social and economic progress (Mendelski, 2017). Some paper stress the idea that the rule of law may truly be consistent with democracy (O'Donnell, 2004), other analyse the concept by defending some different interpretation, distinguishes between rule of law as an institutional equilibrium from rule of law as the distribution of power and relate that governments intention to evade the law is based on psychological preference to dominate others and promote own interest (Maravall and Przeworski, 2003).

In order to clarify the trends in rule of law reforms and to present the legal obstacles to good governance consolidation concurrently with the existence of a relationship between rule of law, the status of good governance and achieved development goals, we try to review the studies which analyse the relationship between the Rule of Law and Development, as well as a series of studies and research that allow us to established a prospective point of view in our research, by presenting new approaches to the rule of law programming.

2. THE RELATIONSHIP BETWEEN THE RULE OF LAW AND DEVELOPMENT

Research on public administration usually ignores the law, while law practitioners ignore the problems faced by public administration. Only a small part of the literature attempts to address the conflict between the rule of law and the efficiency of public administration or the relationship between the legal framework and the development goals (Afonso, Schuknecht, and Tanzi, 2005; Dam, 2006b; Neda, 2011). The 2007-2009 financial crisis has, among other things, generated challenges for governments to change regulation and to strengthen financial supervision to ensure sustainable development. Thus, the regulatory framework benefits from a continuous reform, insisting on the allocation of competences in terms of harmonization and decentralization.

At its core, the rule of law is the connection mechanisms between the state and the citizen and, implicitly, the system by which the creation of an ordering

in society is attempted by the specific principle of regulation and rules, capable to assured security, property rights and a concrete way to development process. Each major event politic or economic, each reform good or bad, each decision right or wrong has a huge implication on the process of development and as far as the rule of law. Being inherently consistent with international human rights standards and requiring a direct implication on society, economy and political systems, rule of law principles imply the existence of solid institutions, capable to maintain their objectives and also harmonization between countries in what concern the process of codify the process of social and economic justice. The principles of governance can be applicable without the supremacy of law and measures capable to ensure adherence to the democratic concepts, but if international norms and standards continues to reflect the diversity at national and international level, then the way to sustained and inclusive growth can be difficult.

In general, political stakes affects the rules of the game and this allow citizens to have doubts about the quality of governance and the essence of democracy.

Table 1. The perception of rule of law indicators

| World Bank indicators of rule of law | World justice project indicators of rule of law | United Nations and the Rule of Law |
|---|---|---|
| Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Legal and political order A state of human security | Constraints on Government Powers Absence of Corruption Open Government Fundamental Rights Order and Security Regulatory Enforcement Civil Justice Criminal Justice | Principles of governance in which all persons are accountable to law Human rights norms and standards Separation of powers Participations in decision making Legal certainty Avoidance of arbitrariness and procedural and legal transparency. |

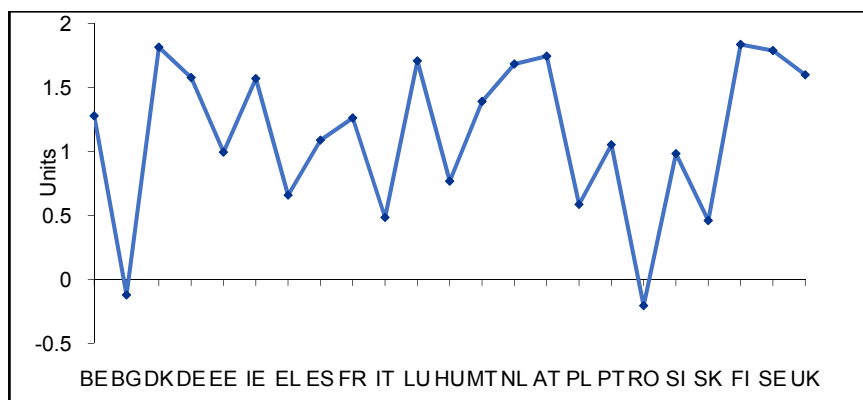
Source: (World Bank, 2012; World Justice Project, 2019)

Analysing international documents, we find that the concept is viewed in slightly different ways. Thus, an interesting point of view came from the World Bank indicators of rule of law, in their reports, being indicated that the rule of law it's not about what most of us will define it. It is nothing about human rights, independence of the judiciary or the principle of equalities before the law, it is nothing about a fair role and fair punishment and it is not implied that all the citizens are treated equally it's all about economic rights, about contracts and

property rights, so all the sources and the questions come from this area. World justice project comes with a composite index which considers other coordinates of this concept, as can be seen in Table 1. This double perception of the concept of the rule of law, in fact, indicates its double implication, of a juridical and economic nature, but above all, it highlights the economic and social implications. The complexity of rule of law implies different interpretation regarding the legitimacy of power, varied understandings from the part of policy makers and subsequent institutions. In this sense, it is a process through which development outcomes can be achieved only if countries proceed to clear legal framework, capable to consolidate principles of governance and concrete measures to assure the principles of supremacy of law.

Different perception of the concept of the rule of law, in fact, indicates its double implication, of a juridical and economic nature, but above all, it highlights the economic and social implications. The complexity of rule of law implies different interpretation regarding the legitimacy of power, varied understandings from the part of policy makers and subsequent institutions. In this sense, it is a process through which development outcomes can be achieved only if countries proceed to clear legal framework (Tofan, 2017), capable to consolidate principles of governance and concrete measures to assure the principles of supremacy of law. Based on World Bank point of view, it is suggested that there is a direct relationship between rule of law status and achieved development. We find for example that “A lack of access to justice is itself a central dimension of poverty”(World Bank, 2012).

Figure 1. Rule of law average in EU countries from 2000 until 2014



Source: computed by authors processing data of World Bank (2019)

The economic rationale of the implications of the rule of law can be observed in a simple analysis and by simply highlighting the specific trend of rule of law index in different states. Considering different countries from

economic and social point of view (in our case the EU countries) can be observed for example that countries known to have poor economic performance, such as Romania, Bulgaria and Greece, show a low value in the rule of law, at the opposite side, Luxembourg, Austria or Denmark, showing the highest values (see Figure 1).

Having in mind the implication of this concept not only at the EU level, the hypothesis launched by us is also sustained globally, in which case there is a decline in the idea of the rule of law also on the profile of some states considered to be finely weak in terms of economic performances. Based on World Justice Project (2019), Figure 2 reflects improving and declining rule of law and categorization of the countries based on their overall Rule of Law index score. As can be seen, in the last year, 56 countries rule of law score changed more than ± 0.005 . We find few countries whose index is below the median but improving, only seven. Over 30% of the countries recorded index above the median but declining.

Figure 2. Categorization of countries according to whether their overall Rule of law index score is above or below the median (improving and declining rule of law)



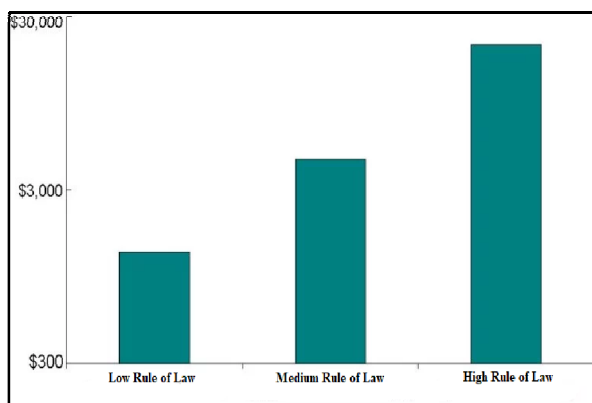
*Stable countries those with a score change between -0.005 and 0.005 are not shown

Source: (World Justice Project, 2019)

We can see that the development agenda should consider new approaches to the rule of law by incorporating three approaches that we consider to be appropriate in the context of further development. First of all, it is considered appropriate *to define a common goal of the rule of law*, to be subsumed in a series of communicating indicators, which can be adapted to the specific context of each country. A rule of law goal would be at the forefront of the rule of law as a result of common indicators (for example as an outcome of development on par with other outcomes, comparing poverty reduction and inequalities reduction with health improvement).

Secondly, *adopting rule of law as a “high standard”* able to guide countries towards development and progress, is another major objective to be integrated into future development policy. In such an approach, the rule of law is not a simple goal, it is an instrument that guides to viable developmental outcomes. Thirdly, it might be useful to *include the rule of law and specific indicators in development goals and strategies*, thus highlighting the implications of the rule of law for the entire development process and seeing it as an important pillar of this itinerary. The empirical results on law and finance provide evidence for the theories of rule of law highlighting an important implication of this concept on the area of development (Allen, Qian and Qian, 2005; La Porta, Lopez-de-Silanes and Shleifer, 2013; Vollmer, 2005). The entire body of research provided by the economists suggests that it is a strong correlation between the historical origin of a country laws and economic outcomes, which means that we need to take legal theory and economic philosophy seriously in order to consolidate a properly design of development and to relate not just *whether* but also *how* law matters.

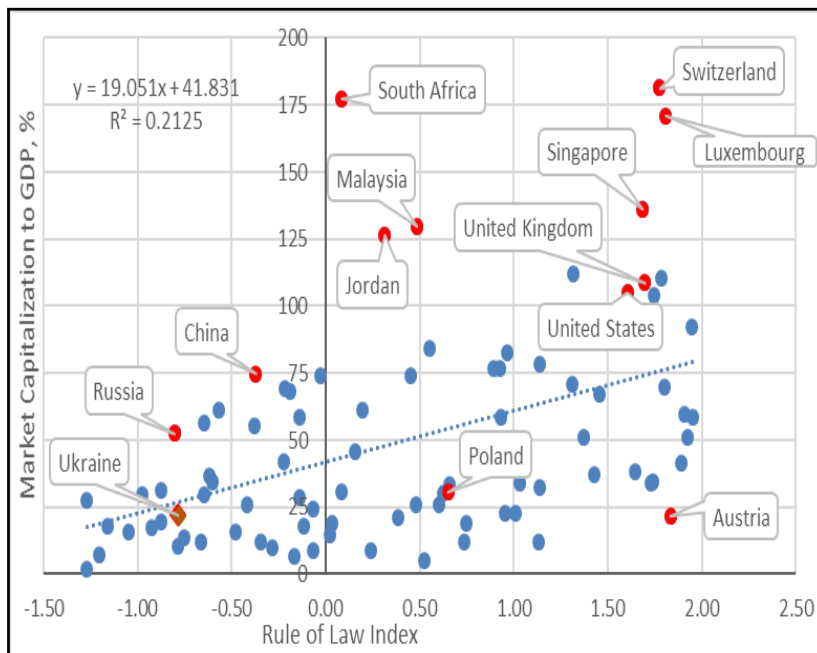
Figure 3. Rule of law Matters for National per capita Income



Source: (Kaufmann, 2010; Kaufmann, Kraay and Mastruzzi, 2009)

The literature presents varying views and evidence of the development functions performed by the rule of law, considering Daniel Kaufman work, we find that challenges established based on the rule of law can matters especially in the long run for economic development and a breakdown of law can expose countries to a socio-economic costs in terms of economic turmoil, high level of corruption or electoral mismanagement (Kaufmann, 2010). By using official indicators indicated by the World Bank, the author suggests that on the profile of US, rule of law does causally impact economic development and growth. (see Figure 3). The author was asserting that the ability of countries to bring innovation through the consolidation of rule of law depends by the capability to determined what components of rule of law are particularly criticalL and how governments and informal institutions affect the application of this objective. Even if the relationship between rule of law and development changed over time, policy on the rule of law allow us to judge that is a strong correlation between rule of law framework and long-run economic growth. A right law treatments for certain companies, a consolidation of property rights or contract enforcement tended to be associated with growth.

Figure 4. The implication of rule of law on the functioning of the stock market



Source: (Naumenko, 2016)

In his study (Naumenko, 2016) analyse the implication of rule of law on the functioning of the stock market and highlight a theoretical mechanism of influence of the rule of law factors on the market (see Figure 4). This is in line with Thorsten, Demirgüç-Kunt and Levine (2003) concept that the law and finance theory holds that legal traditions, brought by colonizers, differ in terms of protecting the rights of private investors vis-à-vis the state, with important implications for financial markets. Moreover, based on literature we find the validation regarding the private perspective, being highlighted that it is a direct correlation between the improvement of the legal framework regarding incompatibilities of executive positions in companies and the quality of governance and also the economic results of organizations (Toader, Oprea and Popescu, 2018).

The relationship between the development of stock market and rule of law is built based on the average values for the period 2008-2012. Market capitalization rate is used as an estimate of the level of market development. The sample includes those countries for which, in addition to capitalization, there are data on turnover, confirming the level of market development. The sample excludes values of Hong Kong.

3. NEW APPROACHES TO THE RULE OF LAW PROGRAMMING

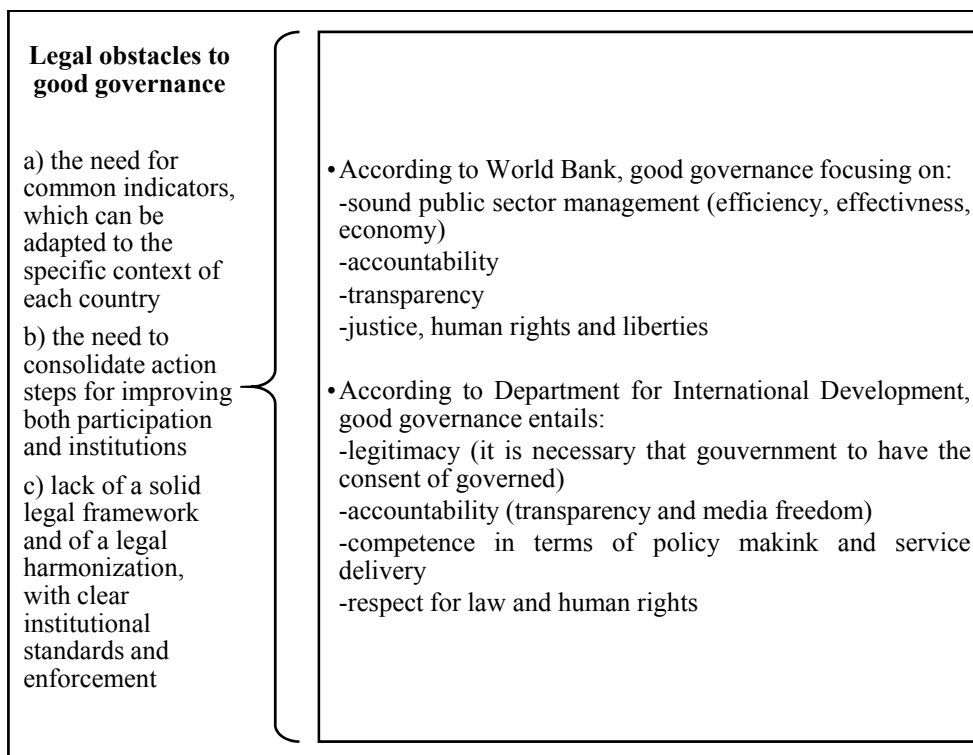
At present, the rule of law is not only one of the most important human values that are meant to endorse humanist principles, justice, but also an effective institute for the protection of the rights and freedoms, the honour and dignity of the person, the means of fighting against bureaucracy, provincialism and departmentalism, the form of realization and the existence of real democracy. As a result of his complexity, the concept entails numerous trends and changes for policy makers and several key choices for both governments and citizens. For instance, in response to citizen's pressure and based on political stakes, policy makers can adopt new promising efforts to pursue rule of law, but without any impact on development path and without a consolidation of institution. We can say that political demand for reforms is essential and in absence of a solid strategy, can imply an intergenerational effect and a negative impact on development perspective.

To improve the quality of rule of law it is required new approaches, capable to better reflect local and regional needs, by including the concept as an outcome element of process of development (including the rule of law perspective through a variety of programmes, from employment, education, health, environment protection, natural resource management or crisis prevention, to poverty eradication and economic growth. Having in mind both World Bank and UNDP perspective, rule of law is considered from one side, as a potential end-users, and from other side, as a people centred perspective, which means that first problem consist in improving monitor and evaluation standards, instead to

defined new principles of rule of law. The enforcement of administrative civil and penal law can represent the prerogative of specialized public authorities and can lead to new perspectives. Of course, it is required that formal judicial and security institution to be eliminated from rule of law agenda and to prioritize the efforts to informal social control and fair allocation and correct delivery of services. If countries facing troubling trends in rule of law, this reflect problems in terms of citizen's fundamental rights and constraints on government powers, which means that the drivers of decline include lack of accountability and enforcement of existing laws.

Overall it seems that rule of law needs a strong foundation, the state should provide enough mechanisms to institutionalize justice sector reforms and to consolidate the idea of good governance, which is the outcome of good practice in rule of law. Following the Figure 5, we have established three legal obstacles to good governance.

Figure 5. Legal obstacles to good governance consolidation



Source: own projection

Starting with the need for common indicators, which can be adapted to the specific context of each country, the legal obstacles are established based on the first part of investigation from our work and relate also, the need to consolidate action steps for improving both participation and institution and the improvement in legal framework by taking into account the idea of harmonization, with clear institutional standards and enforcement.

4. CONCLUSIONS

Enhancing the quality of rule of law is a challenging task for countries around the world. Since the concept entails numerous trends for policy makers and several key choices for both governments and citizens, the fundamental concerns is to improve the partnerships between state and society and to sustained this partnership through good governance, transparency and accountability, following the outcomes of established rules and demonstrate the viability of those rules.

Even if the theoretical literature has explored the breakdown in government decisions and the status of development in different formulations, our extensive bibliographical search reflect that at its core, the rule of law is the connection mechanisms between the state and the citizen and, implicitly, the system by which the creation of an ordering in society is attempted by the specific principle of regulation and rules, capable to assured security, property rights and a concrete way to development process. The study highlight that the development agenda should consider new approaches to the rule of law by incorporating three approaches that we consider to be appropriate in the context of further development: to define a common goal of the rule of law, to be subsumed in a series of communicating indicators, which can be adapted to the specific context of each country. To adopt rule of law as a “high standard” able to guide countries towards development and progress and to include the rule of law and specific indicators in development goals and strategies, thus highlighting the implications of the rule of law for the entire development process and seeing it as an important pillar of this itinerary.

Our findings indicate the existence of a long-run relationship between rule of law, the status of good governance and achieved development goals. This implies that the government must act to reduce corruption by improving governance. Improving governance will not only control corruption but also improve the quality of life. Each major event politic or economic, each reform good or bad, each decision right or wrong has a huge implication on the process of development and as far as the rule of law consolidate action steps for improving both participation and institution, and improvement in legal framework take into account the idea of harmonization, with clear institutional standards and enforcement, the way to development can have a solid pillar.

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RIGHT TO A FAIR TRIAL – LIMITATIONS IN CRIMINAL TRIAL

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Abstract

This article aims to emphasize the deficiencies in procedural-criminal matters, so that the current Criminal Procedure Code is not perfect, but perfectible, in matters of guaranteeing the right to a fair trial. Although ECHR has often condemned Romania for the violations contained in the judgments of the courts of our country, one of the situations presented in this article concerns precisely such a violation of European notions, i.e. non-inclusion in cases of request of rejudgment of the case by the substantive court, of the decision which either is not motivated or is insufficiently motivated, which prevents the right to an effective judgment, as well as the right to the effective exercise of two degrees of jurisdiction, a matter which limits the right of the person to a fair trial.

Keywords: *fair trial; unmotivated; effective judgment; degrees of jurisdiction; rejudgment.*

JEL Classification: K14

1. INTRODUCTION

Among the rights entered in the New Code of Criminal Procedure (Law 135/2010), with the value of principle governing the criminal process as a whole, the right to a fair trial is also being registered. Article 8 Criminal Procedure Code establishes the fair character and reasonable term of the criminal process, showing that the judicial bodies have the obligation to conduct prosecution and judgment in compliance with the procedural guarantees [1] and the rights of the parties and the procedural subjects, so that the facts constituting offences are found in a timely and complete manner, no innocent person is held liable, and any person who has committed a criminal offence is punished under the law within a reasonable time.

2. THE RIGHT TO A FAIR TRIAL – AN APPROACH

The Current regulation of our criminal procedural legislation is an approach whereby the internal legislation has been in line with the existing international provisions. Thus, by Law No. 30 of May the 18th, 1994, Romania ratified the European Convention for the Protection of Human Rights (C.E.D.O.), as well as the additional Protocols to this No. 1, 4, 6, 7.9, 10. The Romanian Constitution also contains specific regulations on international human rights treaties.

According to the provisions contained in art. 11 and 20 of the Constitution, the Convention and its additional Protocols have become an integral part of the national law, taking precedence over it, in other words C.E.D.O. and the Additional protocols have become the source of compulsory and priority national law, which, nationally has as the immediate consequence of the application of the Convention and Protocols by the Romanian courts, and internationally accepting the control provided for by C.E.D.O. on national judgments (Bratu, 2017).

Internationally, the right to a fair trial in criminal matters is governed by art. 6 of the ECHR. The Application of paragraph 1 in criminal matters is determined by the existence of an accusation to be committed a crime. The ECHR defines the application of article 6 paragraph 1 in criminal matters in the Engel decision and others c. The Netherlands on the basis of 3 criteria: the frame given by the national legislation of the state in question, the nature of the offence and the seriousness of the penalty attracted.

Among the components of the right to a fair process is the right of access to a court (Brumarescu, Canciovici, Mosneanu, Greek Catholic Parish Sambata Bihor, Albina, etc) [2]. Article 6 guarantees the right to a court which implies the right to have fair and effective access to judgment [3]. This includes:

- A court with full jurisdiction: the Court does not necessarily understand a classic-type jurisdiction, but has an autonomous acceptance within the meaning of the Convention, applying also to non-jurisdictional bodies. The “Court” is characterized by its jurisdictional function-solving a case based on the rules of law and following a legally established procedure;

- Effective access to the judge: the vigilante benefits from the possibility of challenging an act affecting his rights. Therefore, he must dispose of concrete means of reaching a judge and, at the same time, being assisted by a lawyer in the judicial proceedings. The Absence of free judicial assistance during the proceedings violates the right of access to a court where the complexity of the procedure or case makes this assistance indispensable;

- Obtaining a court decision: the right of the parties to obtain a motivated decision, which solves the dispute definitively. The Court has the obligation to effectively examine the support of the parties, and the proper reasoning of the court decisions is compulsory (see the case of Albina c. Romania);

- The principle of legal security: it means that the solution definitively rendered in a case by a court of justice cannot be the subject of a new judicial procedure. In an exceptionally exceptional way, and only in the conditions and cases expressly stipulated by law, are admitted extraordinary remedies-appeals for annulment promoted by the Romanian Attorney General (see Case Brumarescu C. Romania, Beian Against Romania). Today The criminal procedural legislation allows the exercise of extraordinary remedies against definitive decisions but under certain conditions and for certain reasons strictly

stipulated by the law, without tending to a new judgment on the merits of the case;

- The principle of equality of arms: it involves the Court's obligation to give each party the reasonable opportunity to present its case in conditions that do not place it in a disadvantageous situation in relation to the opposing party (see *Kress v. France*, section 76; and *Göç v. Turkey*, section 55-57). This principle applies only to the disputed parties and allows the sanctification of any discrimination intervened in the communication of acts to the parties, giving them the opportunity to participate equally in the investigation of evidence;

- The principle of contradiction: represents the right of the parties to be communicated to them and to discuss any act or observation brought to the judge. This principle, unlike that of the equality of arms, does not concern only the situation of the parties, one in relation to the other, but also the situation of the parties in relation to the Public Ministry or any other independent jurisdiction that can influence, through the acts or information provided to the Court, its decision. If the communication of an act affects only one of the parties, the ECHR shall take the decision in accordance with the principle of equality of arms which imposes on the court the obligation to treat the parties equally. If both sides have been deprived of the possibility to get acquainted with a useful information provided to the judge, the principle of contradictivity will apply [4].

According to the provisions of art. 6 § 1 of the Convention, everyone has the right to the trial of his case... by an independent and impartial court, established by law, which will decide [...] on the infringement of its rights and obligations [5]. The notion of court [6] is characterized in material sense by its jurisdictional role: to settle, on the basis of the rules of law, with full jurisdiction and following an organized procedure, any matter which falls within its jurisdiction (*Srameck v. Austria*, paragraph 36). So, the power to decide is inherent in the notion itself of 'court'. The procedure before a 'court' must ensure 'legal settlement of the dispute' imposed by art. 6 § 1 (*Bentham v. the Netherlands*, section 40).

In this context, a component of the right to a fair trial [7] is obtaining a court decision. In relation to it, the right to a fair trial implies including the right of the parties to obtain a motivated decision, the courts having the obligation to effectively examine the support of the parties [8], the proper reasoning of the decisions Courts [9].

The issue of the discussion concerns itself how to regulate the current provisions of art. 421 Section 2 (a). b Criminal Procedure Code, text which in our opinion is deficient, including between the reasons for the admission of the appeal also the sending of the case to the substantive court *only* the following situations:

The trial of the case in that court took place in the absence of an unlawfully summoned party or which, in fact, was unable to appear and to notify the Court

of such impossibility, invoked by that party. A retrial by the court whose judgment has been abolished shall also be ordered where there is one of the cases of absolute invalidity, except in the case of non-competence, when the Court of competent jurisdiction has been rejudged (Law 135/2010).

It is worth mentioning that none of the situations when there are any of the cases of absolute invalidity covers the situation that we are signaling in this demarche. Thus, we will observe that the non-indication, between the grounds for admission of appeal and the re-judgment of the case on merits by the court whose decision has been disagreed, of the reason for failure to do so or the insufficient motivation of civil or criminal proceedings in a decision does not confer protection within the meaning of art. 6 of the ECHR Convention and art.2 of Protocol No. 7 of the ECHR Convention. In other words, this lack of regulation violates the right to a fair trial in the current regulation. The obligation to motivate the judgment is a condition of the fair process, requirement laid down by the Romanian Constitution (art. 21 para. 3) and the European Convention on Human Rights (art. 6 paragraph 1) [10].

In practice, by criminal decision No. 276/F/29.09.2017 of the Ilfov Court, the defendant Z.X. was convicted of the crime of tax evasion and money laundering. The substantive Court follows: "Thus, it was held that a group of Chinese citizens collects from various companies that conduct commercial activities in the RED DRAGON COMMERCIAL COMPLEX in Ilfov County, important sums of money that subsequently, by means of ghost-type firms...". From the paragraph shown, which is, moreover, the only reference to a so-called motivation, the court held that the sum of 74,542,760 dollars is "dirty money" obtained from committing a tax evasion offence. Then, also registers that the "Chinese grouping" knowing that these amounts come from the crime of tax evasion, deal with their transfer, "washing" such dirty money.

At an analysis of the content of the aforementioned sentence, we observe that the essential elements of the criminal prosecution, as well as the aspects of the safety measure of special confiscation are completely unmotivated by the substantive court, this hindering the defendant to benefit of an effective appeal, in the sense of capitalization of a minimum of two degrees of jurisdiction in criminal matters [11]. Basically, it is not possible to impugn the decision of the substantive court in the absence of a motivation of the solution rendered in substance and we cannot subject the judicial review to the investigation of a misconception of motivation unless the motivation existed. This is where we can benefit from a statement of reasons for the court of Judicial control, but which we can no longer challenge, thus exhausting a degree of jurisdiction in an inefficient manner.

The right to a fair trial implies the right of the parties to present the observations they consider eloquent for their cause, contradict the arguments of the criminal accusation leading to proof of guilt. This is not a theoretical or

illusory right, but must be effective in the transparency of the complete and coherent reasons that remove any doubt about the person's innocence. In our case, in the case of deducting the court's substantive judgment, the Court is actually bringing about criminal opinions that the sentence does not bend to motivate in any way.

In the context in which the offences of tax evasion has the value of 349,000 lei, which could have been considered the product of the offences mentioned by which the substantive court, in a valid manner substance matter judge had omitted willingly or not, but by serious negligence, to explain from the proving elements administered [12] as it concluded that the difference to the amount of 74,542,760 dollars is dirty money in the sense of the product of any offence.

Then, the substantive court omits to motivate the accusation that the "Chinese grouping knew that these amounts came from committing of a crime", in no way does this assertion being motivated by the substantive judge. By the criminal decision the Court of justice: "Based on art. 33 of Law No. 656/2002 decides the confiscation of the amount which was the subject of money laundering, respectively the amount of 253,615,274 lei." The substantive Court makes a misconception of the act in law, in the sense that the indicated article is a legal rule for reference, or the legal norm indicated is based in the old Criminal code. Beyond this, again, it is unmistakably omitted the motivation of the foundations in fact constituting the foundation of the special confiscation, the only object of the crime of money laundering not meeting the conditions of the legal demanding of motivation according to Provisions of art. 403 para. 1 lit. Criminal Procedure Code.

The motivation by a Court [13] of a decision represents an element of transparency of justice, inherent in any jurisdictional act, and by motivating, beyond the guarantee of a real and effective appeal, the undiscretionary character of the Act of Justice, the good faith of the magistrate who through a transparent logical process ensures the guarantees of the principle of free assessment of evidence. The reasoning of the decision is an essential condition of justice, and if the reasoning on which the solution is supported is not included in the statement of reasons, the court decision is unmotivated (CA Craiova, Dec. Pen. 1249/2015). Relevant are the provisions of art. 20 para. 2 of the Romanian Constitution reported in Protocol 7 art. 2 of the Convention and the provisions of art.421 para. 2 letter. B Criminal Procedure Code, from whose analysis it is imperative that the legislature provides as a real guarantee a protection of the guarantor of the minimum two degrees of jurisdiction in criminal matters. This can be done in the case of non-reasoning of the solution only through the procedural means of sanctioning with reference to the court that issued the unmotivated solution.

In the case of *BOLDEA v. Romania* it was shown that in the reasoning of the applicant's conviction, the first court did not make any substantive reference

to the factual elements that could have justified the conclusion of the applicant's guilt. The ICCJ in Decision No. 656/2004 showed that: to motivate means to demonstrate, to highlight the concrete data which, used as a premise, leads to the formation of logical conclusions. The mere assertion of a conclusion, without indicating any specific facts, without showing how that data was established or the reference explained or implied to the case in general, does not mean to motivate.

The case of failure or insufficient motivation (by reporting the summary to the factual situation and the provision of the applicable text) of the penalties of complementary accessories or of safety measures, the decision is struck by nullity, which even if it is relative causes a damage that cannot be removed otherwise than by cancelling the decision and submitting the case to re-judgment.

Similar to the Boldea case, where the ECHR found that the first instance did not analyze all the constituent elements of the crime and neither the evidence, and in this case, the substantive judge, rejected in an unmotivated manner all the demands in probation and the questions asked to the witnesses, without developing the criteria for assessing whether the evidence is inconclusive or unhelpful.

Moreover, in relation to the nature of the crime in the analyzed case, the ICCJ ruled by Decision No. 23/2017: "It is also up to the substantive judge to check the evidence given in question if the entire amount of money obtained has been based on legal operations and, for the assumption that these amounts were not based on actual operations, to determine whether they have undergone the process of 'whitening', because only on these amounts operates special confiscation; The registration of the two offences does not entail the applicability of the provisions of art. 33 of the Law No. 656/2002, republished, with subsequent amendments and additions."

As for the difference between the total amount of expenses not based on actual operations and the value of the damage caused to the state budget as a result of the offence of tax evasion provided for in art.9 para. (1) lit. c) of Law No. 241/2005 for the prevention and combating of tax evasion, as amended, if it is not apparent from the evidence administered in question that it was obtained by the defendant by committing acts laid down by the criminal law, within the meaning of art. 112 para. (1) lit. e) of the Criminal Code, taking a safety measure on this amount is devoid of any basis.

With regard to goods which may form the material subject of the money laundering offence, in the opinion of the ICCJ prosecutor's office itself, it is claimed that these are always goods derived from the committing of the main offence (predicate), being defined by Article. 2 lit. c) of Law No. 656/2002, republished, with subsequent amendments and additions: "Goods are understood

as tangible or intangible, movable or immovable property, as well as legal acts or documents attesting a title or a right thereon.”

The existence of a good that originates from committing a crime is therefore a *sine qua non* of the existence of the crime of money laundering; otherwise money laundering is devoid of material object. It has no relevance the nature of the offence after the committing of which the goods in question resulted, but among the most common crimes of the money laundering offence include tax evasion, smuggling, drug trafficking, etc.

In the opinion of chartered accountants, expenses not based on actual operations, to which the provisions of art 9 para. (1) lit. c) of Law No. 241/2005 with subsequent amendments, refer constitute expenses which does not have a real existence (expenditure not incurred in reality) and their value does not fall within the notion of “product” of the offence of tax evasion or in the notion of “good”, in the acceptance of art. 2 of Directive 2014/42/EU of the European Parliament and of the Council of 3 April 2014 on the freezing and confiscation of instruments and products of crime committed in the European Union.

Expenses which does not have a real existence (expenditure not incurred in reality) does not constitute the “product” of the offence, defined as any economic advantage obtained, directly or indirectly, from committing a crime (article 2 (1) of Directive 2014/42/EU). In the case of the tax evasion offence set out in art. 9 para. (1) lit. c) of Law No. 241/2005, with subsequent amendments, the economic advantage obtained from committing the offence of tax evasion is not the amount of the expense, but the sums of money equivalent to the tax liabilities owed to the state and unpaid.

We observe that all these elements should be found in the reasoning of the substantive court with reference to each means of proof, the substantive judge having to set a detailed outline of the constituent elements of each offence, to motivate both the criminal and the civil side, which obviously did not happen. In the view of the ECHR, the court’s reasoning must be examined in the light of the circumstances of the case: account must be taken, in particular, of the diversity of the reasons which are presented in the court and the differences in the contracting states legal provisions, as doctrinal concepts, presentation and drafting of judgments and decisions (*Ruiz Torija v. Spain*, paragraph 29, *Hiro Balani v. Spain*, paragraph 27). However, where a plea (argument) relied on by one party is decisive for the outcome of the procedure, a specific and explicit response is required (*Ruiz Torija v. Spain*, paragraph 30; *Hiro Balani v. Spain*, paragraph 28).

Although art. 421 para. 2 lit. b Criminal Code does not provide for the failure to comply with the judgment as a case for which a retrial may be ordered by the court whose judgment has been abolished, in the light of the provisions of art. 20 para.2 of the Romanian Constitution, as well as the provisions of art. 6 (I)

of the European Convention on Human Rights, the latter have priority, in the sense that, on the one hand, there must be effective judgment, and on the other hand, the principle of double degree of jurisdiction must be respected. The reasoning of a judgment is an element of transparency of justice, inherent in any judicial act. At the same time, the judgment is not a discretionary act, but the result of a logical process of scientific analysis of the evidence analyzed in question for the purpose of finding the truth, the analysis process necessary to establish the truth. Thus, the judgment is the concrete result, the summary of the work of the Court and its reasoning is the written argumentation of reasons determining the judge to adopt the solution in question.

However, the notion of fair trial requires that an internal court which has reasoned its decision briefly, either by appropriating the reasons provided by a lower-degree court or otherwise, has, however, actually examined the essential issues subject to his or her attention and not be satisfied to simply confirm the findings of a lower-degree court (*Helle v. Finland*, paragraph 60). This requirement is all the more important when a party has not been able to support the case orally in the internal proceedings (*ibid*). The reasoning of the judgment justifies the fairness of the criminal process, on the one hand, by the right of the legal adviser to be convinced that justice has been performed, namely that the judge has examined all the means of processing and procedural and on the other hand, that he knows to have the opportunity to submit the appeal.

Regarding all these aspects, we consider that the decision of the Court of Law is unmotivated, in his content having to be indicated by means of the evidence administered either in the course of criminal prosecution or during the course of the judgment, all the circumstances invoked exhaustively in the foregoing, it ultimately equating to a genuine reasoning of the decision given with all the guarantees conferred by the legal provisions in the matter.

Under the right to a fair trial, the European Court of Human Rights reaffirmed in its case-law – the case of *Boldea v. Romania*, the case of *Albina v. Romania*, the developed principles recalling that article 6 (I) of the Convention requires that the courts have the obligation to actually analyze the reasons, arguments and evidence, without it imposing a detailed reasoning for each argument relied on. The notion of fair trial imposes the condition that a court which briefly motivated a judgment to genuinely having analyzed the essential problems that have been subject to its attention.

In domestic practice, it was appreciated that the provisions of article 6 (I) of the European Convention on Human Rights should be prioritized in the sense that, on the one hand, there must be effective judgment, and on the other hand, the principle of double degree of jurisdiction must be complied with (Court of Appeal Craiova, criminal Decision No 1249/2015, portal.just.ro). The court has held that the Court has the obligation to motivate in fact and in law the judgment

pronounced both in the face of criminal proceedings and in the appearance of the civil side.

In this sense the Supreme Court has shown that “the reasoning of the solution delivered by the Court constitutes a duty which removes any discretionary aspect in the realization of justice, giving the parties in the process the opportunity to form the conviction with the legality and merits of the solution adopted and to the courts of judicial control the elements necessary for the exercise of judicial review. To motivate means demonstrating, highlighting the concrete data which, was used as premises, leads to the formulation of a logical conclusion. The mere assertion of a conclusion without indicating a specific data, without showing how that data was established, or the explicit or implied reference to the acts of the case in general does not mean to motivate” (I.C.C.J., criminal section, decision No 656/2004, www.scj.ro).

In the same sense, the European Court of Human Rights considered that the reasoning of a judgment which constitutes one of the components of the right to a fair trial under art. 6 of the European Convention for the Protection of Human rights and fundamental freedoms confers to the “court” an obligation to carry out an effective examination of the pleas, arguments and evidence of the parties (ECHR, Judgment of 20 April 2010, in the case of *Boldea C . Romania*, Parag. 32-38).

In practice, it was decided that the irregularity found by the court was not among those laid down in art. 281 Criminal Procedure Code, which, according to art. 421 Section 2 (a). b Criminal Procedure Code, allow the case to be sent back to the first instance. However, in the circumstances where there has been no actual judgment before the first instance, in order not to deprive the defendant of a degree of jurisdiction by being judged by the Court of Appeal, after the re-administration of all the evidence, it is necessary to abolish the criminal decision and the retrial of the case by the first instance of the proceedings, with a view to resolving the substance of the case in compliance with the procedural guarantees conferred to the parties by the Code of Criminal Procedure [14].

3. CONCLUSIONS

The double degree of jurisdiction is a recognized right in criminal matters through Protocol No. 7 of the European Convention on Human Rights. It assumes that any person declared guilty of committing a crime by a court has the right to seek examination of the judgment by which a superior court to the court that has established the guilt. The double degree of jurisdiction concerns a devolutionary state of the case before two courts, a substantive one, and a second, judicial review. In the first instance, there was no judgment in respect of all procedural guarantees, so that the first degree of jurisdiction cannot be taken into account, therefore for the observance of the right to a fair trial and the effective assurance of two degrees of jurisdiction, according to art. 2 of Protocol

No. 7 of the European Convention on Human Rights, it is justified to send the case back to be rejudged.

NOTES

- [1] The case-law has set out criteria to assess whether the ‘full jurisdiction’ control is carried out within the meaning of the Convention (*Sigma Radio Television Ltd v. Cyprus*, paragraph 151-157). Thus, the judgment must allow the examination of each of the substantive requests, without rejecting any of them, and giving clear reasons for their rejection. As far as the facts are concerned, the judge must re-examine those which are the principal in the appeal. Thus, if only the question of procedural means arises, it cannot continue to reproach the judge for not having ruled on the facts (*Potocka and Others v. Poland*, paragraph 57). Therefore, for example, the refusal of a court to independently rule on certain crucial aspects to the resolution of the dispute before it could constitute an infringement of art. 6 § 1 (*Terra Woningen B.V. v. The Netherlands*, section 53-55).
- [2] The right of access to the courts is not absolute. There are by default allowable limitations [*Golder v. The United Kingdom*, section 38; *Stanev v. Bulgaria (MC)*, section 230]. This is, in particular, the case for the admissibility of an appeal, since its very nature requires state regulation, which enjoys in this regard a certain margin of discretion (*Luordo v. Italy*, Section 85).
- [3] In addition, the right to a court includes not only the right to initiate an action, but also the right to legal settlement of the dispute (*Kutic v. Croatia*, paragraphs 25 and 32, as regards the suspension of proceedings; *Ačimović v. Croatia*, section 41; *Beneficio Cappella Paolini v. San Marino*, section 29, on a disclaimer of justice). The right to a court may also be infringed in case of non-compliance by the Court of the legal period, when declaring an appeal against successive decisions of a limited duration (*Musumeci v. Italy*, section 41-43) or in the absence of any decision (*Ganci v. Italy*, paragraph 31). The ‘right to court’ also covers the enforcement of judgments ([/www.ier.ro/webfm_send/152620](http://www.ier.ro/webfm_send/152620)). However, these limitations cannot restrict free access for an individual to such an extent or to a point that the very essence of the right of access is affected. In addition, the limitations are not in line with art. 6 § 1 of the Convention only if they pursue a ‘legitimate aim’ and whether there is a ‘reasonable ratio of proportionality between the means used and the intended purpose’ [*Ashingdane v. The United Kingdom*, paragraph 57; *Fayed v. The United Kingdom*, section 65; *Markovic and Others v. Italy (MC)*, section 99]. The right of access to a court may thus be subject, under certain circumstances, to legitimate restrictions, such as the statutory deadlines for the prescription (*Stubblings and others v. The United Kingdom*, paragraph 51-52), orders establishing the payment of a bail to guarantee court fees (*Tolstoi Mi-Loslavsky v. The United Kingdom*, section 62-67), the requirement for representation (*R.P. and Others v. The United Kingdom*, section 63-67).
Where access to the court is restricted by law or in fact, the court shall examine whether the restriction reaches the substance of the right and, in particular, whether it pursues a legitimate aim and whether there is a reasonable ratio of proportionality between the used means and the purpose of the aim: *Ashingdane v. The United*

- Kingdom, section 57. Where the restriction is compatible with the principles laid down, no infringement of art 6 § 1. shall arise.
- [4] See *Werner v. Austria*, section 66. The purpose of the economy and the acceleration of the procedure cannot justify infringement of the fundamental right to an adversarial procedure (*Nideröst-Huber v. Switzerland*, paragraph 30). The right to an adversarial procedure implies in principle the faculty of the parties in a criminal or civil process to acknowledge any document or observation presented before the judge, even by an independent magistrate, to influence its decision and its discussion [*Ruiz-Mateos v. Spain*, paragraph 63; *McMichael v. The United Kingdom*, section 80; *Vermeulen v. Belgium*, section 33; *Lobo Machado v. Portugal*, paragraph 31; *Kress v. France (MC)*, section 74.
 - [5] The procedure before a ‘court’ must ensure ‘legal settlement of the dispute’ imposed by art. 6 § 1 (*Bentham v. the Netherlands*, section 40).
 - [6] An authority which is not among the courts of a State may, however, within the meaning of art. 6 § 1, be regarded as a ‘court’ in the material sense of the term (*Sramek v. Austria*, paragraph 36).
 - [7] Right to a fair trial before a court, guaranteed by art. 6 § 1 of the Convention must be interpreted in the light of the preamble of the Convention, which lays down the supremacy of the right as an element of the common patrimony of the Contracting States [*Brumagnifescu V. Romania*, paragraph 61; *Nejdet Şahin and Perihan Şahin v. Turkey (MC)*, section 57].
 - [8] An effective right: the parties to the trial are entitled to submit any observations they deem relevant to the case. That right is only effective if the parties’ requests and observations are indeed ‘heard’, i.e. duly examined by the court seized. Thus, the court must carry out an effective examination of the means, arguments and evidence submitted by the parties [*Kraska v. Switzerland*, paragraph 30; *Van de Hurk v. the Netherlands*, section 59, *Perez v. France (MC)* Section 80. The question whether a procedure is equitable is assessed on the basis of an examination of the procedure as a whole (e.g. *Ankerl v. Switzerland*, 38, *Centro Europa 7 S.R.L. and di Stefano v. Italy (MC)*, section 197.
 - [9] The High Court of Cassation and Justice has held that the court is required to adjudicate by judgment on all that has been requested by the request for appeal and on all the means which have been the basis for the claims of the parties, According to art. 261 para.1 Pt. 5 Civil Procedure Code, the essential element of a judgment is therefore the reasoning, which cannot in principle be implied, but must bear on all the arguments of fact and law relied on by the parties or on the criticisms formulated. The obligation to motivate the judgment is a condition of the fair process, the requirement laid down by the Romanian Constitution (art. 21 para. 3) and the European Convention on Human Rights (art. 6 paragraph 1). The Omission of the substantive court to investigate and analyze, effectively, by the recitals of the judgment under appeal, violates not only the substantive grounds relied on by the applicant by the administrative action, but also the relevance and conclusivity of an essential means of proof, administered under the law (Accounting report), violating the provisions of art. 261 para. 1 Pt. 5 Civil Procedure Code, thus violating the applicant’s right to a fair trial (Decision no 2517 of 29 May 2014 delivered on

- appeal by the administrative and tax Department of the High Court of Cassation and justice for annulment of the tax decision).
- [10] The right to a motivated decision has its origins in a more general principle incorporated into the Convention, which protects an individual from arbitration; The internal decision should contain the reasons which are sufficient to deal with the essential factual and legal aspects of the litigating parties-the substantive or procedural argument (Ruiz c. Spain).<https://rm.coe.int/16806f1616>
 - [11] Implied warranties of art. 6 § 1 include the obligation to motivate judgments (H. V. Belgium, paragraph 53). A motivated decision allows the parties to demonstrate that their cause was actually heard. Although an internal court has certain discretion in the choice of arguments and the admission of evidence, it must justify its activity by stating the reasons for the decisions taken (Suominen v. Finland, paragraph 36). A decision which allows the parties to make effective use of their right to appeal (Hirvisaari v. Finland, paragraph 30) is duly substantiated.
 - [12] The admissibility and assessment of the evidence on the merits is in principle the exclusive competence of the internal courts, to which the task is to weigh the evidence obtained [García Ruiz v. Spain (MC), paragraph 28; Farange S.A. v. France (Dec.)]
 - [13] A court is characterised in material sense by its jurisdictional role: to settle, on the basis of the rules of law, with full jurisdiction and following an organised procedure, any matter which falls within his competence [Srameck against Austria, section 36; Cyprus v. Turkey (MC), section 233]. The power to decide is inherent in the notion itself of “court”. The procedure before a ‘court’ must ensure ‘legal settlement of the dispute’ imposed by art. 6 § 1 (Bentham v. the Netherlands, section 40). A “court” must also meet a number of other conditions – independence, especially in relation to the executive power, impartiality, duration of the members’ mandate, the guarantees offered by the procedure – Many of them appear even in the text of art. 6 § 1 [Le compte, Van Leuven and De Meyere v. Belgium, section 55; Cyprus v. Turkey (MC), section 233].
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PERSONAL INCOME TAXATION. COMPARATIVE ANALYSIS FOR EU COUNTRIES

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Abstract

Income tax is an important source of revenue for the state budget, but also an instrument for the implementation of the fiscal policy of the state with medium to long-term results. In the context of the present complex regulatory framework, the paper aims at identifying both common and different aspects in personal income taxation characteristics in the EU member states. The paper makes a brief overview of economic theory for income taxation, by reference to the categories of taxpayers, the optimum tax requirements and the legislative novelties concerning the income tax exemption regime. The comparative analysis targets the categories of taxpayers and taxable income and also the elements related to the residents' regime and the jurisprudential novelties with impact to the delimitation of dependent on independent activities. We note the flexibility of our country's tax regulations, relatively low tax rates compared to other states in the same geographical area and the more rigid regime of income tax exemptions in the current period, by reference to the previous tax regulation. The idea of harmonization of EU taxation in the direct taxation field is addressed, with some pros and cons assessments.

The influence of the principles of common market on personal income taxation is not only theoretical, but also it is present in the courts of law jurisprudence, both at national and EU level. The paper proves the increasing importance of these principles and their applicability in practice, showing the evolution of their impact in the last decade.

Keywords: *personal income tax; EU regulation; jurisprudence.*

JEL Classification: K10, K29, K34

1. GENERAL CONCEPT OF PERSONAL INCOME TAX

Nowadays more than ever, the continuous care for satisfying the needs of citizens concerns (or should concern) not only the governments but the international institutions with role in creating the regulatory framework to ensure optimal living conditions, accordingly to the stage of human civilization level of progress. The taxation came with the first forms of state organization and evolved in interdependency with the functions and tasks of the state.

The respect of the rule of law, the fundamental human rights and the fundamental freedoms are reinforced by current concepts that tend to confirm their importance and priority, such as European integration, globalization and social economy. Insuring a safe and favourable social environment is in direct

connection with the creation of public financial resources, process made out in overwhelming proportion by the collection of taxes, fees and contributions from legal and physical persons. The taxes express the mandatory financial contribution established by law to the state budget and the local budgets, either definitively or non-refundable and without direct and immediate equivalence, that are mainly intended to cover public expenditures (Cigu, Tofan and Bercu, 2015, p. 66).

An increased attention is paid to the respect of the principle of fiscal equity or fair taxation, when drawing the regulation of the personal income tax. This is a fundamental rule of law, unanimously accepted by the authors in the field literature, but differently analyzed by each one of them. Thus, fiscal equity implies that equal taxes are paid on equal incomes, (Saguna and Tofan, 2010, p. 113) but it can equally indicate that it is fair that social solidarity takes precedence, and that prosperous taxpayers are forced to bear public spending in the larger quota (Bilan *et al.*, 2016, p. 212).

Equality in taxation, analyzed as a concept deriving from the famous slogan enshrined on the flag of the French revolution – “liberté, égalité, fraternité” – implies that taxation is done in the same way for all natural and legal persons, irrespective of where they are domiciled or based; therefore, in the ideal taxation environment, there should not be differences in tax treatment from one person to another and from one area to another. Also, according to this type of equality, the rule of taxation must apply in the same way for all economic activities, irrespective of the legal form in which they are organized: individual producers, large or small enterprises. Consequently, equality in taxation implies the neutrality of the tax (Tofan, 2016, p. 62). Such taxation was practiced in the feudal order at the beginning of the capitalist era, and it was replaced as in reality, it did not respond to the principle of fiscal equity. Even though apparent equality means fairness, a closer analysis of the real situation, taking the same amounts from different patrimony affects differently the subjects of law involved, the one with the smaller patrimony feeling more strongly the pressure of the mandatory money collection than the one with the higher wealth. This shortcoming could be eliminated by a percentage charge.

However, it should be noted that equity is rather a state of affairs, than a state of law, and therefore the complying with equity standards depends on a case-by-case basis and must be judged taking into account the personal circumstances of each taxpayer. The regulation of a single mode of taxation can only be fair for some of the situations that are actually in place, and the pursuit of the fairness criterion involves a flexible tax system combining several methods and procedures and reflecting as many of concrete situations.

2. PERSONAL INCOME TAXATION SYSTEMS

Equity in taxing is achieved by applying several measures, such as:

- approving a non-taxable minimum to protect low-income people;
- establishing general rules on the settlement and calculation of taxes;
- substantiating taxes on the basis of the payer's income and personal circumstances.

Tax burdens are allocated on the basis of the horizontal fairness criterion and the criterion of vertical equity (Tofan, 2016, p. 80). Horizontal equity seeks to ensure equality before tax and it is achieved when taxpayers with the same family situations and similar income pay the identical tax. Vertical equity seeks to achieve equality by tax and implies tax differentiation, depending on the contributing capacity of a person.

In particular, the individualization of the tax is achieved through the system of tax rates, as there are several ways of calculating: the imposition in fixed amounts and the imposition in percentage (proportional, progressive and regressive) quotas. Taxation in fixed amounts in the form of a per capita (also known as capita) does not take into account the size of the income, wealth, or personal situation of the taxpayer.

The taxation in proportional percentages implies the same tax rate, irrespective of the size of the taxable substance, maintaining the same proportion between the amount of income (wealth) and the amount of tax due. This taxation method is in line with the principle of equality of taxpayers in relation to taxes and is practiced in the case of direct taxes (for example, in the case of corporation tax) and in the case of indirect taxes (VAT, customs duties, etc.). However, the taxation in proportional percentages does not take into account the fact that the contributing power of different people increases as they earn higher incomes or possess more important assets (Lupu *et al.*, 2018, p. 558).

The taxation in progressive percentages is characterized by the increase of the tax rate with the increase of the taxable base. Progressive tax rates take two forms, namely:

- Simple (global) progressive taxation when the same tax rate applies to all taxable bases belonging to a taxable person. Payment tax is determined as a product between the amount of the value of the taxable base and the tax rate corresponding to it. Although this taxation is based on an increase in the tax rate as the amount of taxable base increases, it has the drawback that it is disadvantageous for taxpayers who are earning income at a level immediately above the one at which a certain tax rate is applied;
- The taxation of compound incremental quotas (on instalments) involves dividing the taxable amount belonging to a taxpayer by instalments, each corresponding to a certain tax rate. The payment tax is determined by summing the partial taxes calculated for each instalment of the

respective taxable material. This imposition removes the shortcomings of imposing simple progressive quotas. The composite progressive rates apply in particular to the taxation of income earned by individuals.

The taxation in regressive percentage rates implies a reduction in the percentage of tax revenue as the income increases. This type of taxation was practiced in order to benefit the exploiting classes that made higher incomes, to the detriment of disadvantaged social classes. Being an unfair measure, this type of taxation has been abandoned. However, it is still used today for some indirect taxes or for some taxes for which the percentage quota decreases as the value of services increases (e.g. stamp duties). When establishing this method of calculation, all requirements of fairness are taken into account, starting from the idea that, essentially, the service acquired by paying the tax is the same and the payment of clearly differentiated taxes creates situations of unjustified differentiation between taxpayers.

We therefore observe that, from the desire to respond as fairly and completely as possible to the equity criterion, different methods of calculating taxes and fees have been developed.

In the literature, apart from traditional tax classifications, some tax themes are distinguished according to social/political or social/economic criteria. The heavy tax systems (“lourdes”), which are characterized by heavy, strenuous tasks, bear different features than light tax systems (legers), which are the opposite of the former (Duverger, 1995, p. 356). In order to qualify a tax system as strenuous or light, retrograde (conservative) or progressive, it is necessary to include in the analysis all the taxes – direct and indirect – perceived in a country by all the bodies empowered to do so, the distribution of income, the correlation between the indicators that characterize the contribution of the different categories of natural and legal persons to the formation of the budgetary revenues and their economic power, the correlation between the fiscal burden and the public expenditures distributed to the beneficiaries, the degree of development of the national economy, the internal and external policy objectives of the party in power, etc. Such an analysis could provide elements for characterizing a country’s fiscal system and its evolution over time.

In the French legal literature, the classification of compulsory taxes is analyzed from the European accounting system point of view, which distinguishes two components of the tax system: on the one hand, the taxes are regarded as compulsory contributions without consideration to the national public administration or to Community institutions, and on the other hand, the social contributions actually paid to the national public administration institutions, which definitely offer a future contribution (Costas, 2019, p. 203).

In tax practice, different ways of settling and calculating the income tax on individuals can be used:

- separate taxation of any income from a particular source made by a natural person;
- global taxation of individuals' incomes.

Separate income taxation allows for differential treatment of income in terms of individualization and tax rates, as quotas differ according to the nature of the income. People who earn income from multiple sources are advantaged because they are not affected by the consequences of tax progressiveness and are encouraged to work more.

Identifying and assessing globally the income earned by individuals in order to tax them is an obvious trend in almost all tax systems of contemporary states. In fact, it is intended to gradually shift to a different way of levying public revenues on the budget: over time, more and more public revenue derives from indirect taxes, which means that their weight in relation to indirect taxes is getting bigger. The conclusion reached by the specialists is that indirect taxation is more equitable and less burdensome (as a tax burden on taxpayers' shoulders) than direct taxation (Tofan, Bercu and Roman, 2016).

In France, at the end of the 19th century, the idea that taxation created during the revolution is outdated and does not allow the distribution of public spending among citizens in proportion to their contributing capacities appeared. Taxation of income was introduced in 1917 and underwent two major reforms in 1948 and 1959. Today, with the share of total public revenue, income tax is the second French tax, after VAT (Regoli, 2000, p. 39).

Income tax in the United States is a complex subject, as a result of the massive regulations passed by Congress. When the federal income tax was first regulated, through the 16th Amendment to the 1913 US Constitution, the normative text was just one page. Today, with more than twenty thousand pages, the US Fiscal Code is the result of years of changes, additions, and annotations, including exceptions and special situations for specific businesses and types of activity, and this process is not yet complete. Every year, hundreds of pages are added to the Code in response to the criticism that the tax system is old. The code is so difficult to track that both companies and citizens call on finance experts to clarify their provisions and obligations (Posner, 1998, p. 453).

In this context, we observe the efforts of the states legislator to create a tax system for taxation the income of current and flexible individuals. There are punctual efforts of each state, but also joint international measure to update the personal income taxation system. Global taxation implies aggregating all income earned by a natural person, regardless of the source of origin, and subjecting cumulative income to a single tax. Total income taxation ensures equity in tax rates due to the application of progressive quotas, implies a basic personal deduction, an additional one and takes into account the external fiscal credit.

3. HOUSEHOLD INCOME TAXATION

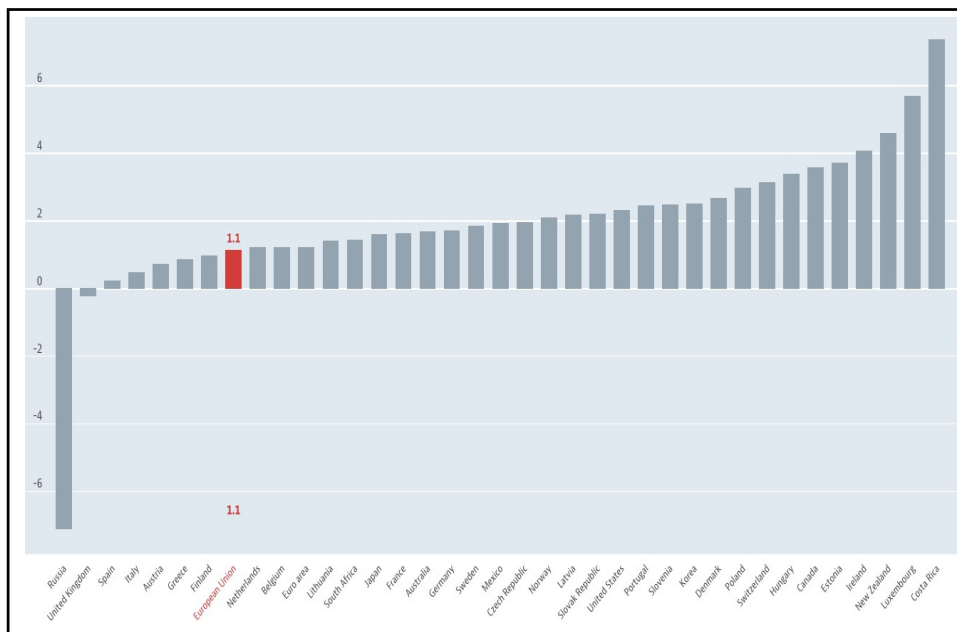
A relatively new form of personal taxation is the household income taxation. It is a project of regulation intensively discussed three years ago in some member countries of the European Union that did not come into force because of the civil society opposition.

Household income is generally defined as the total income of all people living on a common budget. Income refers not only to wages and benefits received, but also to proceeds from any personal activity, investment, dividends and other income. Household income is often used as an economic indicator, more so in terms of real household income, reflecting the well being of the population. The household is a group made up of one or more related or unrelated natural persons having a common patrimony that they manage together economically and financially and live / do not live effectively to the same cadastral number.

From the perspective of international institutions (OECD, 2019), the actual disposable income of households is defined as the sum of the expenses incurred by a household and the savings of its members, less the amounts for pension funds. This indicator also reflects the amount of wages, mixed income, net income from capitalization of property rights, net current transfers and social services, less taxes on income and wealth, and social security contributions paid by employees and unemployed. Gross available earnings include, in addition, the amounts paid by general government and non-profit institutions serving the household, to households, forming social transfers in kind. These transfers reflect the government and / or non-profit-making institutions serving households on individual goods and services, such as health and education. Revenue available, as a concept, is closer to the idea of income, as is generally understood in the economy, than national income or gross domestic product (GDP) (Tofan and Cigu, 2017, p. 389).

The annual growth rate of household net disposable income shows significant fluctuations between 2014 and 2018, as can be seen from Figure 1. According to the chart, the major fluctuations are Latvia, Estonia, Ireland and Greece, and more attenuated for Hungary, but quite significant. The annual growth rate is negative in these countries, especially during the crisis. The other EU Member States show fluctuations over the period 2014-2018, but to a lesser extent. This income of households can be taxable, and therefore several forms of this tax have been thought of at EU level. Although all EU Member States legislated tax, only a few of them practice household tax or family unit tax.

**Figure 1. Household disposable income:
Net, Annual growth rate (%) for 2014-2018,
highlighted country from Europe**



Source: (OECD, 2019)

At the level of the European Union states, the fiscal regulation in 18 countries does not regulate the concept of family unit of taxation, although contextually it can be identified indirectly. Thus, in Belgium married persons are assessed jointly for income tax, but the taxable income of each spouse is determined separately. Portugal renounced this form of taxation in 2015, and it did not exist as a regulation, and Estonia renounced in 2017 the option for spouses to file a joint declaration on income tax (Popa, 2017, p. 13).

With regard to states that have legislated household or family unit tax, it can be said that each state has certain peculiarities. Thus, in Denmark, spouses living together are jointly liable for their tax obligations. In France, income tax is assessed on the basis of a tax household, that is a family unit called “fiscal foyer”. In Germany, Ireland and Spain, family unit tax is optional. In Greece, the spouses submit a joint statement, but each husband is obliged to pay the tax on his share of the common income. In Poland, spouses are taxed separately, but may decide to file a joint tax return under certain conditions. Family tax is levied in Luxembourg, Malta and the Netherlands at the same time as wage tax at source (Popa, 2017, p. 13).

The practice of household tax is not so frequent at the level of the states of the European Union, with some caution in the implementation of this tax due to the demanding way of tax administration, both at the level of the institutions involved, but also from the perspective of the population. A first difficult task to overcome in order to ensure the success of regulating this new type of tax is the financial education of the population, which should be present in all age groups, both in urban and rural areas. That is precisely why, in most European Union countries, this tax exists in parallel with the tax on wage tax at source, which is simpler and safer to administer from the tax point of view.

From our point of view, the introduction of household tax under current conditions is marked by high risk of cashing, but also by the advantages of typology of deductible expenses. The difference between the preponderance of the positive aspects and the negative ones will depend on the quality of the normative framework to be adopted.

4. PERSONAL INCOME TAXATION TRENDS IN EUROPEAN UNION

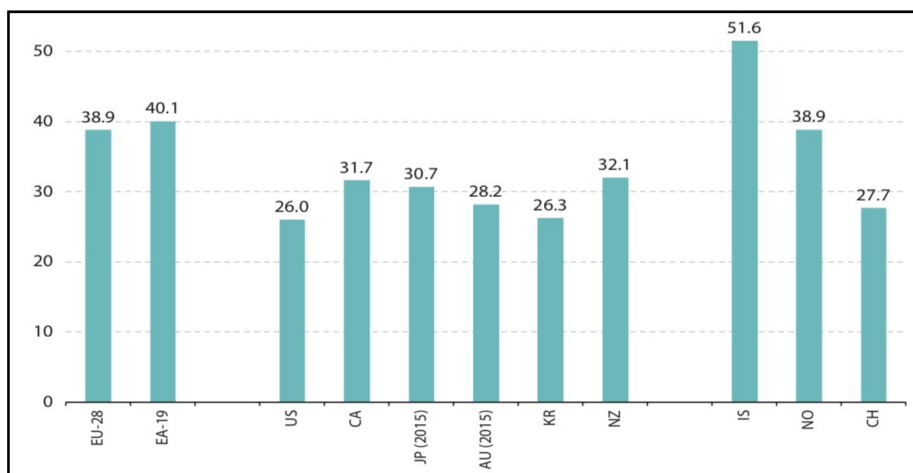
The natural persons usually pay income tax, although some distinction may be available. For instance, in Romanian Tax Code there is the rule permitting the small and medium enterprises to pay income tax and not the corporate tax, for a certain limit of business development.

Within the European Union, the free movement of people imposes a more accurate analyse of the personal income tax subjects, each member state willing to tax all the income of their citizen. The general criterion to determine the state, which is able to collect the tax, is the residency status. Still, we have to consider that there is no general definition of such concept of residency.

In the report that the European Commission – Directorate General for Taxation and Customs Union has published for 2018, the level and long-term trends analysis proves that EU tax revenues are still high in comparison with other developed economies.

In 2016, EU-28 taxes and mandatory social contributions accounted for 38.9% of GDP (Figure 2). Compared to other advanced economies, the level of EU tax is high: about 13 percentage points of GDP above the 2008 level US and 8 percentage points above those recorded by Japan (in 2015). It is also significantly higher than the level for New Zealand (32.1%), Canada (31.7%), Australia (28.2% in 2015), Switzerland (27.7%) and South Korea (3%).

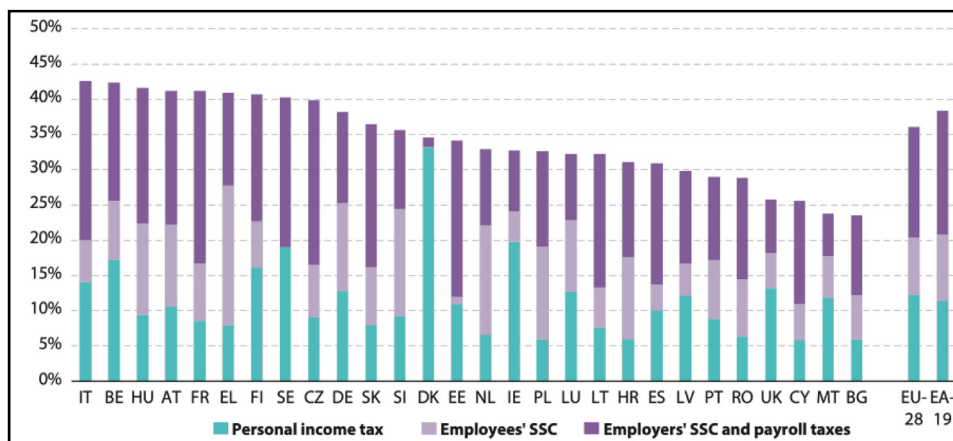
**Figure 2. Tax revenue, including social contributions,
EU and selected countries 2016**



Source: (European Commission, 2018)

The picture offered only by personal income tax (PIT) rates alone is incomplete and it does not reflect the overall tax burden on labour. Not only the level and change in the PIT's peak rates are relevant, but also the level of income to which it applies, the evolution of other applied PIT rates, the structure of allowances and tax credits and the definition of tax that plays a role in defining the actual or actual tax burden. Two special indicators have been developed to measure the effective tax burden on labour: the implicit tax rate on labour and income tax. The first one measures the overall tax burden on all employed workers. This is done by dividing taxes and social contributions into employee wage earnings through total employee compensation and salary taxes. It is an aggregated global indicator based on macroeconomic variables in national accounts. The second indicator, the income tax, takes another approach by of typical taxpayers' scenarios, in terms of composition and income level of households, and in each case the application of the tax rules of the country in question to calculate the effective tax rate. It also includes taxes on personal income and social security contributions for employees and employers, but deducts family allowances.

Figure 3 shows that the overall fiscal pressure on labour remains stable since 2012 and the implied labour tax rate for the EU-28 was 36.1% in 2016, 0.8 percentage points above the 2004 level and 0.3 percentage points versus 2015. In the euro area, the implied labour tax rate (38.4% in 2016) is at a higher level than the EU-28. The level of the tax burden on labour varies substantially between Member States.

Figure 3. Composition of the implicit tax rate on labour 2016

Source: (European Commission, 2018)

Generally, flat tax policies impose a fixed rate on income tax, the lowest being 10% in Bulgaria – where workers have the lowest gross salaries in the EU.

Social security contribution rates in these countries are higher than in progressive systems – on average, social contributions make up 74.9% of payroll taxes collected in “flat tax” countries. Not that the flat income tax rates are lower, either: of the 10 countries assessing the lowest income tax rates on a typical worker’s salary, 8 have progressive income tax systems (Rogers and Philippe, 2018, p. 5).

Another important indicator for evaluating the tax burden for personal income is the tax liberation day, that is the date on which an employee (beginning work, in theory, on January 1st), would earn enough to pay his annual tax burden (Rogers and Philippe, 2018, p. 8).

Table 1. Liberation day calendar in EU for 2018

| | | | | | |
|----------|----------------|---------|----------------|---------|-------------|
| March 27 | Cyprus | June 10 | Slovenia | June 21 | Slovakia |
| April 10 | Malta | June 11 | Croatia | June 21 | Netherlands |
| April 28 | Ireland | June 12 | Portugal | June 23 | Sweden |
| May 8 | United Kingdom | June 12 | Latvia | July 2 | Hungary |
| May 23 | Bulgaria | June 15 | Poland | July 8 | Italy |
| May 30 | Luxemburg | June 19 | Romania | July 10 | Greece |
| May 31 | Denmark | June 19 | Finland | July 10 | Germany |
| June 8 | Spain | June 19 | Lithuania | July 17 | Belgium |
| June 8 | Estonia | June 21 | Czech Republic | July 18 | Austria |
| | | | | July 27 | France |

Source: author interpretation considering the data available at Rogers and Philippe (2018, p. 9)

We exemplify the tax liberation calendar for 2018 in the EU in Table 1, observing the date of 27th of March for Cyprus, in opposition to the 27th of July, in France, which, simply by mathematic calculation, is exactly four months later. This means that a person who is employed in France has to work one trimester more in order to pay the mandatory taxes, which is, in our opinion, one of the reasons for the frequent social movements in this country.

Usually, the personal income taxation system includes the taxation of the freelancers' professional income. Income from liberal professions is distinguished by the fact that they are obtained from services of a professional character, carried out individually or in different forms of association in the scientific, artistic and educational field. Income from free occupations refers to income earned from the practice of a medical profession, lawyer, notary, financial auditor, tax adviser, accounting expert, authorized accountant, securities consultant, architect or other similar profession, organized in an independent manner. The associations between self-employed professionals first appeared in England through the act governing the partnership between self-employed professionals in 1890 (Tofan, 2016).

Usually, all partners participated equally in benefits and losses, unless the constitutive act provided otherwise. Today, due to the expansion of independent activities and their importance in the economy, each state has its own regulations on how to organize the work of the self-employed and to tax their income (Pătrașcu, 2008, p. 90). The system of deductible expenses is the state's fiscal policy and obviously varies from one state to another and for the same state there are major differences depending on the context of the moment we are reporting. For example, in France, the deductions for the determination of net income are the expenses incurred by a private individual for the repair and maintenance of personal dwelling, the improvement of the dwelling (except for the reconstruction and increase of the space), the administration and remuneration expenses caretakers, portraits or other people in charge of administration (Regoli, 2000, p. 79).

If a taxpayer carries out two or more activities generating income from self-employment, other than income from liberal professions and intellectual property rights, the net income from these activities is determined by summing the level of income rules for each activity. If a taxpayer carries out an activity included in the nomenclature and another independent activity, the annual net income is determined in a real system based on the accounting data, according to the real income tax provisions.

The existence of self-employment is delineated on the basis of the following criteria: the free choice of the business, the risk assumed by the entrepreneur, the activity is carried out for more clients, the activity can be carried out not only directly but also with the staff employed by the entrepreneur. The division between freelancer taxation and the taxation for

employee income is a matter of domestic regulation for each of the EU member states. Still, the need to harmonize these aspects occurred in some cases presented to the Court of Justice of the European Union and, consequentially, there are some jurisprudential inputs on this concept also. We consider the opinion of advocate general Tesauro in Case C-202/90, Ayuntamiento de Sevilla v. Recaudadores de Tributos de la Zonas primera y Segunda (Costaș, 2016, p. 308). According to this opinion, accepted by the court, the economic activity of a person is considered to have an independent character when:

- the activity is carried out by a person who is not organically integrated into an enterprise or public administration body;
- the person concerned has a proper freedom of organization as regards the material and human resources used to carry out the activity in question;
- the economic risk inherent in this activity is borne by that person.

5. CONCLUSIONS

Income tax is an important source of revenue for the state budget, but also an instrument for the implementation of the fiscal policy of the state with medium to long-term results.

In the context of the complex regulatory framework, which is characteristic for EU Member States, the common and different aspects of the personal income taxation are analyzed in economic theory and in legal practice, with the purpose of satisfying the regulatory requirements and legislative novelties regarding taxation regime. The comparative analysis shows the importance of maintaining domestic regulatory framework for the personal income taxation, as well as elements related to jurisprudential novelties with impact on the delimitation of dependence on self-employment. Some of the European countries are characterized by a fragile and vulnerable fiscal system, and the application of a new tax philosophy, without proper substantiation and without careful regulation from the perspective of the methodological implementing rules, can cause strong economic imbalances.

We observe the flexibility of our country's tax regulations, relatively low tax rates compared to other states in the same geographical area, and the more rigid tax relief regime in the current period, by reference to previous tax regulations.

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HETEROGENEITY OF TAXATION AND FISCAL CHALLENGES

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Abstract

Notwithstanding the efforts to harmonize and coordinate European tax states, by building insights from the fiscal governance rules, EU taxation is still far from being linked to the idea of homogeneous and is a little appetite to proceed further on the path of fiscal integration. While some papers tend to focus and debate on marginal issues and unrealistic proposals regarding the idea of “fiscal union”, rather than helping to consolidate a realistic literature background on European integration, by taking into consideration fiscal sustainability, fiscal sociology and political economy, is deepening the gap of literature and distances the European decision-making poles from feasible targets. Given that tax reforms may differently affect specific countries and EU states reflect differences in their tax systems, fiscal consolidation and some form of fiscal integration is still required to achieve a sustainable solution in terms of fiscal coordination, democratic legitimacy and long-term sustainability.

The first section of the paper is dedicated to a critical review of existing scientific evidence regarding the heterogeneity of European countries' taxation systems and the idea of “fiscal union”. The second part focuses on analysing the repeated efforts of the European Authorities to harmonize countries taxation, pointing the existing differences in terms of taxation and linked this to the requires of improving fiscal governance, identifying new challenges in order to maintain fiscal stability and to consolidate Europe's economies.

Keywords: *fiscal integration; fiscal governance; heterogeneity of taxation.*

JEL Classification: H20, H30, H60

1. INTRODUCTION

Some of the insights stemming from European experiences, relate that as a key input to the strengthened economic guidance, it should further pave the way for tax cooperation to develop more efficient tax systems and to assure fiscal consolidation (Cogan *et al.*, 2013). As far as each country faces a trade-off between fiscal revenues and efficiency of tax code, fiscal harmonization

becomes a goal that face difficulties for its implementation. According to (Grazia, Gusdorf and Hammoudi, 2014), there are two types of heterogeneity, which involve instability into multilateral agreements and affect fiscal harmonization: heterogeneity of countries (size and number of producing members) and heterogeneity of lobbies (asymmetric influence at the national versus the international level). Garcia, Pabsdorf and Mihi-Ramirez (2013) highlight that only through closer coordination of national tax policies a balance can be struck between the diversity of Member States' tax and social contribution systems and the right to the freedom of establishment and movement throughout the EU. However, given the fact that taxes reflect the state budget need to finance public expenditure, based on their level, the state intervenes in both economic and social activities and influences the dynamics of economy. Fiscal Harmonization could be one of the strong wagons on the economic track which could roll steadily along while the monetarists designed their exchange –rate “snakes” and sent them wriggling through various “tunnels” (Puchala, 2014).

As already stated by the (Lampreave, 2013), the process of constructing the European Union fiscal system, should take into consideration the role of fiscal institutions, starting with independent fiscal Councils and to construct decision making process, by imposed an unanimity requirement in respect of the harmonization of legislation. But even if the ambiguity of fiscal legislation is one of the factor which contribute to the heterogeneity of system, the main reason why the differences in taxation was so deep and widespread is attributed to different social policy choices; dissimilar economic systems; an uneven distribution of income and wealth; institutional arrangements; and, finally, a number of technical issues such as preferences for expenditures or welfare subsidies or taxation and exemption of pension, which affect fiscal stability and led to the spread of financial instability. Starting from 2009 countries from European area was still a long way from being homogeneous. Some repeated efforts of the European Authorities to harmonize and coordinate individual countries' taxation, can be find in a short summary related in the EU Commission's report (European Commission, 2011), which highlight that in spite of the effects deriving from international tax competition EA taxation was still a long way from being homogeneous among the EA Member Countries. Following the European Council conclusions, it is necessary to ensure the “exchanges of best practices, avoidance of harmful practices, and proposals to fight fraud and tax evasion.”

Tax policy within the European Union consists of two components: direct taxation, which remains the exclusive competence of the Member States, and indirect taxation, which affects the free movement of goods and the freedom to provide services in the single market. However, with regard to direct taxation, the EU has set harmonized standards for the taxation of companies and individuals, and Member States have tried to take joint action to prevent tax

evasion and double taxation. In the field of indirect taxation, the EU coordinates and harmonizes legislation on value added tax (VAT) and excise duties. This would avoid distorting competition on the internal market as a result of variations in indirect taxation rates and systems that would give firms in a particular country an unfair advantage over others. Theoretical insights establish a direct relationship between tax harmonization and the idea of single European market, considering that the first one is an integral part of completing the single European market (Kopits, 2012, 2014b, 2014a). Since the single market began, it has invoked fears in terms of deregulatory competition and international policy convergence, involving also the institutional path and national tax policy, which become difficult to be related to international level (Sinn, 2003; Kemmerling, 2010; Genschel, Kemmerling and Seils, 2011). A prerequisite for the creation and effective functioning of the Single Market consist in coordinated efforts to avoid discriminatory tax measures in member states and indirectly, to avoid the disadvantageous treatment of people, goods, services or capital from other member states (Genschel, Kemmerling and Seils, 2011; Garcia, Pabsdorf and Mihi-Ramirez, 2013; Pîrvu and Pîrvu, 2016).

In terms of coordination, we find that institutional mechanisms are directly involved in market integration and tax jurisprudence of the European Court of justice have a direct implication on the entire process (Genschel, Kemmerling and Seils, 2011). Which means that some literature insights are properly viable, because reveals that as far as EU has few “own resources”, require mainly deal with legal framework and market correction capable to link national tax policies with international level (Moravcsik, 2002; Majone, 2005). Fourth, it is important that countries to learn from each other and to be linked to the idea of policy learning (Meseguer, 2005).

2. THE HETEROGENEITY OF TAX STRUCTURES AND FISCAL UNION PERSPECTIVES

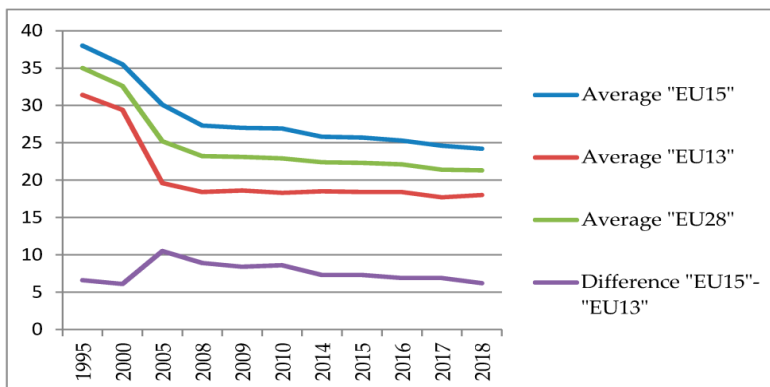
Since EU have limited competences and tax policy depends on the power of each member states, tax measures geared towards the idea of harmonisation, single market and fight against harmful tax evasion or double taxation avoidance. In order to assure this unanimously, European Parliament is co-legislator in area of budgetary related issues and has the right to be consulted on tax matters. However, all this can be possible without a legal basis capable to assure support for EU strategy on tax policy. In line with last point, we find articles 110-113 of the Treaty of the Functioning of the European Union which relates to the harmonisation of legislation in area of turnover taxes, excise duties and other forms of indirect taxation. Articles 114-118 of the Treaty of the Functioning of the European Union (TFEU) establish the framework for taxes that have an indirect implication on the establishment of the internal market. Articles 45-46/ 107-109 TFEU are also related to tax harmonization issues, in

first one being established rules for free movement of persons, services and capital, in second part, we find competition rules. Articles 191-192 of the Treaty of the Functioning of the European Union establish the environment rules. The idea of single market which have as objective free movement of People, Capital, Goods and right to establishment, is also supported by some important documents, as: European Economic Communities, Treaties of 1951 and 1957, Single Treatment, Treaty of Paris 1965, European Act, EC Treaty, Treaty of 1987, Union Treaty-Maastricht of 1992, Institution and Judiciary-Treaty of 1997, Amsterdam, Legislation during Expansion of Community, Treaty of Nice, 2001.

By making a retrospective of these documents, we can see that even if the legal framework is set by fiscal rules, however, maintaining unanimity for all taxation decisions is an impediment in achieves the level of tax coordination that Europe requires. Thus, a possible solution offered by European Commission was to approve qualified majority voting in certain tax area, but the proposal was rejected by Member states. In line with this point of view, theoretical framework reveals that resistance against tax harmonization came predominantly from low-tax countries and after the accession of the central and eastern European countries the prospects of harmonizing tax policy starkly decreased (Wasserfallen, 2014).

Figure 1 validates the theoretical framework involved in previous paragraph. As can be seen, the average corporate tax rate present differences between the old (EU-15) and new member countries (EU 13). The trend indicates that in the beginning of the period we can talk about an increasing gap, and in 2005, we have almost 10.4. Starting from 1995, the dynamics of corporate tax exemplify the implication of tax competition between the countries, the gap between old EU members and new one, continuing to decrease until to 2018.

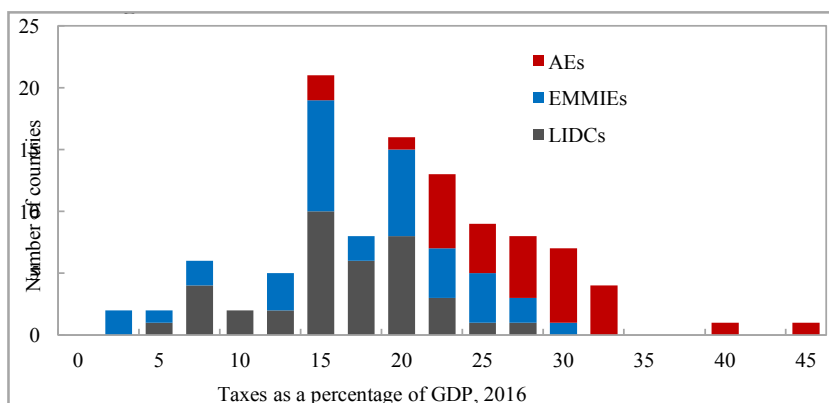
Figure 1. Dynamics of the corporate tax in the EU



Source: computed by authors processing data of Eurostat (European Commission, 2019)

The dynamics of corporate income tax anticipate the preferences of countries to deviate from the fiscal consolidation initiative and to be related to instruments of tax competition. The changes of countries average in term of corporate tax rate demonstrate not only the lack homogeneity of tax rates, but also the necessity to consider relationship between competition and tax risk management. If the development of EU tax provisions is geared towards the tax harmonization, the entire process imply some characteristics: Each member state retains taxing right, Principle of Subsidiary (Article 5), requires unanimity under EC Constitution, we talk about no political Consensus, use of directives to harmonize tax base-not tax rate and overall, a slow and difficult –very limited progress. Holzinger (2005) and Arcos, Holzinger and Biddle (2016) find that the dilemma of co-ordinates measures in area of taxation due to weak cooperative institutions and incapability of EU governments to consolidate an agreement. The authors suggest that there are four groups of causal mechanisms, which obstruct the international tax policy convergence. First one is regulatory competitions, which sometimes lead to asymmetric competition (Kanbur and Keen, 1993). The second one consists in policy co-ordination, which can hide unconventional practices (Even if there are agreements regarding the co-ordination in the level of tax rates, can occur harmful tax practices). Third, imposition requires the implication of international political and legal coercion (Dolowitz and Marsh, 2006). In view of the above context, it should be noted that the situation is maintaining at global stage also. From this point of view, Figure 2 highlights the implications of economic issues, being clear that a law income can be identified on the profile of developing countries.

Figure 2. World Distribution of Tax-to-GDP Ratio, 2016



Note: AEs = advanced economies; EMMIEs = emerging markets and middle-income economies; LIDCs = low-income developing economies)

Source: IMF staff estimates

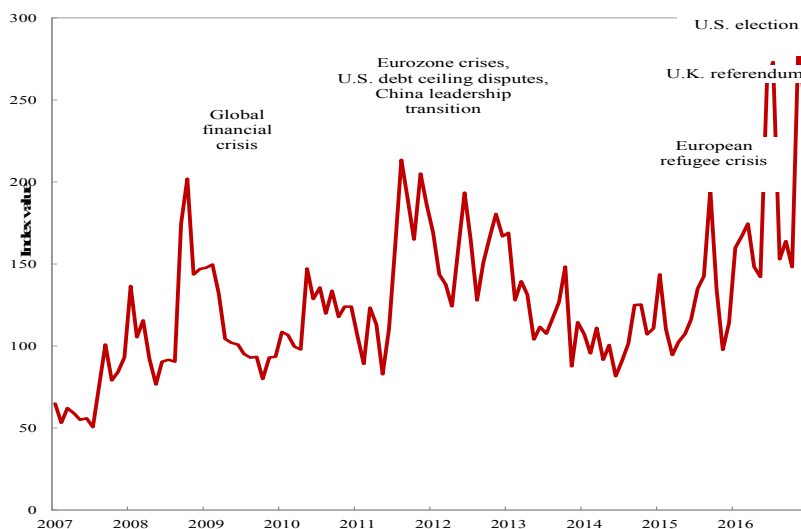
3. CHALLENGES IN THE AREA OF TAX POLICY

In addition to the broad macroeconomic challenges for sustainability and growth, EU member states are currently related to some challenges which imply not only particular attention to the efficiency of taxation, but also to fiscal consolidation and better strategies to harmonize and coordinate European tax states, by building insights from the fiscal governance rules (Dasilveira, 2002; Ostry *et al.*, 2010; Adam, 2015). Tax reform movements imply undoubtedly coming challenges with impact to policy coordination and initiative against heterogeneity of taxes. The most important challenge that could impact the direction of future tax policy trends will be the coordinated efforts to avoid procyclicality and capability to use the automatic fiscal stabilizers without destabilizing fiscal policy stance. However, this is not the only change that could intervene in this field, identifying also the implications of other considerations that are useful from our point of view and at the same time, validated by the current contextual approach. With respect to perspectives that could appeared, we can specify:

- The risk of double taxation situations,
- The loss of opportunities to increase economic competitiveness of the European Union,
- Changes in state suzerainty and common politics,
- Another challenge of tax coordination/cooperation in the EU would be to move a collection of “small” countries into one “big” player, which would raise the leeway for tax policy.

It is worth noting, though, that the challenges in this area will be different across countries. While developing countries will opt for a fiscal policy capable of increasing revenue and investment levels, those developed will maintain interest in strengthening tax bases and aligning them with aging vulnerabilities.

Based on Davis (2016) work, Figure 3 reveals that uncertainty about economic policies has reached a decade high. Having in mind the trend of Global Economic Policy Uncertainty Index, 2007–2016, it is shown that the lack of a coordinated single system can influence how it is transmitted and applies the same EU tax policy decision at each level state, with effects different from those expected to be achieved. Undoubtedly, revenue mobilization will consider continuous challenges with respect to tax policy. Starting with fiscal risk management strategy, toward a new role for fiscal policy, it should be considered some steps. First of all, it is necessary to identify risk, their magnitude and their likelihood, step two should consist in reduction the probability of risk occurring and government exposure, which means that at step three it is necessary to create buffers in the budget to absorb the remaining risk and finally, to set safe fiscal targets.

Figure 3. Global Economic Policy Uncertainty Index, 2007–2016

Sources: (Baker, Bloom and Davis, 2016; Economic Policy Uncertainty, 2019)

Figure 3, which reveals Uncertainty Index about economic policy, demonstrates, in other words, that strong fiscal policy should have the capacity to generate resources based on three pillars: countercyclical policy framework, growth friendly and inclusive. Overall, establish tax rules with minimum coherence, will help EU countries to coordinate their tax policy and to assure fiscal sovereignty.

4. CONCLUSION

Even if we identify an economy with heterogeneous firms and heterogeneous consumers, it is important that European community to give new impetus to the idea of tax coordination, by avoiding harmful practices, fraud and tax evasion. The study reveals some problems regarding the concept of harmonization, being clear that the expression tax approximation is more appropriate and supporting the idea that tax harmonization is simply not possible. In order to satisfy the legitimate expectations of European citizen, it is absolutely vital to consolidate the principles of European single market, based on elimination of double taxation, common minimum rates in the area of tax policy and to continue the approximation of VAT and excise duty rates.

Analyzing legal framework from the area of taxation, we can see that maintaining unanimity for all taxation decisions is an impediment in achieve the level of tax coordination that Europe requires. Thus, approving qualified majority voting in certain tax area can be a possible solution. The study highlights that delicate aspects of tax harmonization require the adjustment on

national fiscal policies and the issues are based on conceptual, legal and rational perspective. Major challenges in the area of taxation will imply fiscal policy coordination, the harmonization of tax law (in terms of approximation), the consolidation of European Court of Justice and consolidation of market forces.

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