

Mihaela Tofan • Irina Bilan • Elena Cigu
(editors)

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EDITURA UNIVERSITĂȚII „ALEXANDRU IOAN CUZA” DIN IAȘI
2020

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Section I

EU BANKING AND FINANCIAL STABILITY

NEW FIRM FORMATION IN THE EUROPEAN UNION COUNTRIES: THE ROLE OF TAX POLICIES

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Abstract

Tax policy is a key dimension of the institutional environment in a country with multiple implications on entrepreneurial activities. Several studies in the entrepreneurship literature have highlighted the crucial role of tax policy in a person's decision to start a new firm. This paper investigates the link between tax policy and new firm formation using panel data for 28 EU countries and spanning 13 years (2006-2018). In our research, we measure new firm formation by the number of newly registered firms per 1,000 inhabitants. In terms of tax policy, we consider both tax rates and the administrative burden of paying taxes and contributions (measured by the number of tax payments and time to prepare and pay taxes). In addition, to ensure the accuracy of the analysis, several control variables have been included in the model, which have been identified in the literature as essential predictors of the dynamics of new business creation (the cost and number of procedures for starting a business, per capita GDP, the availability of finance, foreign direct investment inflows, inflation, and unemployment rate). The data used in our study are coming from World Bank Group Entrepreneurship Snapshots, Doing Business database, and World Development Indicators database (World Bank).

Our empirical results indicate that an increase in tax rates strongly discourages new firms from entering into the market in the selected European countries. However, the relationship is non-linear, as the negative effects become smaller in a high tax rate environment, where the incentives for tax evasion increase. Our results also show that the effects of changes in the level of profit tax rate on the number of newly registered companies is higher than in the case of other taxes. Moreover, we find that the two measures of tax administrative burden negatively and significantly influence the formation of new firms as well. Overall, the empirical evidence confirms that tax policy plays a crucial role in the creation of new firms in the EU countries and, therefore, the governments of these countries could stimulate the creation of new businesses and jobs by cutting tax rates and/or reducing the level of tax administration burden. The findings of our research may be of interest to both researchers, concerned with investigating the impact of tax policy on starting new businesses, and decision-makers, who should focus

more on introducing tax incentives and improving the fiscal regulatory framework to stimulate the creation of new businesses.

Keywords: *new business; tax rates; tax administrative burden; EU countries.*

JEL Classification: L26, H29, K20, M13

1. INTRODUCTION

Entrepreneurship is widely recognized as a key driver of economic growth and development because it contributes to creating new jobs, innovations, improving competition and competitiveness, and reducing economic and social disparities between countries and regions. This has led to increasing interest in how public policies could contribute to stimulating entrepreneurial activities and whether their effects are consistent across countries.

An important public policy with major macro and microeconomic implications is fiscal policy, and the issue of how it affects the dynamics of entrepreneurship has been intensely debated in recent decades, both among researchers and policymakers. Nevertheless, empirical evidence on this matter is quite ambiguous, and further research is needed to shed more light on the link between fiscal policy and entrepreneurship. Moreover, the major negative effects of the current economic crisis generated by the COVID-19 pandemic, consisting in the diminishing of economic actors' activity, the closing of a growing number of businesses, increasing unemployment, lower tax revenues, etc. have brought to the forefront the importance of using fiscal policy actions, especially in the EU countries, to support entrepreneurship and resume economic growth. In addition, the importance of using fiscal policy instruments is determined by the fact that taxes and administrative burdens are major obstacles to entrepreneurial activities.

In this paper, we aim to empirically investigate the effects of tax policies, namely the level of tax rates and the tax administrative burdens on the dynamics of newly created companies in the 28 EU countries. For this, we use a panel dataset spanning the period 2006-2018 and several measures of taxation and the burden of tax administration. In addition, to ensure the accuracy of the results, our models include several control variables, which have been identified in the literature as good predictors of entrepreneurial activity at the country level.

The added value of our study comes from the fact that, to our knowledge, there are few papers that focus on assessing the relationship between tax rates, tax administrative burden and entrepreneurship (proxied by new business density) in the EU member states. Therefore, our research fills this gap by providing empirical evidence on how tax policies affect new firms' entry in the European countries. We conclude that both tax rates and tax administrative burden play a key role in stimulating the creation of new companies.

Through its content, our research aims to contribute to a deeper understanding of how tax policies affect the creation of new companies in European countries.

The remainder of this paper is structured as follows. In section 2, we briefly review the literature on the effects of tax policies on entrepreneurship. Section 3 provides a description of the data, variables, and research methodology. Section 4 presents the results of the empirical analysis and some discussions on the link between tax policy and the creation of new companies in our sample of European countries. Section 5 concludes the paper.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

In recent decades, the role of tax policy in economic recovery and growth, at both national and subnational levels, has been a key topic for researchers and policymakers (Cigu, 2011; Tofan and Cigu, 2017). An increasing number of studies have analyzed the effects of taxation systems on productivity, investment, entrepreneurship, and growth (e.g.: Cullen and Gordon, 2007; Arnold, 2008; Vartia, 2008; Djankov *et al.*, 2010; Arnold *et al.*, 2011; Dackehag and Hansson, 2012; Dahlby and Ferede, 2012; Nuță and Nuță, 2012; Jaimovich and Rebelo, 2017; Stoilova, 2017; Acosta-Ormaechea, Sola and Yoo, 2019; van der Wielen, 2020) and stressed that tax cuts could be an effective way to stimulate the creation of new businesses and jobs opportunities. However, there is some ambiguity about the type of entrepreneurs and businesses that would benefit from such tax facilities.

A large body of entrepreneurship literature has investigated the impact of corporate and personal income taxes on entrepreneurial activity, but the results are quite ambiguous due to the heterogeneity of tax rates (for example, marginal income tax, personal income tax, progressive tax), and also various measures of entrepreneurship. As Schuetze and Bruce (2004) emphasize, economic theory suggests that the tax system in a country could have complex and ambiguous effects on the level of entrepreneurship. According to Asoni and Sanandaji (2014), this lack of clear-cut empirical results is due to the fact that entrepreneurship is a difficult concept to define and measure, but also to the ambiguous theoretical prediction about the relationship between taxation and entrepreneurship.

Some studies (such as: Schuetze, 2000; Cullen and Gordon, 2002) show that higher tax rates increase the rate of entrepreneurial activity. Other papers indicate a negative impact (such as: Klapper, Laeven and Rajan, 2006; Djankov *et al.*, 2010; Da Rin, Di Giacomo and Sembenelli, 2011; Kneller and McGowan, 2012; Chowdhury, Terjesen and Audretsch, 2015; González-Sánchez, 2015; Darnihamedani *et al.*, 2018; Venâncio, Barros and Raposo, 2020), while some authors' research results also point to no significant influence of tax rates on entrepreneurship (Parker, 2003; Crum and Gohmann, 2016; Bruce and Deskins, 2012).

Henriquez *et al.* (2001) show that the level of tax rates and the complexity of the taxation system negatively affect entrepreneurship. In their study it is emphasized that high tax rates reduce the income of small businesses, and complex and opaque tax systems could discourage entrepreneurs. Comparatively,

using data for a sample of European firms, Klapper, Laeven and Rajan (2006) find that the entry of new firms into the market is significantly higher in countries where tax rates on corporate income are much lower than those on personal income. Similarly, Djankov *et al.* (2010) argue in favor of a negative and significant effect of corporate tax rate on entrepreneurship. The results of their study show that a ten-percentage point increase in taxation lead to a 1.4 percentage point decrease in the entry rate of new companies into the market. In addition, the results also indicate a negative influence of tax administration on entry. Using data for 19 OECD countries from 1998 to 2005, Kneller and McGowan (2012) analyze the impact of taxation on firm entry and exit rates. Their results indicate a negative effect of corporate taxation on entry rates, while the effect of personal income taxation depends on how the marginal tax rate is modified. Namely, the authors find that increases in personal tax rates applied at low income levels reduce entrepreneurial activity, while those applied at higher income levels encourage entrepreneurship.

Darnihamedani *et al.* (2018) point to a negative effect of high taxes on innovative entrepreneurship, but the effect is more important in the case of corporate taxes compared to income taxes. The authors conclude that changes in corporate tax levels are a more effective tool for stimulating innovative entrepreneurship compared to changes in personal income tax levels.

In addition, Borchers, Deskins and Ross (2016) show that the impact of tax policy may differ depending on the size of the business. The authors find that high sales and corporate income tax rates are associated with lower small business growth rates. In comparison, in the case of large firms, the results of the study indicate a less important relationship that could be explained by the fact that large firms can get and benefit from different tax incentives or use different tax planning strategies to avoid taxes, strategies that are not widely available to small businesses.

The negative relationship between taxes and entrepreneurship is also empirically evidenced by González-Sánchez (2015). The author argues the significant negative effect of tax rates on the propensity to be self-employed in Europe. The results of the study indicate that the tendency to be an entrepreneur through self-employment decreases when the level of taxes is high.

In a recent study using micro-level data for start-ups located in inland municipalities in Portugal, Venâncio, Barros and Raposo (2020) analyze the effects of corporate taxes on business formation and new job creation, and find that tax cuts lead to additional new companies and jobs creation. Thus, their research results indicate that the tax reform led to an increase in the entry of new companies by about 0.41% and the creation of new jobs by 0.24% monthly, which corresponds to an increase in the number of new companies by 29,150 and the number of new jobs by 223,500 over a period of three years.

Another strand of literature examines the impact of tax progressiveness on entrepreneurial activity. For example, Gentry and Hubbard (2000) examine the extent to which the progressivity of the tax affects entrepreneurial entry. Their research results show that entrepreneurs who earn higher incomes pay a higher tax, and this is seen as a tax on “success”, which further discourages entrepreneurship. Based on a data set for sub-federal jurisdictions in Switzerland, Bacher and Brülhart (2013) analyze the effects of tax burden, tax progressiveness and the complexity of the tax code on the creation of new companies. The authors find that the level of taxes and the complexity of corporate tax code have a negative and statistically significant impact on the creation of new companies, while tax progressivity promotes the creation of new businesses. Using panel macro data for 15 European countries over the period 2000-2008, Balamoune-Lutz and Garelo (2014) analyze the effects of taxes and tax progressivity on new business formation and find that tax progressivity discourages entry into entrepreneurship when incomes are high, but seem to encourage starting new businesses when incomes are low. In another study, Balamoune-Lutz and Garelo (2015) argue that progressive taxation does not affect entrepreneurs with modest profit opportunities, but has a significant negative impact on entrepreneurs who have more profitable opportunities, which make them diminish their effort to reduce the tax burden. The empirical results indicate, in the case of Italy, that the average tax rate has, beyond a certain level, a negative effect on the quality of entrepreneurship (defined as the level of effort), reflected in an inverted-U relationship between progressive taxation and entrepreneurial effort.

The existence of a non-linear relationship between taxes and the entry rate of new companies into the market is empirically tested for in other studies as well. For example, Da Rin, Di Giacomo and Sembenelli (2011) examine, based on a panel data set for 17 European countries, how the taxation of corporate income affects the creation of new firms. The results of their study indicate a significant negative effect of corporate income taxation on the entry of new companies into the market. The authors find that the effect is concave, suggesting that tax reductions influence the creation of new businesses only below a certain threshold tax level. Moreover, the study shows that reducing corporate tax rates is more effective in countries with better institutional infrastructure, as measured by the quality of accounting standards, thus suggesting that corporate tax cuts could lead to the creation of more businesses in countries where it is more difficult to hide income by the manipulation of the profit and loss accounts.

Another stream of literature focuses on investigating how marginal tax rates affect the decision to enter into entrepreneurship. For example, Gurley-Calvez and Bruce (2013) point out that marginal tax rates have an important effect on this decision and find that reducing marginal tax rates for entrepreneurs increases entrepreneurial entry. Similar findings result from a recent study of Ferde (2019), who supports the need to stimulate entrepreneurship (measured by the employer

business entry rate) by governments through various tax incentives, such as lowering the top marginal income tax rate.

The review of the literature on the relationship between tax policy and entrepreneurship reveals the existence of a smaller number of studies that have also focused on examining the influence of tax administrative burdens on entrepreneurship. Among others, Braunerhjelm and Eklund (2014) demonstrate that both tax rate and tax administrative burden have a negative and significant impact on the creation of new companies. Their empirical results show that a 10 percent increase in the tax administrative burden reduces the annual rate of new business entry by 3 percent, while a 10 percent increase in the tax rate leads to a 4 percent decrease in the entry rate. The authors conclude that a reduction in the complexity of the tax code could lead to higher entry rates of new firms into the market. In addition, in a recent study, Braunerhjelm, Eklund and Thulin (2019) argue that the impact of tax administrative burden on entrepreneurship differs in size depending on the stages of the entrepreneurial life cycle. Their research results indicate a significant negative effect on total entrepreneurial activity. Moreover, it is found that the tax administrative burden has no impact on established businesses due to the experience of entrepreneurs, which allows them to more easily cope with the fixed costs associated with tax compliance. The authors also suggest that reducing the tax administrative burden could be used as a mean to encourage entrepreneurship without a decrease in tax revenues.

Based on the review of the most relevant and recent studies on the effects of tax policies on entrepreneurial activity, we advance the following **hypotheses**:

H1: High administrative burden to pay taxes and contributions discourages potential entrepreneurs from being engaged in new firm creation.

H2: An increase in tax rates has an overall negative impact on new firm registration.

H3: The relationship between tax rates and the entry rate of new companies into the market is non-linear, meaning that the marginal effect of increasing taxes on new firm registration is smaller (as absolute value) in a high tax rates environment.

Our research adds to previous literature and aims to contribute to enhancing knowledge about the effects of tax policies on entrepreneurship, by providing additional empirical evidence on how taxes and some aspects of tax regulation influence the creation of new companies in the EU economies.

3. DATA AND METHOD

Our paper investigates the relationship between tax policy and the creation of new businesses in the EU member states, over a time span of 13 years (2006-2018). The data set was constructed using annual indicators from three publicly available international data sources, namely World Bank's Entrepreneurship Survey and database, World Bank's Doing Business project database, and World Bank's World Development Indicators (WDI) database. Although there are currently 27 EU countries, our dataset includes observations for all the 28

members of the EU at the end of our time span, therefore, a number of 364 potential observations. However, as a result of missing data for some countries and some years, the sample was restricted to 338 observations.

The baseline model is a panel-data linear regression model with entity and time fixed-effects, as depicted in equation (1).

$$Y_{i,t} = \beta_1 Tax_{i,t} + \gamma_j X_{j,i,t} + \alpha_r Z_r + \vartheta_t Z'_t + u_{i,t} \quad (1)$$

Where:

i is the country ($i = 1-28$);

t is the time period (year) ($t = 1-13$);

Y is the dependent variable, a measure of new firm creation;

TAX is a tax policy variable;

X_j is a vector of control variables (other potential determinants of new firm creation);

Z_r are region dummy variables;

Z'_t are time dummy variables;

β , γ , α and v are the coefficients of independent variables;

and $u_{i,t}$ are the idiosyncratic (observation-specific) errors.

There are definitely many unobservable time-invariant factors specific to each country that affect the decision to entry into entrepreneurship, and country fixed-effects are usually the way to control for such unobservable characteristics. Due to the low variability of some tax policy variables (in particular, tax administrative burden indicators) in time, this was not an option in our case. However, in addition to year dummy variables, 3 region dummy variables were introduced into the model, corresponding to the 4 major geographical regions of the EU (Western, Northern, Southern and Central and Eastern European countries).

Equation (1) allowed us to assess the existence of a linear relationship between different tax policy variables and new business entry (hypotheses $H1$ and $H2$). Further on, we also wanted to test for a quadratic relationship between tax rates and new firm registration ($H3$) and additionally included the square value of tax rates (Tax^2) as regressor, as depicted in equation (2).

$$Y_{i,t} = \beta_1 Tax_{i,t} + \beta_2 Tax_{i,t}^2 + \gamma_j X_{j,i,t} + \alpha_r Z_r + \vartheta_t Z'_t + u_{i,t} \quad (2)$$

The dependent variable in our models is represented by the natural logarithm of *new business density*, expressing the number of new firms with limited liability registered in one year per 1000 working-age people (ages 15-64). We chose this measure of entrepreneurship among the different measures available because it captures the creation of *new formal firms*, which are more likely influenced by tax policies (Belitski, Chowdhury and Desai, 2016). In addition, our choice for this variable took into account the availability of data, and also the fact that limited liability companies are the most common form of business in most countries

(World Bank, 2020). Data on the dependent variable come from the World Bank's Entrepreneurship Survey and database.

Our main independent variables refer to two dimensions of tax policies, namely *tax burden* and *tax administrative burden*. Tax burden is represented by the amount of taxes owed by a company to taxing authorities and is a direct effect of the tax system, while tax administrative burden refers to the complexity of the tax system and represents its indirect effect (Ravšelj, Kovač and Aristovnik, 2019). Consequently, the main explanatory variables used in our analysis are represented by three types of tax rates and two measures of the burden of tax administration, as follows:

- *Total tax rate* (% of commercial profits) – measures the amount of taxes and mandatory contributions payable by the business after accounting for allowable deductions and exemptions;
- *Profit tax* (% of commercial profits) – is the amount of taxes on profits paid by the business;
- *Labor tax* (% of commercial profits) – is the amount of taxes and mandatory contributions on labor paid by the business;
- *Number of tax payments* – is the total number of taxes paid by the business, including electronic filing;
- *Time to prepare and pay taxes* – is the time, in hours per year, it takes to prepare, file, and pay (or withhold) three major types of taxes: the corporate income tax, the value added or sales tax, and labor taxes, including payroll taxes and social security contributions.

Data on fiscal policy variables come from the World Bank's Doing Business project database. Based on the findings of previous empirical studies, we expect an increase in tax rates and tax administration burden to have a negative effect on the number of newly created companies in the EU countries. Moreover, according to our third hypothesis, the marginal effect of increasing tax rates is expected to be smaller when tax rates are high.

In addition, our models include seven control variables, which have been identified in the literature as good predictors of entrepreneurial activity at the country level, namely: the *cost of business start-up procedures* and the *number of start-up procedures to register a business* (used as proxies for business start-up regulations), *GDP per capita* (which measures the level of economic development), *domestic credit to private sector* (used as a proxy for the level of financial development), *foreign direct investments*, *inflation rate*, and *unemployment rate*. Some details on these variables, including the source of data and their expected impact on the creation of new firms, are provided in Table 1.

Table 1. Control variables – description, data sources and expected impact

Symbol of the variable	Explanation	Data source	Expected impact
cost	Cost of business start-up procedures (% of GNI per capita)	World Bank, Doing Business project	-
procedures	Number of start-up procedures to register a business	World Bank, Doing Business project	-
gdp	Natural logarithm of GDP per capita (at constant 2010 USD)	World Bank, World Development Indicators	+/-
domestic_credit	Domestic credit to private sector (% of GDP)	World Bank, World Development Indicators	+
foreign_investment	Foreign direct investment, net inflows (% of GDP)	World Bank, World Development Indicators	+/-
Inflation	Inflation rate, as annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or change at specific intervals (%)	World Bank, World Development Indicators	+/-
unemployment	Unemployment (% of total labor force)	International Labour Organization, ILOSTAT database	+/-

Source: authors' own elaboration

4. RESULTS AND DISCUSSIONS

The results of the regression analysis are briefly presented in Table 2. Models (1) and (2) reflect the effects of tax rates on new business density, while model (3) includes the two variables related to tax administration burden. The full model, model (4), includes regressors related to both fiscal policy dimensions under investigation, namely the tax burden and the administrative burden of paying taxes and contributions.

We can notice a negative and highly significant relationship between tax policies and new business density in the EU countries. Our empirical evidence shows, both in the case of overall tax rates, and profit and labor taxes, that high tax rates discourage the creation of new firms, which confirms our second hypothesis (H2). All the coefficients of tax rates have the expected sign and are highly statistically significant ($p < 0.01$), which suggests that a high level of tax rates could reduce potential gains and the interest in starting new businesses (Chowdhury, Terjesen and Audretsch, 2015; Braunerhjelm and Eklund, 2014). With regard to the *profit tax rate*, our results confirm the findings of several other

empirical studies (Djankov *et al.*, 2010; Da Rin, Di Giacomo and Sembenelli, 2011; Bacher and Brühart, 2013; Belitski, Chowdhury and Desai, 2016; Block, 2016; Darnihamedani *et al.*, 2018; Venâncio, Barros and Raposo, 2020) and indicate a decrease in new business density under the conditions of a higher rate of profit taxation. As Venâncio, Barros and Raposo (2020) point out, a high corporate tax rate is an important constraint for creating a new firm because it increases the costs of starting a business and, consequently, deters individuals who cannot obtain the necessary financial resources. The results on the effects of the *labor tax rate* are similar as statistical significance to those of the other two (above-mentioned) tax rates, but the size of the coefficients is much smaller than in the case of profit tax rate.

Our first hypothesis (H1) is also confirmed, as we find a negative and highly statistically significant relationship between tax administrative burdens (the number of tax payments and the time to prepare and pay taxes) and new business density, in both models (3) and (4). Therefore, a high tax administrative burden leads to a reduction in new business density and is an important obstacle to the creation of new companies. As suggested by Braunerhjelm, Eklund and Thulin (2019), tax codes are often complex, and compliance requires both time and financial resources, which are often significant, especially for potential entrepreneurs. Consequently, burdensome tax administration reduces the number of people willing to start new businesses. The authors also point out that the negative effects of costs related to the administration of taxes are more important for young people and small businesses. The empirical results on the effects of both measures of tax administration burden are in agreement with our expectations and comparable to those evidenced by Djankov *et al.* (2010), Braunerhjelm and Eklund (2014), Belitski, Chowdhury and Desai (2016), and Braunerhjelm, Eklund and Thulin (2019).

Another interesting result from Table 2 is that the magnitude of the impact of tax payments is higher than the one of the time required to prepare and pay taxes. This indicates that the costs related to the number of tax payments are much higher for potential entrepreneurs compared to the time required to pay taxes.

As for the control variables, all seven have the expected sign and a significant influence on new business density, which suggests their role as key predictors of the dynamics of the number of newly registered companies.

The two indicators used as proxies for business start-up regulations (*the cost of business start-up procedures* and *the number of procedures required to start a business*) are negatively (and statistically significant) correlated with the new business density in all four models, although there are differences in terms of the size of coefficients. The empirical results suggest that a reduction of the cost of business start-up procedures or of the number of procedures needed to start a business would allow potential entrepreneurs to more easily create a new business. Our findings confirm the hypotheses and are in agreement with results of other empirical studies (such as: Klapper, Laeven and Rajan, 2006; Djankov *et al.*, 2010; Klapper and

Love, 2010; Braunerhjelm and Eklund, 2014; Chowdhury, Terjesen and Audretsch, 2015; Braunerhjelm, Eklund and Thulin, 2019).

Table 2. Impact of tax policy variables on new business creation

Dependent variable – NBD	Model (1)	Model (2)	Model (3)	Model (4)
tax_total	-0.0183*** (0.0032)	-	-	-
tax_profit	-	-0.0440*** (0.0070)	-	-0.0447*** (0.0070)
tax_labor	-	-0.0192*** (0.0032)	-	-0.0194*** (0.0032)
payments_taxes	-	-	-0.0039* (0.0020)	-0.0056*** (0.0018)
time_taxes	-	-	-0.0015*** (0.0005)	-0.0015*** (0.0004)
Cost	-0.0118*** (0.0014)	-0.0104*** (0.0015)	-0.0112*** (0.0016)	-0.0099*** (0.0016)
Procedures	-0.0695*** (0.0194)	-0.0685*** (0.0190)	-0.0706*** (0.0196)	-0.0622*** (0.0188)
Gdp	-0.3090*** (0.0996)	-0.2626*** (0.0927)	-0.4048*** (0.1223)	-0.3384*** (0.0974)
domestic_credit	0.0032*** (0.0011)	0.0037*** (0.0011)	0.0057*** (0.0009)	0.0033*** (0.0011)
foreign_investment	0.0047*** (0.0011)	0.0030*** (0.0011)	0.0062*** (0.0014)	0.0029*** (0.0011)
Inflation	0.0771*** (0.0266)	0.0708*** (0.0258)	0.0703*** (0.0265)	0.0775*** (0.0256)
Unemployment	-0.0484*** (0.0114)	-0.0667*** (0.0120)	-0.0508*** (0.0116)	-0.0708*** (0.0118)
_cons	6.3497*** (1.0356)	6.2826*** (0.9945)	6.5718*** (1.3562)	7.4397*** (1.0742)
<i>N</i>	338	338	338	338
<i>Fixed effects</i>	Yes (year/region)	Yes (year/region)	Yes (year/region)	Yes (year/region)
<i>F-test</i>	20.57	20.44	15.14	19.39
<i>Prob F-test</i>	0.0000	0.0000	0.0000	0.0000
<i>R-squared</i>	0.5231	0.5589	0.4922	0.5768
<i>Adjusted R-squared</i>	0.4882	0.5250	0.4533	0.5414

Notes: Robust standard errors between parentheses; *, ** and *** indicate significance at 10%, 5% and 1% levels, respectively.

Source: authors' own elaboration

The level of economic development proxied by GDP per capita has a negative and highly statistically significant relationship with the number of newly created companies. The findings are in line with our expectations, but also with the results of other research papers (such as: Vidal-Suñé and Lopez-Panisello, 2013; Braunerhjelm and Eklund, 2014; Arin et al., 2015; Chowdhury, Terjesen and Audretsch, 2015; Fuentelsaz et al., 2015; Belitski, Chowdhury and Desai, 2016; Darnihamedani et al., 2018), which show that in conditions of declining incomes, people choose to start new businesses due to the lack of better employment

opportunities. As Arin *et al.* (2015) point out, when GDP is low, the creation of new companies can be seen as an effective solution to mitigate poverty.

Another factor with potential impact on new business density is *the level of financial development*, proxied by *the ratio of domestic credit to the private sector*. We considered this variable in our analysis because the start up of a company and its subsequent increase require financial capital and an easy access to finance. We find a positive relationship between the ratio of domestic credit to the private sector and new business density, which confirms our expectations and the results of other studies (e.g.: Aghion, Fally and Scarpetta, 2007; Klapper, Laeven and Rajan, 2006; Herrera-Echeverri, Haar and Estévez-Bretón, 2014; Vidal-Suñé and Lopez-Panisello, 2013). Also, the coefficient estimates are strongly statistically significant ($p < 0.01$) in all four models. Our empirical evidence shows that an increase in the amount of credit granted to the private sector of the economy, implying an easier access to finance, would encourage the creation of new firms.

As for *foreign direct investment*, our estimates indicate a positive and strongly significant effect on new business density, in line with our expectations but also with the results of other studies (such as: Ayyagari and Kosová, 2010; Herrera-Echeverri, Haar and Estévez-Bretón, 2014; Kim and Li, 2014). The presence of foreign companies could stimulate the creation of new businesses because people working in such firms gain work experience and assimilate new knowledge, which would allow them to more easily identify new business opportunities. Moreover, the significant presence of foreign companies could generate new business opportunities in the local market through their additional demand for domestic goods and services, which would further encourage the creation of new companies.

Another variable of control included in our study is the *inflation rate*, which is positively and strongly associated with new business density, thus confirming our hypothesis and the findings of some empirical studies (Vidal-Suñé and Lopez-Panisello, 2013). This situation could be explained by the fact that a higher inflation rate leads to more business opportunities because the increase in the prices of goods and services creates higher earnings expectations of entrepreneurs.

Unemployment rate is negatively and strongly related to new business density in all models, in line with our expectations but also with the findings of several studies (such as: Herrera-Echeverri, Haar and Estévez-Bretón, 2014; Vidal-Suñé and Lopez-Panisello, 2013; Arin *et al.*, 2015; Fuentelsaz *et al.*, 2015; Dvouletý and Orel, 2019). As the unemployment rate rises, the purchasing power of the population decreases and, therefore, the demand for goods and services decreases, which further reduces business opportunities. Consequently, a high unemployment rate could discourage the formation of new companies.

To test for the existence of non-linear effects of tax rates on the creation of new businesses (hypothesis H3), a quadratic term (represented, consecutively, by the square value of total tax rate, profit tax rate, and labor tax rate) was added to the regression model. The results of the regression analysis are depicted in Table 3.

We can firstly notice that the results concerning our control variables are broadly unchanged. Moreover, our main findings from the previous regression analysis hold, namely there is a strong and highly statistical significant negative relationship between the tax policy variables (tax rates and tax administration burdens) and the number of newly registered firms.

Table 3. Quadratic effects of tax rates on new business creation

Dependent variable – NBD	Model (5)	Model (6)	Model (7)
tax_total	-0.0853*** (0.0149)	-	-
tax_total ²	0.0008*** (0.0002)	-	-
tax_profit	-	-0.1353*** (0.0211)	-
tax_profit ²	-	0.0037*** (0.0007)	-
tax_labor	-	-	-0.0782*** (0.0137)
tax_labor ²	-	-	0.0011*** (0.0002)
payments_taxes	-0.0065*** (0.0018)	-0.0025 (0.0018)	-0.0045** (0.0019)
time_taxes	-0.0014*** (0.0005)	-0.0012*** (0.0004)	-0.0013*** (0.0004)
cost	-0.0094*** (0.0015)	-0.0067*** (0.0016)	-0.0103*** (0.0013)
procedures	-0.0656*** (0.0191)	-0.1278*** (0.0224)	-0.0717*** (0.0181)
gdp	-0.4930*** (0.1017)	-0.3694*** (0.1006)	-0.4460*** (0.1246)
domestic_credit	0.0029*** (0.0010)	0.0076*** (0.0009)	0.0019 (0.0012)
foreign_investment	0.0039*** (0.0011)	0.0035*** (0.0012)	0.0061*** (0.0013)
inflation	0.0938*** (0.0256)	0.0785*** (0.0249)	0.0866*** (0.0260)
unemployment	-0.0558*** (0.0110)	-0.0656*** (0.0118)	-0.0381*** (0.0114)
_cons	9.8981*** (1.2331)	7.190747*** (1.1072)	8.311425*** (1.3998)
<i>N</i>	338	338	338
<i>Fixed effects</i>	Yes (year/region)	Yes (year/region)	Yes (year/region)
<i>F-test</i>	18.33	19.16	17.90
<i>Prob F-test</i>	0.0000	0.0000	0.0000
<i>R-squared</i>	0.5662	0.5911	0.5410
<i>Adjusted R-squared</i>	0.5299	0.5569	0.5027

Notes: Robust standard errors between parentheses; *, ** and *** indicate significance at 10%, 5% and 1% levels, respectively.

Source: authors' own elaboration

In addition, the coefficients of the quadratic term are positive and highly statistically significant ($p < 0.01$) in all three models. As tax rates in the EU countries increase, their marginal negative effect on the creation of new businesses becomes smaller and smaller. This confirms our hypothesis of a non-linear relationship between tax rates and new firm registration in our sample countries, in line with the findings of some other studies (Cullen and Gordon, 2007; Da Rin, Di Giacomo and Sembenelli, 2011).

One possible explanation for this result could be that, as tax rates increase, the incentives for tax evasion increase as well. In other words, in a high tax rate environment, tax morale might be low and tax evasion might become more appealing and, therefore, potential entrepreneurs might be less discouraged by an increase in tax rate.

5. CONCLUSIONS

The crucial role of entrepreneurship in the economic and social development of a country has led to the increase of researchers and decision-makers' interest in examining the extent to which tax policy measures could encourage the creation of new businesses.

Our study aims to empirically test the relationship between tax policy variables and the dynamics of new business creation in the 28 EU countries over the period 2006-2018. The main explanatory variables were divided into two groups, namely variables on tax rates and tax administration burdens. Moreover, in order to ensure the accuracy of the results, several control variables, which were identified in the literature as important determinants of entrepreneurial activity at the country level, have also been included in the analysis.

The results of our regression analysis confirm the findings of previous empirical studies on the effects of tax policy on entrepreneurial activities, and show that the level of tax rates and tax administration burdens significantly influences the dynamics of newly registered companies. In addition, we evidence that the magnitude of the effect of changes in the level of profit tax rate on the number of newly created firms is higher than in the case of labor tax rates. Therefore, in line with the findings of other empirical studies, we emphasize that changes in the corporate tax rate would be a more effective way to stimulate the creation of new companies and new job opportunities. Regarding the second set of tax policy variables, namely the two measures of the burden of tax administration, we find that the number of tax payments is a more important barrier to the creation of new companies compared to the time required to pay taxes. Moreover, our research finds empirical evidence for a non-linear relationship between tax rates and new firm registrations, implying that the marginal effect of increasing tax rates becomes smaller and smaller.

The analysis of the control variables highlights that all the seven indicators investigated are key predictors of the dynamics of the number of new companies registered in the EU countries.

Overall, our empirical evidence shows that fiscal policy plays a crucial role in the creation of new firms in the EU countries so that the governments of these countries could stimulate this phenomenon by cutting tax rates and/or reducing the level of tax administration burdens.

The findings of our research may be of interest to both researchers, concerned with investigating the impact of tax policy on starting new businesses, and decision-makers, who should focus more on introducing tax incentives and improving the fiscal regulatory framework to stimulate the creation of new businesses.

Our research has some limitations that open the way for further research. For example, one of the limits comes from including in the analysis all the 28 EU member states, which, however, have different levels of economic development. Therefore, given the relevance of the research topic, we intend to develop our analysis by investigating the relationship between tax policy and the creation of new businesses for different subgroups of countries, such as euro area and non-euro area countries. In addition, we aim to examine the extent to which the relationship between tax policy and starting a new business would be affected by the quality of the institutional environment, as measured by the degree of corruption.

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THE IMPORTANCE OF SOCIAL RESPONSIBILITY IN THE BANKING SECTOR OF ROMANIA, IN THE CONTEXT OF THE COVID-19 PANDEMIC

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Abstract

This paper aims to present the measures, which were adopted by the banks from Romania, regarding the effects of the COVID-19 pandemic. Being a critical moment for the world economy, certain measures have been imposed, so that the impact of such a phenomenon to not be very great among consumers. An important role in this period is played by social responsibility, one of the dimensions of reputation. The content of the paper will refer to the mission that this element has within an economic unit, and implicitly in the creating of a strong reputation. Moreover, a pilot marketing research among consumers was conducted to present the way in which they assess the banks' reaction. A questionnaire was the research tool. The analysis of the research results evidenced that the banks on the national market reacted appropriately to the effects that may be created by the COVID-19 pandemic. This is also reflected in the behavioural intentions of consumers.

Keywords: *social responsibility; reputation; banks; marketing research; COVID-19 pandemic.*

JEL Classification: G21, L14, M14

1. INTRODUCTION

Since the economic crisis, which began in 2007-2008, and until the end of 2019, the world economy has not faced major events that would affect the smooth running of companies' activities.

More than ten years later after the start of the aforementioned event, a new turning point seems to be taking place. This is the so-called crisis created by the COVID-19 pandemic.

According to the World Health Organization, COVID-19 is “an infectious disease caused by a newly discovered coronavirus” (World Health Organization, 2020).

According to data provided by the website of the General Secretariat of the Council, which is dedicated to this issue, the first case of COVID-19 was registered in Wuhan, China, in December 2019 (The General Secretariat of the Council, 2020). Since then, the number of cases has grown on a large scale.

On 11 March 2020, COVID-19 was declared a global pandemic by the World Health Organization. At the end of March 2020, all Member States of the

European Union registered such cases. Worldwide, during that period, the number of individuals infected with this new virus exceeded 859,700 people (Worldometer, 2020).

Because it spreads very easily from an infected person to a healthy person, some states have taken drastic measures, which have even consisted of closing the borders. As a result of these decisions, many flights were cancelled, exports and imports were reduced or stopped, and touristic activities were interrupted. Furthermore, a state of emergency was declared in Romania, which led to the suspension of certain activities.

Due to the ones mentioned above, the economic consequences of this pandemic will be of a negative type. Experts say there will be a recession. According to an article in The Economist Intelligence Unit, “the eurozone will be one of the hardest hit regions, posting a full-year recession of 5.9%” (The Economist Intelligence Unit, 2020).

The fact that the economies of the euro area Member States would face such problems would not be a novelty. The previous economic crisis, which began in 2007-2008, was a challenge for them, as “they were forced to deal with additional issues coming from the membership to a monetary union with a single currency” (Duhnea, Ghiță-Mitrescu and Moraru, 2018).

For this purpose, in order to prevent certain threats, such as a massive drop in demand or a low reputation, the institutions have already begun to take various measures. These preventive measures can be applied to all states, not just those in the euro area. They will have an additional role, namely not to provoke panic among citizens, who will probably feel afraid of the periods to come.

All decisions taken in this regard are related to one of the dimensions of the company's reputation, namely Social Responsibility.

The first part of this paper will address the concept of social responsibility, according to the information presented in the literature. Then, there will be a review of the reactions that took place on the Romanian banking market, one of the most affected sectors in the country when it comes to the COVID-19 pandemic. The paper will end with the most representative conclusions of marketing research, which was conducted among the consumers on this market.

2. LITERATURE REVIEW. THE IMPORTANCE OF SOCIAL RESPONSIBILITY

2.1 Social Responsibility

The economic crisis that began in 2007-2008 may be a phenomenon that will help economists get over the potential crisis created by the COVID-19 pandemic. Even if the occurrence of each one is determined by different causes, the previous crisis can represent a support for the decisions that will be adopted in the next period.

Research has shown that during the crisis that occurred about ten years ago, “purchasing decisions have been heavily influenced by bank reputations” in this sector (Dell’Atti *et al.*, 2017). This fact might repeat itself during this period, if the potential crisis created by the COVID-19 pandemic will increase. Representatives of banking units should take into account the moments spent during the economic crisis that broke out in 2007. Thus, there is a chance that banks will not have a low level of reputation. This fact will not lead to a decrease in demand and implicitly to a smaller number of customers.

But what does reputation mean? Reputation is “a perceptual representation of past actions and future prospects of a firm that describes its appeal in specific contextual circumstances, with respect to the different criteria and a specific stakeholder, compared against some standard” (Ruiz, Gutiérrez-Broncano and Esteban, 2012). This is an adapted definition of the one given by Fombrun in 1996. Therefore, the behavioural intention of a consumer, when he wants to work with a bank during an economic crisis, will be influenced both by the company's past activity and by the opportunities it can offer for the future. Even if the bank, through its strategic plans, has a very attractive vision, if its past is a bad one, consumers can change their minds in collaborating with such bank.

According to the specialized literature, one of “the most popular and well-cited measurements for corporate reputation” is the Reputation Quotient (RQ) (Kanto, de Run and Isa, 2016). According to the RQ model, the six dimensions of reputation are: (1) “emotional appeal”; (2) “products and services”; (3) “vision and leadership”; (4) “workplace environment”; (5) “social responsibility”; (6) “financial performance” (Krueger and Wrolstad, 2016).

Out of the six dimensions presented, one of the most important is social responsibility. This will be able to count a lot during this period, helping the company to have a favourable perception among consumers.

The attributes that make up the dimension of Social Responsibility are: “Supports Good Causes”; “Environmental Stewardship”; “Treats People Well” (Fombrun and Gardberg, 2000).

The importance of this dimension, which supports charitable, environmental or social actions, is also given by the fact that it “is present in all reputation general models and in most specific ones”, not only in the one mentioned above (Ruiz, Esteban and Gutiérrez-Broncano, 2014).

Taking into account today's dynamic competition, which takes place between companies in different economic sectors, experts consider that “the social responsibility of organizations is the main factor of the survival of every organization” (Lahiji and Fadaei, 2016). Keeping this in mind, companies should continuously adapt their social responsibility strategies so that, in times of crisis, they can apply them correctly and efficiently.

The literature states that “the beginnings of the social responsibility concept were connected to the society’s needs” (Zaharia *et al.*, 2010). Thus, all companies,

which will want to carry out actions related to the dimension of reputation mentioned above, will have to analyse, first of all, the needs of those in society, in order to intervene effectively. By carrying out an activity that addresses the needs of the society, the company will be able to take advantage of this and will be able to improve its reputation on the market in which it operates.

Moreover, the Social Responsibility actions, which the companies will want to carry out, will have to take into account two things: the allocated budget and the target audience. The financial strength of an economic unit is an important element, which can make the difference between the actions carried out by two units, from the same sector or between the decision of a company to carry out such actions and the decision of a company not to carry them out. If the public does not receive the message that a social responsibility activity has, it is unlikely that the unit can be appreciated by its customers. In this regard, their age, level of education or income level should be taken into account (Dabija and Băbuț, 2014).

2.2 Corporate Social Responsibility Actions

The Social Responsibility actions conducted by a company can target the whole society and not only its consumers. These are usually mentioned in the Corporate Social Responsibility (CSR) policies of such units.

CSR is “a role of business in society as a social performance” (Selvi, Wagner and Türel, 2010). Such actions are supporting the company in building a strong reputation and a sustainable reputation. Furthermore, the importance of this sector in a company must be increased as it ensures “each organization’s essential competitive advantage” and represents “a path to society’s sustainable development” (Anghel, Grigore and Roșca, 2011).

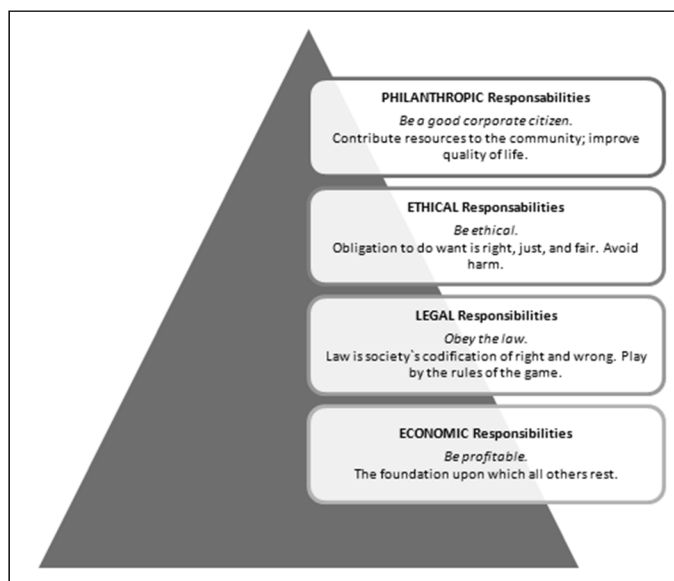
An important aspect of CSR is that these activities come on the initiative of companies, and are not imposed by a particular body (Commission of the European Communities, 2001).

Adopting a positive attitude, which may be possible by starting a CSR action, can bring many benefits to the economic unit, such as “a better image for citizens, partners and investors” (Ogarcă and Puiu, 2017).

If these charitable activities come from an economic unit that has a good reputation, they will be perceived positively by the public. Instead, if the company does not have a high level of reputation, the entire effort to carry out a philanthropic activity can be attributed, in the view of the public, to the company's interest in improving its image (Bae and Cameron, 2006).

An action that can support the whole society and that has been found over time on the Romanian banking market is the action of charitable donations. According to the specialized literature, “a charitable donation is one dimension of corporate social responsibility” (Xia, Teng and Gu, 2019). This can also be seen in the CSR Pyramid (Figure 1).

The pyramid has four essential components, each of which directs the company in a certain direction: “Economic Responsibilities”, “Legal Responsibilities”, “Ethical Responsibilities” and “Philanthropic (or Charitable) Responsibilities” (Carroll, 1991).



Source: own processing after Carroll (1991)

Figure 1. The Corporate Social Responsibility Pyramid

Simionescu and Dumitrescu (2014) state that the economic crisis, which began in 2007, has also brought favourable situations. These opportunities could also be found in the current crisis created by the COVID-19 pandemic and could be quantified by assessing social responsibility activities. Specifically, the potential economic crisis will be able to “highlight if companies connected their CSR practices to their core business in a responsible way or they fall victim to cost-cutting measures” (Simionescu and Dumitrescu, 2014).

Therefore, those who are most able to evaluate the way in which the banking units in Romania treat this subject are the consumers. Having some history with the institution, they will be able to assess whether the CSR activities, which can be promoted in the next period, are in the interest of the institution or are part of a pronounced policy of the company.

3. REACTION OF BANKS IN ROMANIA

The effects of the COVID-19 pandemic have also been felt in Romania. One of the most affected fields is the banking sector. This is also explained by the reactions of the members of the banking institutions, who adopted preventive

measures to reduce the negative impact of the pandemic. The way in which the institutions on the banking market reacted to the phenomenon mentioned above reflects the importance they are giving to society’s problems.

Two of the most important participants in this market are BRD – Groupe Société Générale (BRD) and Banca Transilvania (BT). According to the last hierarchy made by CSRHub (2019), these two banks are among the only institutions in Romania that were fully evaluated. If at the beginning of December 2019, on a scale from 0 to 100, BRD had a score of 51, BT had a score 10 points lower, respectively 41.

CSRHub “provides access to corporate social responsibility and sustainability ratings and information on 17,268+ companies from 134 industries in 143 countries” (CSRHub, 2020).

Table 1 and Table 2 show the main measures taken by the two banks in the context of the COVID-19 pandemic with regard to their customers.

**Table 1. Measures to combat COVID-19 (risk reduction),
for individual customers – BRD**

The bank institution	Measures
BRD	<ul style="list-style-type: none"> - “the deferral of rates (for loans) for a period of up to 9 months, according to the GEO 37/2020”; - “the postponement of the due date by 30 days, for monthly instalments, for the credit cards”; - “extending the grace period by 30 days for the credit cards”; - “increasing the number of instalments without interest from 6 to 18, for the credit cards”; - “the MyBRD Net platform and the MyBRD Mobile application for free, for three months”; - “some agencies were temporarily closed, and others have changed schedules”.

Source: (BRD – Groupe Société Générale, 2020a)

**Table 2. Measures to combat COVID-19 (risk reduction),
for individual customers – BT**

The bank institution	Measures
BT	<ul style="list-style-type: none"> - “the possibility to defer the payment of instalments by up to 3 months, without any additional costs”; - “legislating the postponement, upon request, by up to 9 months the instalments, interests and fees for the customers who are affected by the current context, but not later than the end of the year”;

Source: (Banca Transilvania, 2020a)

Two main ideas can be extracted from the measures presented above: the interest for the continuation of a good development of the provision of services, but also the increased interest for the protection of consumers' health.

It should be noted that, in order to defer payment of the loans, the debtors had to submit to the creditor institutions an application requesting this action. The application had to be submitted within a maximum of 45 days from the date of entry into force of the Emergency Ordinance regulating this, respectively 30 March 2020. The period for which these payments can be suspended is between one month and nine months. The deadline until when this postponement period can take place is December 31, 2020 (Government Emergency Ordinance no. 37/2020).

The two institutions mentioned above did not limit their actions taken only in support of customers. These carried out various charitable activities, which consisted of donating large sums of money, in order to help the whole society.

On 19 March 2020, BRD announced its public on its official website that it is donating no less than two million LEI to reduce the effects of this pandemic. Of the two million LEI, 1.7 million LEI are dedicated to the medical sector and 300,000 LEI to the "independent cultural sector" (BRD – Groupe Société Générale, 2020b).

In its turn, BT issued a few days later a statement on its website announcing that it had donated until that day 1 million euros "to help hospitals, doctors, those in the first line, and the Romanians all over the country in the fight against COVID-19" (Banca Transilvania, 2020b).

The gesture of both banking units is one to be appreciated and worth following by those of the units having such a potential. Likewise, there were other banking units in Romania that reacted to the effects of this pandemic, in order to help customers, but these were not mentioned in this section of the paper.

By continuing to start of such actions, banks will be able to benefit from a consistent appreciation from as many consumers as possible.

4. RESULTS OF THE MARKETING RESEARCH

A pilot research was conducted among the consumers of banking services in the country with regard to the effects of the COVID-19 pandemic and to the reaction of the banking units in Romania.

4.1 Research methodology

4.1.1. Research objectives

The main objectives of this research were: to measure the level of satisfaction of respondents regarding the reaction of banking units in Romania, in order to reduce the effects of the COVID-19 pandemic on consumers; to establish the purpose of the representatives of the banking units in Romania, regarding the

taking of measures to prevent the effects of the COVID-19 pandemic, in the view of consumers; identification of the behavioural intentions of the consumers surveyed, following this event, in connection with the banking institution with which they collaborate.

4.1.2. Research period, research tool and software used

This marketing research was conducted between 03 April and 16 April 2020. The research tool was a questionnaire. It consisted of 16 questions. The questions asked concerned the profile of the respondent, and the objectives of the research. Were used open-ended questions, with a short answer, and closed-ended questions. For one of the questions, was used a five-point semantic differential, from 1 (very unsatisfactory) to 5 (very satisfactory). The data collected were processed using the IBM SPSS Statistics software.

The questionnaires were distributed online.

A total of 187 questionnaires were collected. After the incomplete questionnaires were removed, the total number of forms on which the analysis was started was 173.

4.1.3. Ethical issues

At the beginning of the questionnaire, a special section was set up in which each respondent was informed about the purpose of data collection and that the information provided will be confidential. Furthermore, before starting to actually fill it in, even if the form was in electronic format, each respondent had the opportunity to express his/her agreement to participate or not in this research. They were also informed that, in accordance with the provisions of the EU Regulation no. 679/2016, the data provided will be used strictly for the specified purpose.

4.1.4. Sample structure

Table 3 shows the sample structure of this research.

Table 3. The structure of the sample

Variable	Groups	Frequency (%)
<i>Gender</i>	Male	24.3
	Female	75.7
<i>Age</i>	18-24 years	22.5
	25-34 years	37.6
	35-55 years	38.7
	56-65 years	1.2
<i>Residence</i>	Urban	79.8
	Rural	20.2
<i>Marital status</i>	Single	50.3

Variable	Groups	Frequency (%)
	Married	42.8
	Divorced	5.2
	Widowed	1.7
	Employee	66.5
<i>Professional status</i>	Student	14.5
	Entrepreneur	8.0
	Housewife	5.8
	Freelancer	4.0
	Unemployed	1.2
<i>Average monthly income</i>	0 – 2230 LEI	33.5
	2231 – 3000 LEI	25.4
	3001 – 4000 LEI	12.1
	4001 – 5000 LEI	11.0
	>5000 LEI	18.0

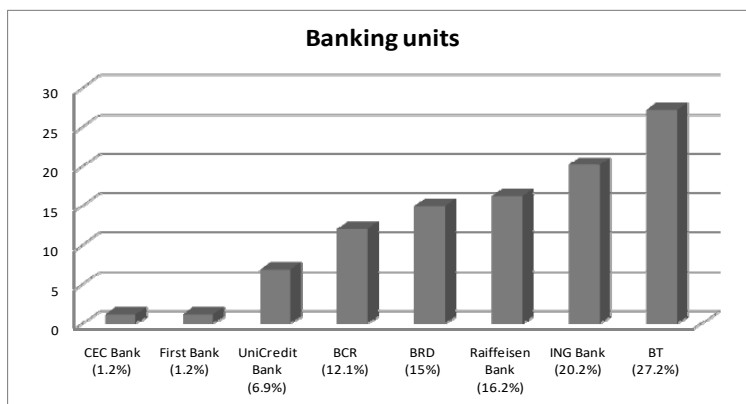
Source: own processing

4.2. Data analysis

The banking units with which the respondents interact most often are Banca Transilvania (27.2%) and ING Bank Romania (20.2%). The hierarchy of all banking units, with which the respondents collaborate, can be analysed in Figure 2.

Out of the total number of respondents, only 46.8% of them were affected by the consequences of the COVID-19 pandemic when it comes to the use of banking services.

The ways in which they were affected are: the impossibility to go to the bank to make certain payments (49.4%), the impossibility to pay the instalments of loans on time (40.7%) and the impossibility to go to the bank to solve certain problems that are not related to making a payment (9.9%).



Source: own processing

Figure 2. Hierarchy of banking units

Out of the total number of people affected, 56.8% stated that the banking unit had taken measures to reduce the negative effects of the COVID-19 pandemic, while 7.4% stated that the banking unit they were collaborating with had not taken any such measures. 35.8% of those affected stated that they do not know whether or not the banking institution has taken any decision in this regard.

Based on the answers received from the affected respondents, the efficient measures that banking institutions have taken to protect consumers from the effects of this pandemic and from which they are benefitting are the following: the elimination of fees for using online platforms to make certain payments (47.8%); the extension of the payment period of credit instalments (45.7%); the use of alternative means of communication (6.5%).

A five-point semantic differential, from 1 (very unsatisfactory) to 5 (very satisfactory), was used in order to assess the reaction of representatives of the banking units in Romania. The average score recorded can be seen in the following table (Table 4).

Table 4. Descriptive statistics

	Mean	S.D.	Min.	Max.
<i>How do you assess the reaction of the banking institution to the current situation created by the COVID-19 pandemic?</i>	3.44	1.000	1	5

Source: own processing, using the IBM SPSS Statistics software

The current reaction can also be explained by the impulse of the customer, who “accepts the risk to trust the bank (and implicitly the financial system) because he expects that he can rely on bank’s promise, although bank might prove to act opportunistically, deceiving his expectations and trust” (Andrei, Zait and Vătămănescu, 2015). It will be interesting to analyse, in six months or a year, when the measures adopted by the banks will be felt, if the affected consumers will have the same opinion.

The means of communication that the representatives of the banking units used in order to inform the consumers about the adoption or non-adoption of measures to diminish the negative effects generated by the COVID-19 pandemic are: e-mail (27.2%); telephone call (12.3%); SMS (11.1%); press (6.2%); mobile application of the banking unit (7.4%). The remaining 35.8% of those affected said they had not been informed of such measures.

30.9% of the affected persons said that the measures adopted show a responsible attitude of the banking institution towards its public. On the other hand, 22.2% of the affected respondents said that the measures adopted are more in the interest of the institution, in order to improve its image and benefit from a higher reputation. 46.9% of the affected persons could not decide on any direction.

Of the total respondents, only 27.2% know of other social causes which the banking institutions with which they collaborate have carried out, in the context of the COVID-19 pandemic, in support of society.

With reference to the behavioural intentions of consumers regarding the banking institution with which they collaborate, 88.4% of the respondents will continue their collaboration after this event. Other answers given by respondents are: continued collaboration and more intense promotion of the banking institution (5.8%); interruption of collaboration (2.9%); interruption of collaboration and lack of recommending of the institution to other consumers (2.3%); conducting a negative marketing campaign (0.6%).

4.3. Testing of hypotheses

Three research hypotheses were formulated and subsequently tested.

H₁. There is a strong correlation between the ways in which respondents were affected and the measures taken by banking institutions.

According to the results, $r(44) = 1.00$, $p < 0.01$, there is a perfect correlation with the points that are in a perfect straight line. The hypothesis is being accepted.

It can thus be seen that the measures adopted aimed at reducing the negative effects on consumers.

H₂. There are statistically significant differences in behavioural intent between the respondents who were affected by the consequences of the COVID-19 pandemic and the respondents who were not affected by this pandemic.

A Chi-Square test was used to test this hypothesis. The results $\chi^2(4) = 15.931$, $p = 0.003$ lead to the acceptance of this hypothesis.

The behavioural intention of respondents who have not been affected by the effects of the COVID-19 pandemic is an entirely positive one, as opposed to the behavioural intention of the respondents who have been affected.

H₃. There are statistically significant differences in the assessment of the response of banking units between the respondents who stated that their banking unit has taken preventive measures and the respondents who stated that their banking unit has not taken any preventive measures.

To test this hypothesis, an independent samples *t*-test was used. Due to the test result, $t(50) = 6.395$, $p = .000$, the hypothesis is being accepted.

The reaction of the people who stated that their banking unit has taken preventive measures is a satisfactory one, unlike the other group, whose reactions are unsatisfactory.

5. FUTURE RESEARCH

Given the impact of this COVID-19 pandemic, a future direction of research could be to make a comparison between the measures taken by a bank on the national market and the measures taken by it in other countries. Taking into account the fact that some banking institutions in our country have their main

headquarters abroad, and “the corporate social responsibility in the Romanian banking sector is influenced by the parent-financial group” (Frecea, 2019), it is interesting to analyse whether decisions differ significantly from one country to another.

6. CONCLUSIONS

When examining the main objectives of the marketing research, one can find the following: the level of satisfaction of the respondents when it comes to the reaction of the banking units in Romania, in order to diminish the effects of the COVID-19 pandemic on consumers, was a more neutral one; in the respondents’ opinion, the main goal of the representatives of the banking units in Romania with regard to the taking of measures to prevent the effects of the COVID-19 pandemic, was to come to the aid of consumers; the majority of respondents (94.2%) will continue to have a positive attitude towards the banking unit with which they collaborate, continuing the relations with them, and some of them will even promote the institution more intensely. The remaining 5.8% of respondents will not have a positive intention in relation to the banking unit, as they want to interrupt their collaboration or even carry out marketing campaigns that are negative for the image of the institution.

While keeping in mind the measures taken by the representatives of the banking units, a digital revolution in this field is expected to take place in the near future. The use of online platforms will be increasingly encouraged. In this regard, institutions will need to pay more attention to ensuring a high level of security so that customers are not reluctant to use them. At the same time, if this in-depth computerization strategy is implemented, the whole system will be much more efficient. Consumers will no longer have to travel to the bank to make a payment, and everything will take place much faster.

After analysing the small percentage of respondents who became aware of the existence of other social causes, supported by the banking unit with which they collaborate (27.2%), but also the share of respondents who stated that the measures adopted by the institutions with which they collaborate are directed more to the bank's interest (22.2%), one can state that all the steps taken by the companies have had the expected success. As the needs of society were put first before those of the bank, the reputation of companies will be able to benefit from a high score in the next period, due to the adoption of some social responsibility ethical policies.

In conclusion, social responsibility is one of the most important dimensions of reputation, which can save the image of a banking institution during negative events.

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THE PANDEMIC: A REAPPRAISAL OF MONETARY AND FISCAL POLICIES IN THE EU COUNTRIES

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Abstract

Nowadays society is faced with a severe pandemic situation. This context has brought to the foreground an intensely disputed issue concerning the interventionist measures that governments are taking supposedly to solve the problems caused by this pandemic. Both the fiscal and monetary policies used by the member states of the European Union have a major social and economic impact. Considering the rising need for interventionist measures in the midst of this pandemic, the aim of our research is to identify and discuss the main measures taken by the member states of the European Union in terms of fiscal and monetary policies. The partial shutoff of Europe's pandemic-afflicted economies has led states to a more serious economic crisis than the one back in 2008, and the announced measures have to be understood and interpreted in a different economic context, as the causes for this contraction are of another sort.

Keywords: *pandemic context; interventionism; monetary policy; fiscal policy.*

JEL Classification: E5, G01, H30

1. INTRODUCTION

The current economic crisis is an atypical one. Per Baldwin's (2020) description, it is neither a banking crisis or loan crisis, nor a sudden-stop crisis or an exchange rate crisis. However, it incorporates elements from all of the above. The crisis did not start from a specific location – geographic and/or sectorial – and then spread over an extended area; instead, it set in almost simultaneously in China and the G7 economies, in several economic sectors.

Nation states and suprastate bodies are facing new challenges in the context of the economic crisis caused by the COVID-19 pandemic. Forecasts indicate an

impairment of fiscal balances for this year in pandemic-afflicted states, while previous deficits are a sore spot for the affected economies.

The COVID-19 pandemic found European economies in a growth phase, with low inflation and nominal interest rates. The economic impact of this pandemic calls for unprecedented fiscal and monetary policy measures. In this context, the aim of the fiscal policy as mentioned in the Fiscal Monitor of IMF is “to save lives, protect the most-affected people and firms from income losses, unemployment, and bankruptcies, and reduce the likelihood that the pandemic results in a deep long-lasting slump” (IMF, 2020a).

In addition to the losses of human lives, the pandemic also has a major impact on manufacture and exerts an extraordinary pressure on national budgets. Social distancing caused the cutting off of many economic activities, with severe consequences in terms of revenue reduction, low collections from taxes, and costs related to the protection of affected people and firms. All these required extensive and specific measures, such as: sick leaves or family caregiver leaves supported from public funds, unemployment compensations, subsidies, tax payment deferrals or benefits for companies at risk for bankruptcy. At a global level, compared to previous forecasts for the ongoing year, it is estimated that these support measures will generate an increase in fiscal deficits and public debt rates. More precisely, revenues will register a 2.5% decrease of the GDP compared to forecasts back in October 2019, while the fiscal costs are estimated to add up to 3.3 trillion dollars. Meanwhile, the loans contracted by the government and the monetary injections (1.8 trillion dollars), as well as the guarantees and other contingent debt (2.7 trillion dollars) generate fiscal risks (IMF, 2020a).

The governmental involvement geared towards minimizing the disaster caused by the COVID-19 virus on the economy is evident. However, the measures taken by the European Union member states fail to counteract the severe destabilization of the real economy. We believe that state intervention via monetary injections will lead to an inevitable economic crisis, whose signals can be identified in the effective market. This type of approach is debatable and, in the course of time, it proved to be ineffective.

Our paper provides only a theoretical interpretation of the economic policy measures, being in line with the research dualism identified by Shanaev, Shuraeva and Ghimire (2020) for the COVID-19 pandemic, namely theoretical estimates or models calibrated on data from past pandemics, both entailing evident limitations.

2. LITERATURE REVIEW

In less calm periods, the adoption of monetary and fiscal measures is a strategy for national governments to (apparently) minimize problems occurring within the economy. Referring to the SARS virus, Lee and McKibbin stated that the economy was generally affected in three major areas: (1) reduced consumption, (2) increased economic uncertainty, which was a danger for

entrepreneurs, and (3) increased spending on prevention and control (Lee and McKibbin, 2012). Their observations can also be deemed valid under the circumstances of the current pandemic. The consequences of epidemics are not evenly distributed throughout the world. The uncertainty caused by pandemics generates lack of confidence for investing in afflicted economies (Lee and McKibbin, 2004, p. 117).

The risks that pandemic-afflicted societies are exposed to are amplified by numerous factors and, to be able to face the new challenges, state institutions have to implement instruments that facilitate their action (Bloom, Cadarette and Sevilla, 2018). Therefore, governments are focused on limiting the spread of outbreaks on the one hand, and minimizing the economic impact on the other hand. The main actions via which the authorities announced their intentions to intervene in order to stimulate the economy are tributary to the Keynesian economy, i.e. loans from the financial markets to extend consumption stimulus measures to the beneficiaries of these funds and to reduce the interest rate in order to stimulate consumption spending, respectively (Mitchell, 2020).

More and more studies focus on how fiscal and monetary policies can be used to reduce the economic effects of the pandemic (Baldwin and di Mauro, 2020; Benassy-Quéré *et al.*, 2020; Eichenbaum, Rebelo and Trabandt, 2020; Faria-e-Castro, 2020; Fornaro and Wolf, 2020). Many other studies are still underway, and the conclusion these suggest is that macroeconomic fiscal and monetary policies are necessary and can have positive effects for the economy, by ensuring the cash flow, stimulating global demand, and salvaging productivity and occupation. In the monetary policy domain, crisis periods are similar to an interest rate reduction operated by central banks (McKibbin and Fernando, 2020), and the best response to ensure bank liquidity is thought to be a combination of monetary easing and fiscal stimuli (Bénassy-Quéré *et al.*, 2020). To counteract the crisis, governments all over the world resort to a reduction of interest rates, as well as the creation of fiscal stimulus packages, in case the effectiveness of monetary policy reached its limits (Feldstein, 2009). However, we should not overlook the fact that these fiscal and monetary policies generate *spill-over effects* on financial markets and moreover on the overall economy.

Exceptional situations call for exceptional measures, with economic recovery being one of the primary concerns, and the adoption of interventionist positions can be relatively accepted. Nevertheless, the use of monetary policy is far from being a universally valid solution. It certainly cannot eliminate the problems arising in production, nor those concerning the high rate of unemployment. This measure has a limited scope of action, making it rather difficult to appreciate its focus on particularly affected sectors (Koenig, 2020a; Koenig, 2020b). Milton Friedman stated that each major inflation had its starting point in monetary expansion. Most of the times, it aimed to satisfy stringent (war) needs via the forced creation of money/currency (Friedman, 1968).

One of the primary consequences of fiscal relaxation is stimulating the demand for goods and services. In the context of a recession, when states are faced with a high rate of unemployment and a production capacity used less than during normal periods, increasing demand will result in producing a higher quantity of goods and services, without a change in pricing. The capacity of the fiscal policy to stimulate the aggregate demand and implicitly to reduce the rate of unemployment determines this type of measures to be included in the potentially economy-stabilizing category (Weil, 2008). Fernando Martin (2020) believes that temporary shocks must be financed via debt, as the costs this entails can be dispersed over time.

The important role of monetary policy is highlighted by Philippe Lane (2020b), who identifies three action directions thereof, namely: guaranteeing the liquidity in the banking system, ensuring the flow of loans to the real economy, and intensifying asset purchase programs to prevent a procyclic trend of financing conditions. Alternatively, as the contraction is not caused by economic factors, but rather induced by the pandemic lockdown, traditional monetary and fiscal measures may not lead to the expected result (Barua, 2020).

Pierre Gourinchas (2020) believes that the most adequate response of the EU would be to issue Eurobonds in order to finance medical expenses and minimize the effects of the economic contraction, as the challenges of the pandemic are above the concerns related to the moral hazard associated to the issue of these bonds. This proposal must be considered in the context of existing doubts about the efficiency of monetary policy measures to stimulate demand. For instance, the European Central Bank was already operating with negative interest rates before the pandemic era (Letzing, 2020).

Shanaev, Shuraeva and Ghimire (2020) centralized the authorities' responses in 51 economies in the context of the COVID-19 pandemic, via both fiscal and monetary stimuli, estimating their effects on the capital markets. The authors argue the existence of a negative impact thereof, as fiscal measures are responsible for a 12.8%-13.1% "value destruction", while monetary measures account for around 3.2%-3.7%. Alternatively, Ozili and Arun (2020) found a positive impact of the fiscal measures taken globally on the prices of stock and economic activities in general. Moreover, they deem fiscal measures more effective than monetary measures due to the inflationist risks.

Michel (2020) draws attention to the false promises of fiscal stimuli, analysing both the effects of direct payments and governmental spending made during the 2008 crisis. He identifies a trade-off entailed by fiscal measures, namely the replacement of private activities by public activities that are unable to produce wealth.

Bernoth *et al.* (2020) have identified a positive effect of the fiscal measures taken at a European level on stock markets, but not on the markets for government bonds, which are characterised by a higher rate of uncertainty. Using the

announcement concerning national and European level monetary measures, the study by Klose and Tillmann (2020) identified positive results of the monetary policy in stimulating the real economy, particularly via assets purchase.

Ettmeier, Kim and Kriwoluzky (2020) conclude that the monetary and fiscal measures taken by a few European countries were only partially effective; moreover, they draw attention to the importance of international cooperation and the coordination of monetary and fiscal measures. While the nationwide fiscal measures adopted in countries such as France, Italy or Spain did not suffice to mitigate the negative effects of the lockdown, the aid package announced by Germany also produced positive effects on the other markets under analysis.

3. METHODOLOGY

As the spreading of the COVID-19 virus affected the majority of countries around the world, we aim to identify and discuss the macroeconomic policy measures adopted in order to minimize the impact on national economies. We focused our attention on fiscal measures and the monetary measures, respectively, as proposed by the governments of European Union member states. Then, building on the information provided by the specialty literature and using logic-deductive reasoning, we set out to forecast the potential effects of interventionist measures over the economic path of European states.

To reach this goal we used both qualitative and quantitative analysis instruments. The analysed data was collected from the International Monetary Fund, the World Bank and the OECD and, for the sake of clarity, have been processed by the authors. The specialty literature analysis focused on identifying the primary monetary and fiscal instruments that can be employed by states, as well as the effects they determine in the economy.

4. RESULTS AND DISCUSSIONS

By using certain governmental measures, the member states of the European Union set out to mitigate the impact of the COVID-19 virus on the economy. However, even if we admit this premise, it is impossible to leave out the effects of state intervention in the economy. One such effect is the distortion of market signals, plus the fact that most of the measures adopted can be interpreted as being deeply political.

Two categories of policies are ascertained at the European Union member states' level, policies used as instruments designed to fight against the effects of the current pandemic: on the one hand there are measures in terms of fiscal policy, and on the other hand there are those in terms of monetary policy. In the context of this research endeavour, these are succinctly presented here below.

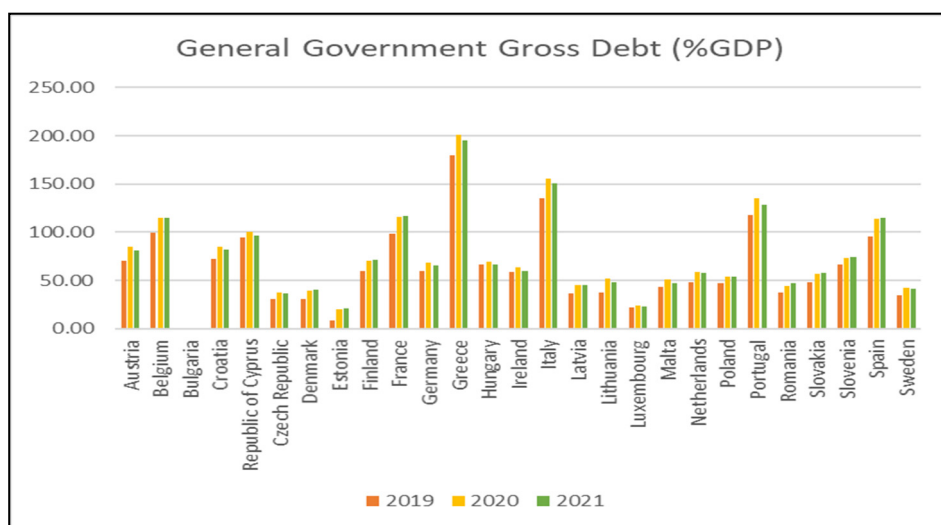
4.1. Fiscal policy measures in the context of the pandemic

In the European Union, in order to mitigate the social and economic effects of the COVID-19 pandemic, the European Commission drafted in March 2020 a series of recommendations designed to support European citizens and the European economy (Commission Recommendation (EU) 2020/403). These recommendations can be grouped into six sets of measures: flexibility of state aid schemes, flexibility of the European fiscal framework, ensuring solidarity within the European Single Market, mobilizing the EU budget, mitigating the impact on employment, and the virus response investment initiative. The European Commission can thus approve additional national support measures to help the deeply afflicted economy of a member state by using Article 107 paragraph (3) letter (b) of the TFUE (Treaty on the Functioning of the European Union). In the event of a major drop in activity, the Commission recommends reducing the contributions required of member states. It also proposes the implementation of Europe-wide coordinated and transparent solutions to ensure the production-stocking-use flow of equipment for medical use and pharmaceutical products within the community area. To support the pandemic afflicted member states, a 1 billion Euro guarantee will be unlocked from the EU budget and redirected to the European Investment Fund, in view of assisting banks for providing liquidity to firms and deferring bank instalment payments (“credit holidays”). Concurrently, the EU considers mobilizing the European Social Fund (ESF) and the European Globalisation Adjustment Fund (EGF) in order to support healthcare professionals, laid off workers and people conducting independent activities. To mitigate the impact of the crisis, the Commission proposes redirecting a total of 37 billion Euro to fulfilling the objectives of the Cohesion Policy, while also agreeing that this year it waives the reimbursement of unused pre-financing from structural funds by member states.

As of this April, the European Commission decided to provide on relief from import duties and VAT exemption on importation granted for goods needed to combat the effects of the COVID-19 outbreak during the ongoing year (Commission Decision (EU) 2020/491). The community decision was implemented in the national legislation of member states, which have instituted the state of emergency lockdown during the outbreak, as well as for a subsequent period, providing the importers of pharmaceutical products, medical devices and sanitary materials that can be used for preventing, limiting, treating and fighting against COVID-19 with exemption from the payment of such obligations.

As a result of these recommendations and directives, it is expected that the fiscal balances of many EU member states will deteriorate. Although the majority opinion is that the deficits will be beneficial for the affected economies, the starting level is a vulnerability for certain states. It is estimated that the public debt of EU-28 states in 2019 was 80% of the GDP (European Commission, 2020b), and significant increases are forecast for the upcoming period as a result of the

spending entrained for mitigating the impact of the pandemic (IMF, 2020a). Figure 1 illustrates the forecasts by the International Monetary Fund on the evolution of public debt over the upcoming period. The only one of all the European Union member states for which no information was provided is Bulgaria.



Source: own processing of data from IMF (2020a)

Figure 1. General government gross debt (% GDP)

Table 1 synthesizes the *Discretionary 2020 fiscal measures adopted in response to coronavirus by 16 April 2020**, % of 2019 GDP, adopted by a part of the European Union states. Standing out among all these is the degree of intervention by the German state in view of mitigating the impact of COVID-19 on the economy by means of fiscal measures. The discrepancies between states are evident.

Contrary to the existing specialty literature, Aghion, Bacchetta and Banerjee, (2001) highlight that the main problem that European states might be faced with following the significant increase in public debt refers to the passing over and augmentation of the debt problem from the private sector, particularly as a great part of the public debt is in foreign currency. In their opinion, this situation does not have a stabilizing role for deeply indebted national economies.

Table 1. Discretionary 2020 fiscal measures adopted in response to coronavirus by 16 April 2020*, % of 2019 GDP

	Immediate fiscal impulse (% of GDP)	Deferral (% of GDP)	Other liquidity/guarantee (% of GDP)
Belgium	0.70%	3.00%	10.90%
Denmark	2.10%	7.20%	2.90%
France	2.40%	9.40%	14.00%
Germany	6.90%	14.60%	38.60%
Greece	1.10%	2.00%	0.50%
Hungary	0.40%	8.30%	0.00%
Italy	0.90%	13.20%	29.80%
Netherlands	1.60%	3.20%	0.60%
Spain	1.10%	1.50%	9.10%

Source: own processing of data from Anderson *et al.* (2020)

In terms of fiscal policy, amendments have also been adopted at a national level in addition to the European measures. Of these, the following stand out:

- (1) profit tax payment deferral. Certain terms are set function of each country;
- (2) granting additional remuneration to ministries of health, internal affairs and defence (Bulgaria, France, etc.);
- (3) advanced payments for the income tax of natural persons and companies (Czech Republic, Croatia, etc.);
- (4) granting subsidies for pandemic-affected company categories;
- (5) reducing excise taxes by up to 90% for the companies involved in the production and storage of alcohol used in manufacturing disinfectants (Latvia);
- (6) temporary exemption from the payment of certain contributions (IMF, 2020b; OECD, 2020).

Although the adoption of fiscal relief measures is a strategy frequently adopted by states in crisis situations, such as the current one, these measures also entail high intrinsic costs, increasing level of debt to be covered in the future, inflationist pressure, as well as the danger of losing a substantial portion of capital (Armingeon, 2012).

4.2. Monetary policy measures in the context of the pandemic

In the context of the COVID-19 pandemic, the situation that the majority of states around the world are faced with determines a series of measures in terms of monetary policy, and the European Union is no exception from the general approach. The current circumstances moot blockages and even crashes at the level of national economies, and governmental intervention was to a good extent foreseeable as a response to this newly created conjuncture. At the European

Union level, current estimates bring up a decrease in the real GDP by up to 12% for the year 2020 (Lane, 2020a).

The main measures adopted by the European Central Bank include reducing the interest rate by an additional 25 basis points from June 2020 to June 2021 (Lane, 2020b). A series of measures was adopted by the central banks of member states, of which we mention the following:

- (1) payment deferral for due public and private debt. The period for which such moratoria are granted varies from one country to another;
- (2) increasing liquidity by reducing the rate of mandatory reserves (Croatia, Poland, etc.);
- (3) reducing the monetary policy rate (Czech Republic, Poland, Romania, etc.);
- (4) contracting and granting loans to enterprises;
- (5) diminishing the systemic risk buffer for commercial banks;
- (6) reducing interest rates pertaining to loans for SMEs in tourism and the interest rate for large enterprises (Latvia, Lithuania, Spain, etc.);
- (7) release of the countercyclical capital buffer for banks (Euro Area).

The existing differences between European Union member states re-emerge to the foreground during the COVID-19 pandemic. To a significant extent, the monetary and fiscal policy measures were adopted at a national level, although the involvement of European institutions cannot be denied. In reality, this situation can be justified by the extent to which these were influenced or not by the pandemic. Moreover, states such as France and Germany have a well-established reputation for their interventionist preference. The discrepancies in terms of economic development also add to this particularity.

To reach the goal we set, we can conclude that the impact of the COVID-19 pandemic on the European economy was one that has not led merely to slowing down the pace of economic growth. The primary concern now is stopping or slowing down the decline and restarting national economies. To this end, a decision was made that the most favourable solution is state intervention in the economy by means of fiscal and monetary measures. Acknowledging the magnitude and severity of the current situation, we highlight and are in total agreement with Milton Friedman's position, who argued that one of the most important lessons we could learn from the past is that monetary policy can prevent the situation in which money would be, contrary to expectations, a major source of economic imbalance (Friedman, 1968, p. 12).

4.3. Forecast effects on the economies of EU member states

The impact of the pandemic can be analysed from several perspectives. Although attempts were made to mitigate this impact on the economy by adopting new monetary and fiscal policies, we cannot speak of an *immunity/immunisation* of national economies. In this context, we set out to emphasize three major aspects of the economy that were affected COVID-19 (please refer to Table 2).

The lockdown has further exacerbated the impact of the pandemic on economic activities. Considering the ongoing character of the economic activity, the new context resulted in the development of a *fissure* within the whole (economic) process, and the possibility of rapid relief/recovery can be intensely debated. The losses that occurred at the economy level resulted in the disappearance of those who were unable to finance their activity using own resources, as well as those unable to adapt.

Table 2. Overview – the spring 2020 forecast

	Country	Real GDP (%)			Inflation (%)			Unemployment rate (%)		
		2019	2020	2021	2019	2020	2021	2019	2020	2021
1	Austria	1.6	-5.5	5	1.5	1.1	1.5	4.5	5.8	4.9
2	Belgium	1.4	-7.2	6.7	1.2	0.2	1.3	5.4	7	6.6
3	Bulgaria	3.4	-7.2	6	2.5	1.1	1.1	4.2	7	5.8
4	Croatia	2.9	-9.1	7.5	0.8	0.4	0.9	6.6	10.2	7.4
5	Republic of Cyprus	3.2	-7.4	6.1	0.5	-0.2	1	7.1	8.6	7.5
6	Czech Republic	2.6	-6.2	5	2.6	2.3	1.9	2	5	4.2
7	Denmark	2.4	-5.9	5.1	0.7	0.3	1.3	5	6.4	5.7
8	Estonia	4.3	-6.9	5.9	2.3	0.7	1.7	4.4	9.2	6.5
9	Finland	1	-6.3	3.7	1.1	0.5	1.4	6.7	8.3	7.7
10	France	1.3	-8.2	7.4	1.3	0.4	0.9	8.5	10.1	9.7
11	Germany	0.6	-6.5	5.9	1.4	0.3	1.4	3.2	4	3.5
12	Greece	1.9	-9.7	7.9	0.5	-0.6	0.5	17.3	19.9	16.8
13	Hungary	4.9	-7	6	3.4	3	2.7	3.4	7	6.1
14	Ireland	5.5	-7.9	6.1	0.9	-0.3	0.9	5	7.4	7
15	Italy	0.3	-9.5	6.5	0.6	-0.3	0.7	10	11.8	10.7
16	Latvia	2.2	-7	6.4	2.7	0.2	1.9	6.3	8.6	7.5
17	Lithuania	3.9	-7.9	7.4	2.2	0.8	1.5	6.3	9.7	7.9
18	Luxembourg	2.3	-5.4	5.7	1.6	0.7	1.6	5.6	6.4	6.1
19	Malta	4.4	-5.8	6	1.5	0.7	1.1	3.4	5.9	5.3
20	Netherlands	1.8	-6.8	5	2.7	0.8	1.3	3.4	5.9	4.4
21	Poland	4.1	-4.3	4.1	2.1	2.5	2.8	3.3	7.5	5.3
22	Portugal	2.2	-6.8	5.8	0.3	-0.2	1.2	6.5	9.7	7.4
23	Romania	4.1	-6	4.2	3.9	2.5	3.1	3.9	6.5	5.4
24	Slovakia	2.3	-6.7	6.6	2.8	1.9	1.1	5.8	8.8	7.1
25	Slovenia	2.4	-7	6.7	1.7	0.5	1.2	4.5	7	5.1
26	Spain	2	-9.7	7.9	0.8	0	1	14.1	18.9	17
27	Sweden	1.2	-6.1	4.3	1.7	0.4	1.1	6.8	9.7	9.3

Source: own processing of data from European Economic Forecast, spring 2020
(European Commission, 2020a)

Following our analysis and study of the specialty literature, we can conclude that the effects of COVID-19 on the economy can be structured on several dimensions with multidirectional connections. Thus, according to the statistics provided by the European Commission, significant drops in the real GDP are forecast for the year 2020, which will impact the standard of living of the population. In close connection to the aforementioned aspect, substantial increases are estimated to occur in unemployment rates, with both short- and long-term impact. Moreover, the combination between the declining pace of the economic activity and the problems occurring on the labour market can generate inflationist pressure (European Commission, 2020a, p. 5). *Spillover and domino effects* work perfectly in crisis situations: the crash or decline of a national economy implicitly affects the situation in the others. This aspect is verified and felt in the decreasing consumption, which can serve as a unit of measurement in analysing the impact of the pandemic. Finally, we would like to note that the possibility of a severe economic crisis cannot be omitted from future discussions.

An important discussion generated by the fiscal and monetary stimulus packages in European states comes from accurately identifying the causes for the economic contraction. This is because, as mentioned by Shanaev, Shuraeva and Ghimire (2020) in reference to the analyses by Robert Barro, if the contraction is generated by factors related to supply and specific lockdown interventions, then “both monetary and fiscal policies are counterproductive and can achieve at best a redistributive effect.”

5. CONCLUSIONS

The results of this research emphasize the manner in which the European Union and its member states have acted and reacted to the pandemic. All these include important interventionist trends, based on fiscal and monetary policies designed (at least from a theoretical and short-term perspective) to counteract or mitigate the disastrous effects at the economic and social level.

Over the course of the analysed period, governmental spending registered substantial and, moreover, unforeseen increases. However, the imminent scenario of an economic crisis occurring is plausible, even though the states have tried to reduce the effects of the pandemic on national economies. Adopting certain fiscal and monetary measures cannot prevent the onset of a recession, as evidence by the more or not so recent history.

The measures primarily aimed at limiting the activity of the population led to a lockdown with a catastrophic impact on the economic sector. One of the greatest challenges right now is restarting the engine of the economy, given the *blockages* in the market process as a result of the European economies *closing*. In our opinion, the use of fiscal and monetary policy measures by the European Union member states will not be able to ensure that the economic balance is restored without resuming the economic activities and regaining individual liberties. These

measures have to be seen as emergency solutions, necessary on the short term, but whose use for longer periods of time entails unsound resource allocation, capital losses, and numerous other costs.

Monetary and fiscal incentives cannot generate real demand (Talocka, 2020); as J.B. Say proved, deficiencies in production activities are the ones contracting consumption. Therefore, if the supply is the sole condition for ensuring consumption and productive activities are contracted by lockdown measures, then stimulating demand by means of monetary and fiscal policies is counterintuitive, to say the least.

The measures announced by the authorities in different European countries have the joint objective of stimulating consumption. Fiscal and monetary measures alike are geared towards stimulating spending, both by encouraging access to loans, and by redistributing the funds loaned by the authorities. However, additional spending must not be mistaken for prosperity, the latter being the only one able to produce a natural increase in consumption spending (Mitchell, 2020). And, as evidenced by the history of humanity, prosperity is closely connected to individual freedom. Reverting to sustained economic growth has to start by regaining liberties. The freedom of action and of assuming entrepreneurial risk under normal conditions of uncertainty and based on coherent economic calculation, comes to the fore in actions that generate well-being, with demand naturally resulting from the supply. The production of goods and services will provide the necessary resources to stimulate consumption.

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DETERMINING FACTORS OF BANKING PERFORMANCE: AN EMPIRICAL ANALYSIS

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Abstract

The performance of banks is an essential indicator that presents the situation of the activity undertaken by banks and the quality of their management. The rate of bank profitability is one of the key challenges facing the banking sector in the European Union and beyond. The profitability of banks is assessed by ROA and ROE. These indicators are extremely useful when we are talking about the level of profitability of banks, as they are widely used as a standard measure of bank profitability. In order to identify which factors have a strong impact on the banks' performance, a more in deep analysis was performed, which would differentiate the internal effects from the external ones. The method used in this study is Ordinary Least Squares (OLS), investigating the performance of the banking sector in the European Union countries during the 2007-08` crisis and post-crisis period.

Keywords: *factors; banking performance; European Union; financial crisis; post-crisis.*

JEL Classification: G21, F45, G01

1. INTRODUCTION

The changes in the performance of the banking sectors are related both to their activity and to external factors (economy, market, crises, internationalization, etc.). Banks as the main actors of economic growth can have a high impact on a country's economy.

The link between the profitability of banks and financial stability is given by the assumption of banking risks, which contradicts a high return or an increase in profits. Performance is influenced by a number of factors that either complement past events or apply the same principle that "history repeats itself." An important note is that not all factors can be kept under control or prevented, due to the impact they create.

2. LITERATURE REVIEW

2.1. Banking performance and relief aspects of its content

There it was, the crisis. Financial crises are accompanied by an overvaluation of currencies, weakening exports, and the bursting of asset price bubbles (Kaminsky and Reinhart, 1998). The most negative factor is the extremely rapid credit expansion that has taken place. This credit expansion has been funded by massive borrowing from abroad as a result of the sizeable interest rate differential (Krzak, 1998). The effect of the bursting bubble that we have experienced starting in 2007 has created a lot of doubt about the soundness of the banking sector, which causes a great threat to the credibility of the system as a whole.

There are different ways of looking at how financial institutions are performing. Generally, stockholders will mainly take into account the profits that are being made. Some studies however, focuses more on the added value to the common wealth on behalf of both consumers and businesses as a performance indicator for banks (Bikker, 2010). These groups are mainly interested if the quality of the products that these financial institutions offer is sufficient, and if they are not too expensive. These indicators are linked to the efficiency of financial institutions on the one hand, and the level of competition on the other.

Another factor that can be regarded as a performance indicator is the reliability of financial institutions (Bikker, 2010), in terms of solvency and of whether customers can be sure to get their money back in case of a negative economic shock. Reliability works both in the interest of customers, and does so in the long run. Since the crisis, the amount of risks that financial institutions take has become an important point of attention.

The key drivers of banking performance are earnings, efficiency, leverage, and risk-taking (ECB, 2010). While earnings are an obvious goal of banking institutions, it is also important to take into account the volatility and composition of those earnings. With efficiency, we refer to the ability of generating revenue from a given amount of assets, and to make profit from a given source of income. It is also referred to as a measurement that helps banks' management improve operations, market position, and their competitive advantage (Berger and Humphrey, 1997; Berger and Mester, 1997). Leverage can work both ways. It can improve results in the upswing, but on the other hand, it can increase the likeliness of bank to fail, as results of rare, unexpected losses. The dimension of risk-taking are the necessary adjustments to the earnings of financial institutions for the risks taken to generate them.

While the ECB mainly focuses on the four dimensions mentioned above, Bikker (2010) also regards competition as an important factor. Especially in combination with efficiency, financial institutions will have to offer high quality at a low cost, and as a result, welfare will be boosted. Competition is also important for adequate monetary transmission. This is the speed at which central

banks pass through their policy interest rates to bank interest rates. Competition has another effect, in that it has an impact on the financial innovation, financial institutions' financial health, financial stability and the accessibility of banking services to customers.

Furthermore, the study breaks down ROA even further, since they argue that changing in the ROA are usually the cause of the most important changes in the banks' performance. A modified version of the DuPont financial ratio analysis technique (Dietrich, 1996; Vensel and Wihlborg, 2001) is applied to analyze profitability and efficiency changes in the banking system.

2.2. Non-financial performance measurements

A performance measurement framework that can add non-financial performance measures to traditional financial metrics is the balanced scorecard (Kaplan and Norton, 1992). This method gives managers the opportunity to evaluate their style of conducting business from four different perspectives: the customer perspective, the internal perspective, the innovation and learning perspective, and the financial perspective.

Another indispensable aspect of bank survivability and success is customer satisfaction (Haron, Ahmad and Planisek, 1994). Customer satisfaction is linked to competition within the banking sector, because competition causes banks to innovate, to compete, and to generate value for customers with long-term benefits (Ahmad *et al.*, 2011).

2.3. Technological development and bank performance

The development of new technology also is a factor that can have an impact on the performance of banks (Akhisar, Tunay and Tunay, 2015). In the banking sector, technological progress is monitored very closely and is used widespread. Applications such as internet banking, mobile banking, telephone banking, ATM and POS networks bring significant advantages in the delivery of existing products to customers. The demand for such services forces banks to invest a significant amount of funds into this field. These technology-based products give banks the opportunity to have significant cost advantages, increasing profitability, and facilitate lower risk than traditional banking products. Also, if there is enough customer demand, the return on investment can be reached in a short time. However, this effect is not seen in some less developed and developing countries, because of both the infrastructure not being suitable for this kind of technology, and the sentiment of customers that prefer traditional banking methods over new ones.

Several studies have shown that electronic banking application requiring advanced technology increased the overall profitability of banks in the United States and in Europe (DeYoung, 2001; Wiegelt and Sarkar, 2012). These studies, among others, have shown that internet banking has a significant positive

contribution to the increase of competition and performance of banks. Technology based products, and in particular internet banking, reduce the operational risks of the banks (Hasan, 2002). Internet banking also increases the asset quality of banks, and therefore increase the operational profitability and return on equity performance directly (Kagan *et al.*, 2005).

Studies conducted in developing countries show that electronic banking applications diminish operational costs and increases the performance of banks (Hosein, 2013; Gutu, 2014). This encourages increasing use of electronic banking in developing countries. The customer portfolio has to be expanded in order to increase the performance of the banks (Sumra *et al.*, 2011). Overall, the results of these studies are in line with results from investigations conducted in developed countries. However, in some cases the findings are negative when relating electronic banking to the bank performance. This is mainly due to customers that still depend on the more traditional banking methods rather than adopting the new technologies. The lack of a proper electronic banking infrastructure blocks the impact of the expected cost-effectiveness and profitability. Also, in some cases, the profitability was hard to measure, as a results of inadequate information technology infrastructures and limited networks for ATM and POS activity. On the other hand, internet banking has been activated by large banks in some of these developing countries (Malhotra and Singh, 2007; Malhotra and Singh, 2009). Large-scale private-owned banks with a high deposit volume, a low amount of branches, and less fixed assets tend to turn to internet banking. This was mainly motivated to increase their market share. This increasing rivalry among banks boosted the competitiveness within the market.

A properly developed infrastructure has a great impact on lowering the cost per transaction for banks. Other contributors to the success of these developments are the level of education of customers to work with these applications, and the functionality of the banks' application or website. Customers have a need to know how to properly handle these applications, which sometimes leads to extra costs for banks. These costs arise due to the need of education demanded from these customers to properly apply the technology to their benefit. Not all banks have profited from these developments, especially not the ones that paid no or not enough attention to the demands of their customers. On the other hand, banks that provided complimentary services saw their operational expenses decrease, and their revenues increase (Brush, Dangol and O'Brien, 2012; Dubois, Bobillier-Chaumon and Retour, 2011).

3. DATA AND METHODOLOGY

In the literature, we can find numerous studies based on banking performance, but each differing by the aspects taken into account, by the period analyzed, by the methods used and by the final results. In this sense, Simpson and Kohers (2002) investigated the relationship between financial and social-

corporate performance between banks. Nizam *et al.* (2019) conducted an analysis of the determinants of Islamic banks' performance to examine the impact of access to finance and financing for the environment.

This study aims to highlight the factors that influenced the performance of the banking sector in the Member States of the European Union for the period 2007-2017. In the following, we will review a series of factors, as well as their afferent description (Table 1).

Table 1. Description of variables

Abbr.var.	Variables names	Description	Expected sign	Source
<i>ROA</i>	<i>Return on assets</i>	Net income to total assets	-	FRED, World Bank, GFD, The Global Economy, CEIC Data
<i>ROE</i>	<i>Return on equity</i>	Net income to total capital	-	FRED, World Bank, GFD, The Global Economy, CEIC Data
<i>LIQUIDASS</i>	<i>Liquid assets ratio</i>	The ability of a company/institution to pay short-term debts	+/-	World Bank, ECB
<i>CAR</i>	<i>Capital adequacy ratio</i>	The ratio between a bank's available capital and its credit exposures	-	World Bank, ECB, CEIC Data
<i>DEPOSITSR</i>	<i>Deposits rates</i>	The rate paid by financial institutions to deposit account holders	-	World Bank
<i>SNDBNKS</i>	<i>Soundness of banks</i>	The degree to which a bank can cope with market risks	+/-	World Bank
<i>INFL</i>	<i>Inflation</i>	An increase in prices and a decrease in the purchase value of money	+/-	OECD, World Bank, IMF
<i>NPLR</i>	<i>Non-performing loans ratio</i>	Aggregate NPL to total gross loans	+	ECB, FRED, World Bank, CEIC Data
<i>EXCHR</i>	<i>Exchange rate</i>	The price of a nation's currency against another foreign currency	+	World Bank, OECD, IMF

Source: author's definitions

The analysis uses Ordinary Least Squares (OLS) based on the equations below:

$$ROA = \beta_0 + \beta_1 LIQUIDASS_{i,t} + \beta_2 CAR_{i,t} + \beta_3 DEPOSITSR_{i,t} + \beta_4 SNDBNKS_{i,t} + \beta_5 INFL_{i,t} + \beta_6 NPLR_{i,t} + \beta_7 EXCHR_{i,t} + \varepsilon_{i,t}(1)$$

and

$$ROE = \beta_0 + \beta_1 LIQUIDASS_{i,t} + \beta_2 CAR_{i,t} + \beta_3 DEPOSITSR_{i,t} + \beta_4 SNDBNKS_{i,t} + \beta_5 INFL_{i,t} + \beta_6 NPLR_{i,t} + \beta_7 EXCHR_{i,t} + \varepsilon_{i,t}(2)$$

Where:

- ROA – return on assets;
- ROE- return on equity;
- LIQUIDASS- liquid assets ratio;
- CAR- capital adequacy ratio;
- DEPOSITSR- deposit rates;
- SNDBNKS – soundness of banks;
- INFL – inflation;
- NPL – non-performing loans;
- EXCHR – exchange rate.

In the following, is presented the descriptive analysis of the factors that determine the performance of the banking industry in the European Union.

Table 2 provides descriptive statistics for the banks of the sample used. The average ROA is 0.32%, while ROE averages 3.55%. The liquid assets rate is on average 33.9%, with a decreasing course, which means that banks have a lower capacity to pay their debts. In the case of the capital adequacy rate, its average is 16.76%, registering a growth trend throughout the period, banks trying to learn from the experience of the financial crisis and applying new management strategies. Although the value of deposits increased during the period, their rate averages 2.19%, being in a continuous decline due to the fact that the banking system had a liquidity deficit, with few moments of improvement. Also, the soundness of banks is on average of 5.22%, which means that banks still do not maintain a balance that would give them stability in the event of a stronger shock. The level of inflation stands at an average of 1.90%, registering the lowest values in 2015, although throughout the period there were increases and decreases, resulting in consumption above the production potential of some savings, along with rising prices administered to some goods and services and inconsistent wage increases in some states. Exchange rates are at an average of 10.37%, following an upward trend until the end of the period due to the depreciation trends of the national currency. These "psychological" movements of exchange rate appreciation are followed by a decrease.

Table 2. Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
ROA	308	0.323472	1.231989	-8.52221	4.24146
ROE	308	3.549332	16.786	-117.673	33.227
LIQUIDASS	289	33.92513	18.03694	5.26555	127.969
CAR	294	16.75504	6.007289	7.34263	56.78
DEPOSITSR	263	2.185285	1.828508	0.04	11.987
SNDBNKS	308	5.22724	1.025283	1.44	6.8
INFL	308	1.905929	2.314816	-9.174	15.402
NPLR	298	7.332767	7.939002	0.082	48.189
EXCHR	308	10.36909	42.27784	0.5	281.523

Source: results obtained by the authors

For estimating the return on assets (Table 3) as a dependent variable, we find 5 statistically significant variables. As one can see, the capital adequacy rate and the soundness of banks positively influence the return on assets, which is why we can say that banks have a good management and structure ensuring the income flow they work with. Instead, deposit rates have a strong negative effect on the return on assets due to the costs that banks have with them, but also due to the level and market requirements at which they are located. Another negative effect is represented by the non-performing loans, due to their volume and the trend that follows it due to the economic changes that endanger the incomes of the debtors and those of the banks. Inflation is the only element that positively influences the profitability of banks' assets.

Table 3. Impact of determinants on the return on assets

	[1]	[2]	[3]	[4]
LIQUIDASS	-0.00674	-0.00255		-0.00525
	0.005009	0.004238		0.005044
CAR	0.0559***	0.040971***		0.058053***
	0.018804	0.012033		0.018737
DEPOSITSR	-0.0593		-0.16907***	-0.11028**
	0.049305		0.050986	0.056007
SNDBNKS	0.30165***	0.376824***	0.21449**	0.275352**
	0.112666	0.07826	0.107175	0.112922
INFL		0.044434	0.082571**	0.079979*
		0.032435	0.040958	0.042444
NPLR	-0.031**		-0.0273**	-0.02615*
	0.014686		0.014143	0.014831

	[1]	[2]	[3]	[4]
EXCHR	0.001723	0.001142	0.002242	0.001614
	0.00172	0.001628	0.001686	0.001712
_CONS	-1.6371**	-2.37081***	-0.444	-1.65828**
	0.771973	0.418288	0.622206	0.767882
Adj. R ²	0.1484	0.124	0.1321	0.1576
F-stat	7.97	8.98	8.7	7.42

Note: standard errors in parentheses

*** statistical significance level at 1%

** statistical significance level at 5%

* statistical significance level at 10%

Source: results obtained by the authors

As in the case of return on assets, return on capital (Table 4) is influenced by capital adequacy, deposit rates, bank soundness and inflation. The only element that differentiates them, is represented by non-performing loans, which in this case are not statistically significant. The strength of banks has a much greater impact on the return on capital than on the return on assets, indicating that the higher the soundness of banking systems is, the higher the return on capital is. Capital adequacy has a positive impact in this situation, which explains why banks are in a constant concern to keep their capital at a constant level. As in the case of return on assets, deposit rates negatively influence the return on capital, and inflation in a positive way.

Table 4. Impact of determinants on the return on equity

	[1]	[2]	[3]	[4]
LIQUIDASS	-0.03268	0.013712		-0.01402
	0.068606	0.056611		0.06917
CAR	0.55786**	0.353976**		0.584885**
	0.257573	0.160739		0.256972
DEPOSITSR	-0.53026		-1.82233***	-1.17019
	0.675377		0.691399	0.76812
SNDBNKS	6.801067***	6.459158***	5.819092***	6.470974***
	1.543295	1.045399	1.453338	1.548699
INFL		0.520714	0.993301*	1.00389*
		0.433266	0.555405	0.582109
NPLR	-0.11528		-0.10584	-0.05438
	0.201162		0.191779	0.203408
EXCHR	0.022259	0.016393	0.026889	0.02089

EU BANKING AND FINANCIAL STABILITY

	[1]	[2]	[3]	[4]
	0.023563	0.021746	0.022866	0.023478
_CONS	-38.7102***	-38.1234***	-24.6475***	-38.9761***
	10.5745	5.587487	8.437395	10.5313
Adj. R ²	0.1584	0.1653	0.1548	0.1654
F-stat	8.53	12.17	10.27	7.79

Note: standard errors in parentheses

*** statistical significance level at 1%

** statistical significance level at 5%

* statistical significance level at 10%

Source: results obtained by the authors

In conclusion, both types of returns have influences that cannot be fully controlled by banks. However, at the same time, there are influences that help banks grow in profits and make new investments in developing and expanding their business.

The average return on assets and capital (Appendix 1) varied from one banking system to another during 2007-2010. In most cases, the return on capital was high during this period compared to the return on assets, which was much lower. The countries that recorded negative values are represented by Slovenia, Portugal, Ireland, Greece and Cyprus. This high value indicates that the banking systems in these countries have failed to rehabilitate than other countries.

Appendix 2 shows the countries that obtained good values of return on equity and assets during the financial crisis as well as during the post-crisis recession, but also the countries that did not achieve this performance. The banking systems that have suffered throughout the financial crisis were Lithuania, Latvia, Ireland, Estonia and Belgium. However, in the post-crisis period of 07-08, there were banking systems that suffered, even if during the crisis they survived with all their might, and here we refer to Slovenia, Portugal, Italy, Greece and Cyprus.

4. CONCLUSIONS

The banking activity can be influenced both from the internal environment of the banks, by developing the activity carried out by them, as well as from the external environment, taking contact with the phenomena that bring with them, or benefits that add value to the performance of the banking sector.

Recent years have brought with them big changes in the banking sector, one of the effects being the increase in the number of mergers and acquisitions among banks, in order to increase performance, or to maintain its position and a favorable image on the market.

In conclusion, we can say that the performance of banks in EU member states has suffered in some respects, but at the same time, the banks are trying to find new solutions to maintain a desired balance and create future benefits. Banks must

improve their activity in order to achieve their objectives. Being in a constantly changing society, banks need to be flexible in terms of information coming from the market and having a strong impact, as well as be prepared to deal with a major shock.

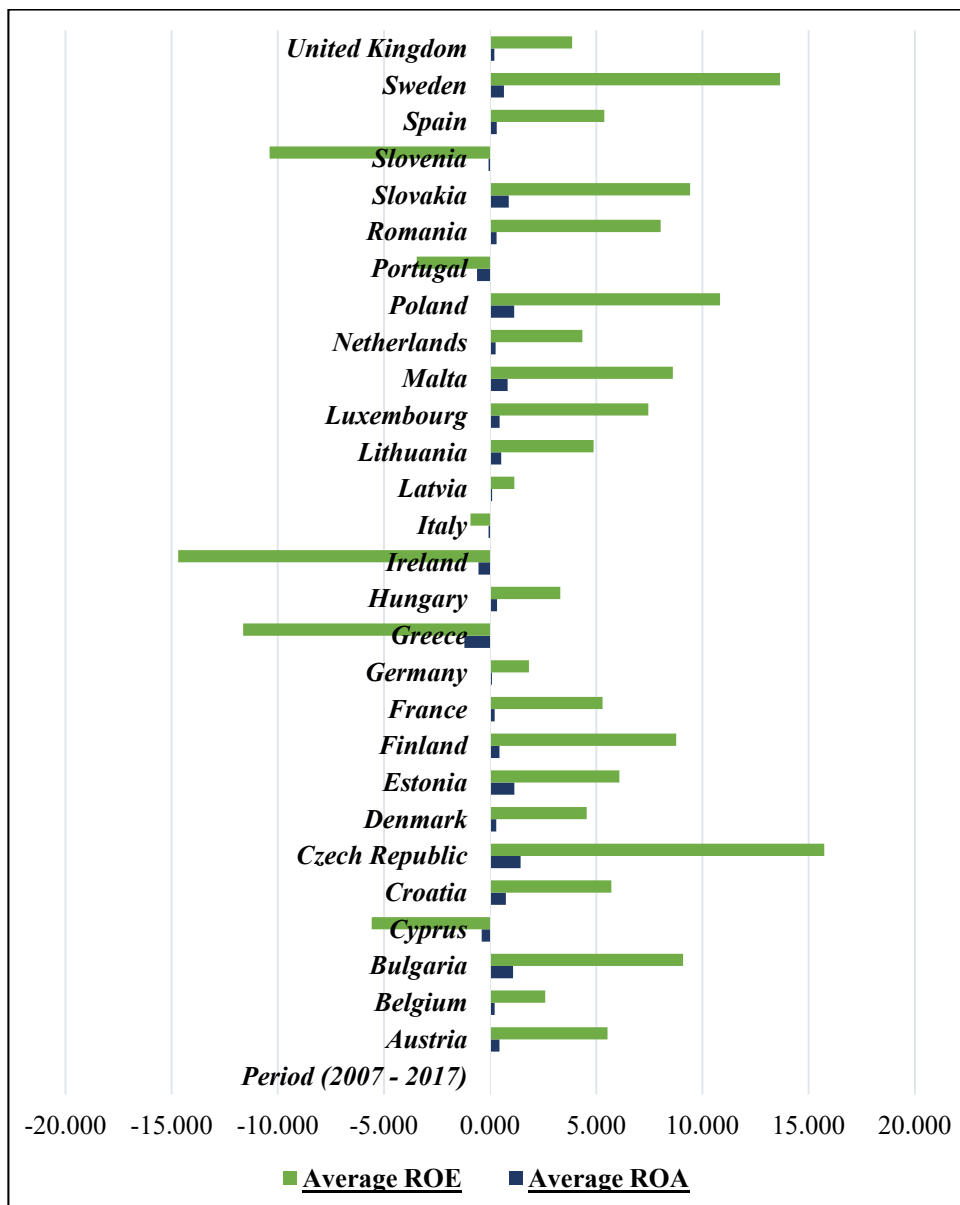
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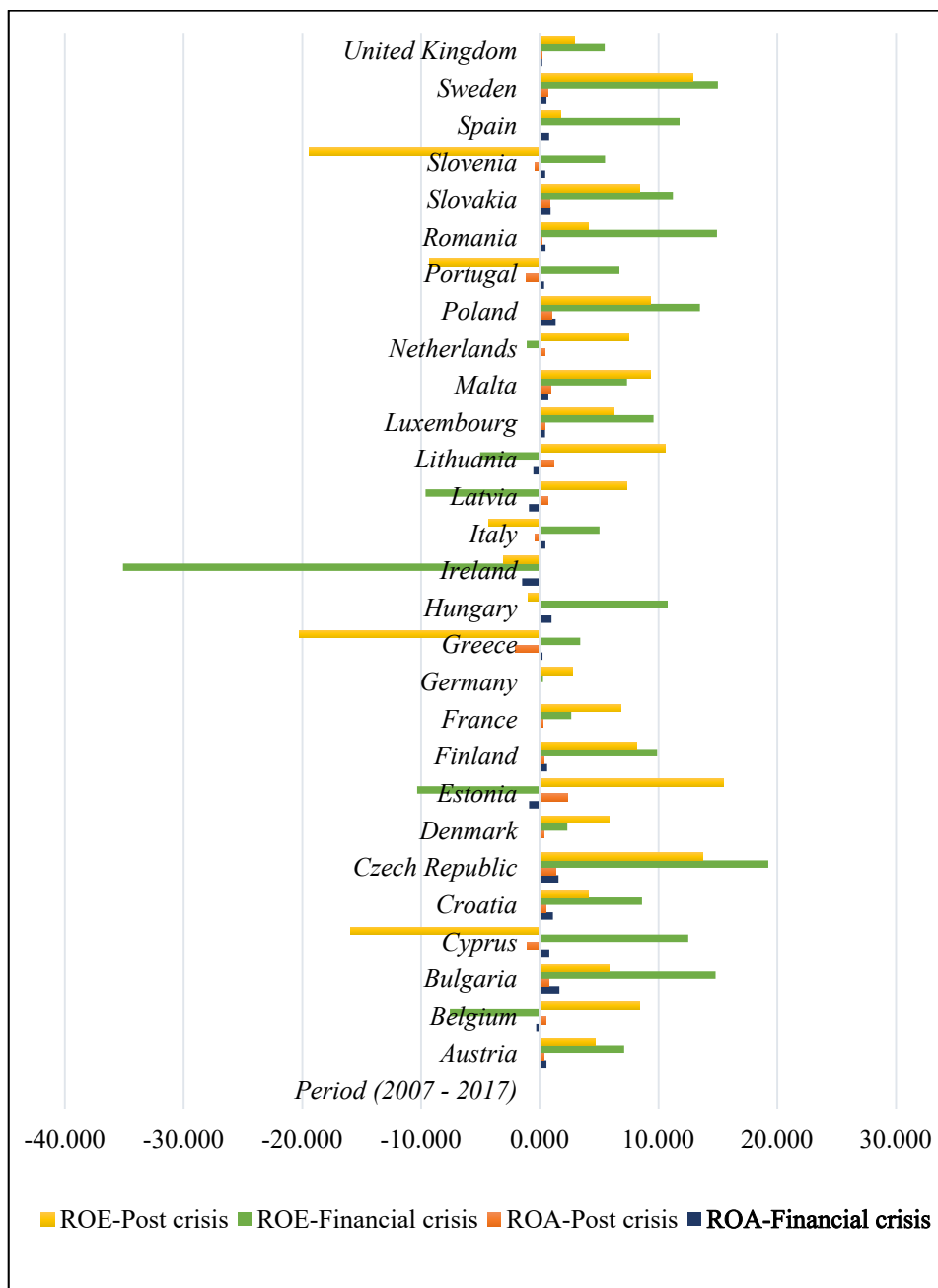
Appendixes

Appendix 1. Average of ROA and ROE in the banking systems from European Union



Source: results obtained by the authors

Appendix 2. Average of ROA and ROE in the banking systems from European Union during financial crisis and post-crisis



Source: results obtained by the authors

DEFENSE INDUSTRY FINANCING – PUBLIC CREDIT VS. BANK CREDIT

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Abstract

The problem of identifying viable sources of financing to support an efficient, profitable activity for both economic operators, the state, beneficiaries and the specific market is a really dynamic one. Among the alternative sources of financing most used by economic operators in the field of defense, in whose patrimony the state owns full or partial property, we mention its own revenues/self-financing, public-private partnerships and access to loans/lines of credit to commercial banks, with government guarantees, both domestically and internationally. The paper aims to highlight the correlation between public and private funding in the EU, without excluding NATO member countries. Given the importance given to both types of financing specific to defense industry operators, we appreciated that the appropriate secondary objective is the link between the two concepts in the opinion of the authors in the field. The working methods used are documentary research and qualitative analysis based on specialized software. The construction of the code matrix allowed us to observe that a series of concepts such as public financing and private financing of the defense industries are interconnected with public credit and respectively bank credit products. This fact allows us to appreciate that most of the authors of the analyzed studies associate the financing of the defense industry with the financing of public expenditures in the field of defense as well as with the private technological environment that notices an opportunity in this specialized field. Given the results obtained, we appreciate that the defense industries in the EU and NATO area tend to adopt mixed or private financing based on public-private partnerships and the use of credit products offered by domestic and international commercial banks. The governments of European countries, although giving importance to the development of defense/security capabilities, tend to “outsource” the financing of economic operators in the defense industry, limiting public credit to support defense research and production and opting more for the purchase of the final product.

Keywords: *defense industry; public credit; bank credit; defense financing.*

Jel Classification: H50, H56

1. INTRODUCTION

To meet the formidable challenges of the present, the military must look for innovative ways to support research and development in order to maintain technological superiority and explore concepts that can optimize the use of

infrastructure and equipment. The development of the capabilities of the defense industry has allowed the armies, over time, to use the technological level reached by society in achieving military interests (Chang *et al.*, 1999).

By extrapolation, it can be stated that the defense industry is a component of the national industry, obviously on a smaller scale in terms of necessity, but which plays an important role in supporting the process of building and developing defense capabilities (Diaconu, 2016).

The defense industry is a special and exclusive branch in the sphere of a country's industrial capabilities. In the patrimony of the operators in this field, in many countries, we find state capital, private and finally mixed (Frunzeti, 2013).

On the one hand, public credit as a method of financing is obviously linked to public expenditure supported by a state resource (Constantinescu, 2011). The scale of defense investment has often been justified by the importance of recognizing military research in civil society. In practice, many of the major innovations of the last 50 years have often been initiated in the field of defense, including the internet and biotechnologies (Guillou and Longhi, 2010).

On the other hand, private financing of the defense field is achieved mainly through methods such as public-private partnership, army-operator type in the defense industry or access by operators of banking products in the range of consumption/ production/ investment (Friedman, 1999). Speaking of the public-private partnership, it is often the case that public funding complements private funds and has a stimulating effect on the latter. Moreover, sectors such as defense and public health need investments that exceed private production (Brauner *et al.*, 1998).

The option of accessing a private credit financing resource by defense market operators is one related to both their own growth and profitability and the market mobility offered by the independence of managed resources.

2. LITERATURE REVIEW

In the conditions of accentuating the economic interdependencies between the different states, they become more and more difficult to fulfill the tasks of the national economies for ensuring security and defense. The economic relations between the states become, in this way, very important, they can favor the development on all lines, or on the contrary, to cause real economic blockages (Diaconu, 2016).

A common aspect that we observe, in the European and even international environment, is that the external financing of the development of military capabilities and production capacities of the operators in the defense industry, in which the state holds an integral or majority position, is based on reimbursable or non-reimbursable funds made available by programs carried out by international organizations and bodies and on external loans made available through credit/external loan agreements (Văcărel *et al.*, 2008).

In order to equip modern, large-scale or strategic capabilities, such as armaments, governments tend to purchase defense goods from national suppliers by defining and maintaining national supply chains, rather than targeting purchases to prominent economic operators in the market. Thus, not infrequently, defense sectors continue to be financed from countries' budgets even when they prove unprofitable (Pucea, 2016).

Another form of financing through public funding is represented by the programs of international bodies such as NATO programs or by government-guaranteed external loans contracted with international financial-banking institutions (Badea, 2019).

Regarding the size of the financing of armies and industries in the European environment, (Tiltiņš and Šavriņa, 2015) shows that European governments address a funding policy that can be described as one of budget cuts, which is applied in stages to the defense budgets of EU Member States. According to European Defense Agency data (EDA) total defense expenditure of EU Member States, decreased by the influence of the global financial crisis and the reduction of military personnel in the period from 2006 to 2011, by 21 billion euros or almost 10%, and between 2011 and 2012 they decreased further by almost 3%.

Operators in the EU defense industries whose funding was based on public credit have had to reorient themselves since 2007 and address business opportunities and private financing in the US market which has proved much more attractive (Korczak, 2014). Research shows that defense operators in the U.S. have developed both public-private partnerships and private partnerships exclusively, through company acquisitions or team collaborations in order to approach new markets (Neuman, 2010).

In the spirit of observing the trend of financing industries in the European defense market, the opinions of some authors show that protectionist and anti-competitive practices are quite common and are favored by the legal and regulatory framework of national laws in each country. For example, the first two industries in the European market, Great Britain and France, represent precisely the extreme positions regarding the state's influence on the armaments industry (Pucea, 2016).

Relevant aspects regarding the financing of defense capabilities we observe in a study conducted by Diaconu (2016) in several Central and Eastern European countries such as Romania, Bulgaria and Poland on which defense industries have undertaken, in recent years, several measures of consolidation, refurbishment and modernization of production lines. We can deduce from the study that the measures of public funding used through the various programs have maintained production capacities on a small scale, with a technological level aimed at ensuring the maintenance of equipment and military equipment of Soviet design. It also appears that the introduction of a different investment and financing

approach would have beneficial effects on the internal and external defense market (Radu, 2009).

By promoting and carrying out projects designed to stimulate the growth of military capabilities at European level, the European Defense Agency (EDA) has sought to make funding costs more efficient, including attracting additional revenue to Member States' defense budgets. We observe the use of the Pooling & Sharing concept on the resource line in approaching the financing of these projects and we exemplify in this sense the Go Green project started in 2012 whose objective was to produce electricity needed by the armed forces from renewable resources (Buşe, 2014).

On this line of investment measures in order to economic recovery and boost production capacity in defense, we can see in Romania in 2014, the emergence of a regulation that canceled tax obligations of approximately 22,221 thousand Euros, due by some economic operators in the industry defense, production or trade of weapons, ammunition and war materials, suppliers of goods and services. Another invigorating and investment measure aimed at converting budget receivables into shares was provided by the reorganization plan, with the express consent of the creditor for economic operators with full or majority state capital that were in insolvency proceedings (Diaconu, 2016).

Internationally, as stated by Băhnăreanu (2019), there is an increase in the financing of defense spending, the U.S. and China being willing to spend more on the military than any other country. To the extent that the U.S. finances acquisitions from the market of private operators in the field, China is developing capabilities by financing the national defense industry, we can see the country's preference for outsourcing production capacity and the latter a firm commitment of its domestic industry.

Ukraine's own defense industry with full state capital is also financed by Ukraine, by owning a huge military complex, which based on the study conducted by Petre S. in 2017 and Buşe in 2014, declined in 2014 due to poor management, political and economic interference of Russia on the intention to control capacity and not ultimately to target certain types of markets such as the Middle East, South Asia, Southeast Asia and Africa.

Going east to the Russian Federation, we notice, in the quantitative study of some local researchers, a colossal defense industry in the form of a colossus, difficult to manage in the economy and with serious financing needs (Ivanov and Sotirov, 2018). We note that the performance of the company is associated with the presence of bank debt. In order to carry out the contracts, the operators in the defense industry access bank loans and in most cases, benefit from preferential clauses. In this case, the guarantor is the state (Fedorova, Nikolaev and Mazalov, 2016).

Given the contradictory results obtained by specialists in the field of financing the armed forces and the relationship between public and bank credit, at

European and international level, we considered it appropriate to conduct a qualitative study to try to shed light on trends identified in the literature in this regard. sense.

3. PURPOSE AND OBJECTIVES OF THE RESEARCH

Through this analysis we aim to identify the main ideas in the literature on financing the defense industry through public and bank/ private credit, respectively. Among the objectives we aim to achieve are:

1. Identification of the main ideas/ themes from the specialized articles in the field regarding the financing of the defense industries at EU and international level.

As mentioned in the preamble of the study, in order to have a competitive army adapted to the technological level of development and the needs of internal and external security and defense, a tailor-made financing of the essential capability provider is needed – the defense industry. It has a significant impact on public spending and, in particular, on the level of indebtedness at both state and private defense level. Of course, there is also a connection between a country's development, its budget, its defense industry and its real possibilities for financing the armed forces. Taking into account these aspects, through the first proposed objective we aimed to determine what are the main ideas/ notions mentioned in the profile literature on how to finance the defense industry.

2. Highlighting the connection between public credit and bank credit as financing methods of the defense industry.

Given the importance given to the relationship between public financing of the defense industry and the army and private financing of the capabilities of defense market operators, we appreciated that the second objective we will focus on is both the link between the two notions and the preponderance of their use, in the opinion of the authors in the field.

In achieving the two proposed objectives, an important contribution is also the identification of positive/ negative opinions on the impact of public funding vs. private sector on the defense industry.

Finally, after studying the type of relationship (positive/negative) that emerges from the results of the analyzed articles, we will determine the predominant trend in the literature regarding the influence of financing through public and private credit and by mixing the two forms on the capabilities of the defense industry.

Next, we will consider the research methodology adopted.

4. RESEARCH METHODOLOGY

For the proposed study we resorted to documentary research.

The study sample is 20 articles from the profile literature searched using the Google Scholar engine. To identify the 20 articles that were the subject of the analysis, we used a series of keywords in English, as follows:

- „public credit” – 349.000 results;
- „public financing defense” – 190.000 results;
- „bank loan financing defence” – 235.000 results
- „bank loan and defense industry” – 180.000 results.

After using of keywords, we selected the 20 articles taking into account the largest number of their citations by other authors in the field. The 20 selected items were introduced in the NVIVO qualitative analysis software, version 12.

5. RESULTS AND DISCUSSIONS

To analyze the content of the selected articles, we introduced them in 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 grouped words, including synonyms, with a minimum of 4 characters (the result obtained is shown in Figure 1. Word frequency). Subsequently, we used the autocoding function to determine what codes we can assign for each item.

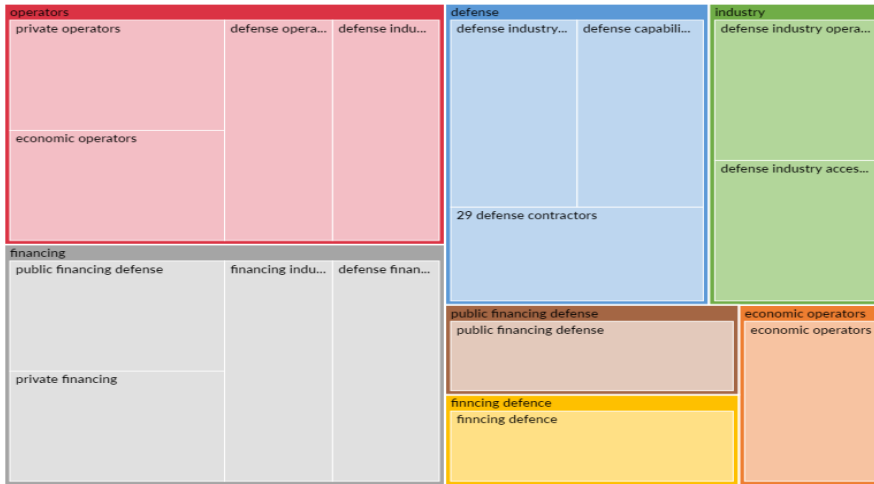
After identifying the most common codes, we built an array of codes to identify those that are found in all 20 articles alike. The results obtained are as follows:



Source: own processing in NVIVO

Figure 1. The most common 100 words

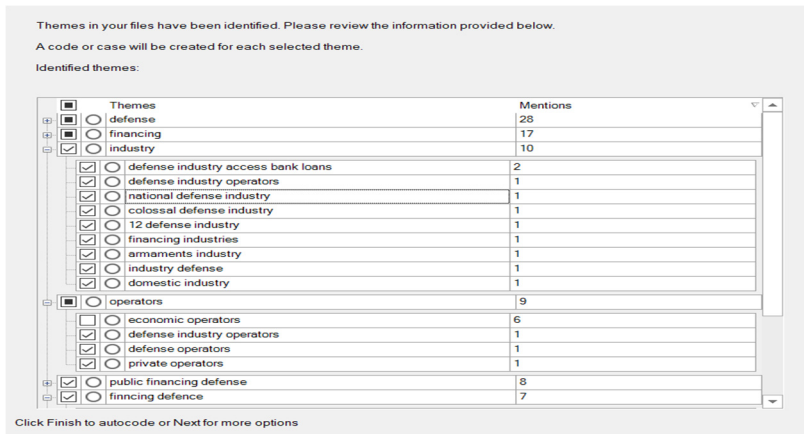
The code matrix created automatically based on the keywords selected from the most used words in the reference base used are shown in Figure 2.



Source: own processing in NVIVO

Figure 2. Codes created automatically by 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).



Source: own processing in NVIVO

Figure 3. Example for selecting relevant codes

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 20 articles

Cod name	Frequency of occurrence
Public credit	32
Bank credit	12
Defense industry	17
Armed force funding	29
Defense contractors	16
Funding opportunities	18
Public funding	26
Private funding	8
Public-private partnership	22

Source: own processing

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

The purpose of this analysis was to identify the main ideas in the profile literature on the financing of the defense industries through public credit/ public budget allocations and private/bank credit in the European and international market. The analysis shows that most of the items considered combine public credit/ defense spending and bank/private credit and other means such as bonds/ shares and 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 series of concepts such as public financing and private financing of the defense industries are interconnected with public credit and respectively bank credit products. This fact allows us to appreciate that most of the authors of the analyzed studies associate the financing of the defense industry with the financing of public expenditures in the field of defense as well as with the private technological environment that notices an opportunity in this specialized field. Given the results obtained, we appreciate that the defense industries in the EU and NATO area tend

to adopt mixed or private financing based on public-private partnerships and the use of credit products offered by domestic and international commercial banks.

Another aspect is that, to the extent that the U.S. largely finances defense objectives and part of the defense industry's production capacities, governments of European countries, although attaching importance to the development of defense/ security capabilities tend to "outsource" financing to economic operators in the defense industry, limiting public credit in support of defense research and production and opting more for the acquisition of the final product.

If a number of authors consider that public/private financing of defense industries has a positive impact on economic growth in terms of the need for security/defense contributing to the economic development of states (we have identified 12 positive opinions in this regard), other researchers support the effect negative public funding on the public budget and, implicitly, to the detriment of other industries, sectors or areas considered priority (6 negative results in the studies considered).

Given the results obtained, we appreciate that the defense industry is and will continue to remain a major source of funding on the agenda of current governments, especially in developed countries and those with military commitments, in Europe and internationally. Moreover, the link between public and private funding is obvious and evolving with a tendency of complementarity, given that nationalized defense industries are swinging to the private sector.

7. LIMITS AND PERSPECTIVES OF RESEARCH

Study boundaries are required by:

- the limited number of articles on the same topic – 20;
- the minimum interest of the specialized literature in specific aspects of financing the defense industry;
- relative experience in using NVIVO qualitative analysis software;
- the self-coding criteria considered (only those codes created automatically by NVIVO that are common to all 20 items were selected).

The prospects of the study are given by:

- the possibility to extend the analysis either by entering more codes, or by including more articles on the selected topic;
- the growing interest of researchers in the field in identifying potential/ alternative sources of funding for public spending, including those specific to the defense industry;
- presentation of the study carried out during the conference in the field in order to obtain an informed opinion from fellow researchers.

All these aspects can represent a starting point for an extension of the qualitative analysis in carrying out a quantitative analysis starting from the results obtained so far.

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DETERMINANTS OF BANKING NON-PERFORMING LOANS: EVIDENCE OF EU MEMBERS

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Abstract

Non-performing loans (NPLs) represent the negative part of the performance registered by the banking industry. This type of loans can be of several categories, with different purposes and maturities, but which they have registered in their component is the outstanding payments. Although these are always highlighted in the banks' portfolio as payment deficiencies due to either internal or external factors. Therefore, one of the factors that influences the appearance of non-performing loans (NPLs) is represented by the clients who are unable to honor the payment of their loan rates. When we look at it from a macroeconomic perspective, non-performing loans (NPLs) are affected by factors such as the financial crisis, inflation, unemployment, the real estate market, etc. Thus, this type of loan decreases the annual profitability of banks and in certain situations can lead to the insolvency or bankruptcy of banks. Reducing or counteracting the development of these loans within the banking systems of the European Union is constantly carried out by both domestic banks and by the competent authorities such as national banks, the International Monetary Fund (IMF), the European Central Bank (ECB). In order to see what impact the factors that determine the appearance or increase of non-performing loans (NPLs) have, an analysis is available during the financial crisis and during the recession period after it. For this study, the Fixed effects method was used, an analysis that took into account all banking systems in the European Union.

Keywords: *non-performing loans; NPLs factors; European Union.*

JEL Classification: E43, E51, G21

1. INTRODUCTION

Lending activity is paramount for the performance of banking financial institutions as well as for a country's economy, due to the fact that borrowed money returns to the economy in various forms.

A loan can be considered performing or underperforming. The high-performance loan is one in which payments are made regularly or in less than 90 days. In the case of a non-performing loan, we are talking about that loan in which

the payments are delayed for more than 90 days and for which the debtor does not offer the certainty that he will be able to honor his outstanding debts. In such situations, lenders try to take a series of preventive measures or deny the existence of such loans by charging higher interest rates.

Non-performing loans (Miglionico, 2019) are usually considered loans for which payments were not made by the borrowers when they were scheduled for a certain period, a period that may vary from one industry to another and the type of loan accessed. The chances for a non-performing loan to become re-performing are very small, which is why a closer analysis of the debtor's repayment capacity is recommended.

In banking, this type of loan is classified as non-performing due to the fact that its maturity has exceeded either 90 days or 180 days, this differs from one banking sector to another and contractual terms.

In order to be considered a non-performing loan, a loan must meet the following criteria:

- a loan that exceeds 90 days of non-payment of interest and which has subsequently been capitalized, refinanced or has undergone changes since the initial contracting;
- a loan that exceeds 90 days of non-payment but which shows a high distrust of the creditor towards the debtor regarding the latter's ability to make payments in the future;
- a loan that has matured but has an overdue portion.

2. LITERATURE REVIEW

2.1. Non-performing loans – general considerations

International financial authorities offer different meanings of non-performing loans.

The **European Central Bank (ECB)** defines non-performing loans as those loans for which the interest and/or principal payment has not been paid for more than 90 days for various reasons.

The **International Monetary Fund (IMF)** classifies non-performing loans as those loans for which debtors' interest and/or principal payments have been strengthened by less than 90 days or more or have been refinanced or repaid (Bloem and Freeman, 2005; IMF, 2019).

Another concept of non-performing loans defined by the banking regulations in force consists in those loans that have exceeded the 90-day maturity and for which interest can not be longer accumulated, being subsequently recorded in the profit and loss account and also, by real estate guarantees that are taken by exclusion or by forced execution.

The existence of non-performing loans can be solved in two ways: centralization and decentralization. Centralization, as a process, involves bringing

together banks, regulators and the government to form a group to look for appropriate solutions to reduce or eliminate non-performing loans. Decentralization involves only the affected banks. This process offers these banks the possibility to manage their own non-performing loans situation through incentives, special tax advantages and specific legislation (Klingebiel and Dado, 2002; Klingebiel, 2000).

Worldwide, non-performing loans are managed by a number of companies that manage assets using public or bank funds. The measures of such management aim at corporate governance, prudential supervision, capital markets and securitization. In addition to these measures, the management of non-performing loans has shortcomings, among which we can mention: the lack of a generally accepted definition of non-performing loans and their clear methodology, pressure on banks by social, economic and political issues, forcing banks to and underestimates its own non-performing loans, the lack of banks to sell such loans due to their associated costs, etc. Thus, companies that take over non-performing loans through acquisition can have profitable businesses due to the fact that they pay only a part of the total credit and later become the new owners of the loans.

2.2. What banking institutions do with NPLs?

Some banks prefer to sell non-performing loans to those companies that are interested in such business. Thus, these loans are bought due to their discount and control over assets. This discount is made only for the principal balance unpaid, not taking into account the related interest, their penalties (only if they exist) and subsequent taxes. Asset control refers to the takeover of rights and responsibilities by the new “creditor” from the old creditor (bank).

Acquisitions of non-performing loans by companies are considered less risky than investments in the stock market or the real estate market.

Those who sell non-performing loan portfolios or sell some of them to a specialized company are: banks, other creditors, hedge funds, independent investors and providers.

To better understand the process of such transactions, we will analyze the posture of each participant in the process. Hedge funds sell non-performing loans through brokers, e-mail lists or other means. Independent investors resell non-performing loans purchased from a fund, lender or bank only when they have taken the assets they need, and the rest is resold. Banks (only a part of banks do this) and servicers sell non-performing loan portfolios every quarter to recapitalize, without owning movable or immovable properties of debtors.

The reasons why banks sell non-performing loans refer to avoiding unknown debts and excessive legal costs, avoiding long foreclosure processes, insufficient flexibility of banks due to the regulations they are subject to and the speed with which non-performing loan portfolios can be sold. These banks can be local/regional, either with state or foreign capital, or large or small. Such

transactions require a lot of involved staff, meetings, decision makers and processes (Liaw, 2012).

In these processes of selling non-performing loans, banks report a series of indicators (loans that are not cumulated, loans with long delays in payments, the level of unpaid loans) to describe the situation of their portfolios and their motivation.

The value of non-performing loans given for sale is given by the note, collateral and the type of debtor. Thus, investment strategies in non-performing loans refer to: rehabilitation of non-performing commercial loans, training in trading non-performing residential loans (changing contractual terms and switching to refinancing), existence of government programs for rehabilitation of non-performing residential loans, holding non-performing loans and controlling commercial loans guarantees and the acquisition of these non-performing loans), the targeting of non-performing residential loans, the purchase of loans that may be “performing” from their initial position of non-performing and the purchase of non-performing loan portfolios with special destination. (Ogolla, 2012)

2.3. How NPLs affect banks?

The high level of non-performing loan portfolios held by banks affects not only their performance, but also the share price, which is less attractive for investors.

Most of the time, borrowers who are unable to repay debts (Louzis, Voudis and Metaxas, 2012) related to loans contracted from banks maintain this position, but there is also the situation where a small part of borrowers resume payments on the loan even though the loan has changed its status to default.

Banks that hold non-performing loans may be either in a position to recover what is owed to them by taking over the collateral that supports the loan, or in the impossibility to recover the debts due to the lack of assets to support the loan.

The high level of non-performing loans leads to the following situations for banks: non-collection of interest due (interest being an income for banks), banks have less money for new loans, banks restrict options for potential borrowers, banks will collect more assets after foreclosure of the debtor (banks are not interested in collecting such assets but in their equivalent value after the sale).

The increase in non-performing loans forces banks to take measures to protect their own interests as well as those of shareholders, as well as a reassessment of lending practices.

3. DATA AND METHODOLOGY

The issue of non-performing loans has been analyzed over time by many specialists due to the fact that this is a problem of great interest to banks and their performance. Thus, Ghosh (2015) and Saba, Kouser and Azzem (2012). analyze the specifics of the US banking industry and economic determinants to observe

what happens to non-performing loans registered by US banks. It concludes that high capitalization, liquidity risks, low credit quality, high cost efficiency, inflation, unemployment and public debt lead to a significant increase in non-performing loans, while a high GDP, increasing the personal income of the population. and changes in the housing price index reduce the level of non-performing loans.

Greenidge and Grosvenor (2010) made a non-performing loan forecasting model that applies over long periods of time to individual banks and less globally, due to the degree of accuracy that this model can relate.

Also, Makri, Tsagkanos and Bellas (2014) analyzed the factors influencing the non-performing loans rate before the 2007-2008 crisis in the euro area countries, as well as the correlations between economic and bank-specific factors and non-performing loans.

Next, we will analyze the determinants of non-performing loans in the banking sectors in EU member states during the financial crisis and the post-crisis period (2007-2015). Therefore, the analysis took into account a series of indicators specific to the banking area as well as macroeconomic indicators.

In Table 1 we will describe the variables used in the study and their sources of origin.

Table 1. Description of variables

Abbr.var.	Variables names	Description	Expected sign	Source
<i>NPL</i>	<i>Non-performing loans</i>	Aggregate NPL to total gross loans	+	ECB, FRED, World Bank, CEIC Data
<i>BCAR</i>	<i>Capitalization</i>	Total capital to total assets	+/-	FRED, World Bank, GFD
<i>DVF</i>	<i>Diversification</i>	Non-interest income to total income	-	ECB, OECD, FRED, World Bank, GFD, The Global Economy
<i>ROA</i>	<i>Return on assets</i>	Net income to total assets	-	FRED, World Bank, GFD, The Global Economy, CEIC Data
<i>RGDPG</i>	<i>Real GDP growth</i>	Percent of change/grow in GDP from one year to another	-	ECB, OECD, FRED, World Bank, GFD, CEIC Data
<i>UNEMPR</i>	<i>Unemployment rates</i>	The proportion of unemployed people	+	ECB, OECD, FRED, World Bank, GFD, IMF, The Global

Abbr.var.	Variables names	Description	Expected sign	Source
				Economy, CEIC Data
<i>INFL</i>	<i>Inflation</i>	An increase in prices and a decrease in the purchase value of money	+/-	OECD, World Bank, IMF
<i>HPI</i>	<i>Housing Price Index</i>	Percent price changes of residential housing over time	-	OECD, CEIC Data, Eurostat
<i>DGDP</i>	<i>Deficit to GDP</i>	Balance of public income and expenditure as percent of GDP	+	OECD, IMF

Source: author's definitions

The analysis uses Fixed effects method based on the equation below:

$$NPL = \beta_0 + \beta_1 BCAR_{i,t} + \beta_2 DVF_{i,t} + \beta_3 ROA_{i,t} + \beta_4 RGDPG_{i,t} + \beta_5 UNEMPR_{i,t} + INFL_{i,t} + HPI_{i,t} + DGDP_{i,t} + \varepsilon_{i,t}(1)$$

Where:

- NPL – non-performing loans;
- BCAR – capitalization;
- DVF – diversification;
- ROA – return on assets;
- RGDPG – real GDP growth;
- UNEMPR – unemployment rates;
- INFL – inflation;
- HPI – Housing Price Index;
- DGDP – Deficit to GDP.

In order to see which are the factors that can determine the appearance of non-performing loans in the banking sectors in the European Union, we built the following hypotheses:

H1: There is a strong negative relationship between non-performing loans and ROA.

H2: There is a strong positive relationship between non-performing loans and the unemployment rate.

In the following, we will analyze the correlations between banking and macroeconomic indicators with non-performing loans registered by EU banking systems. Below, the descriptive analysis is presented to see the existing differences and what would be the causes of those differences.

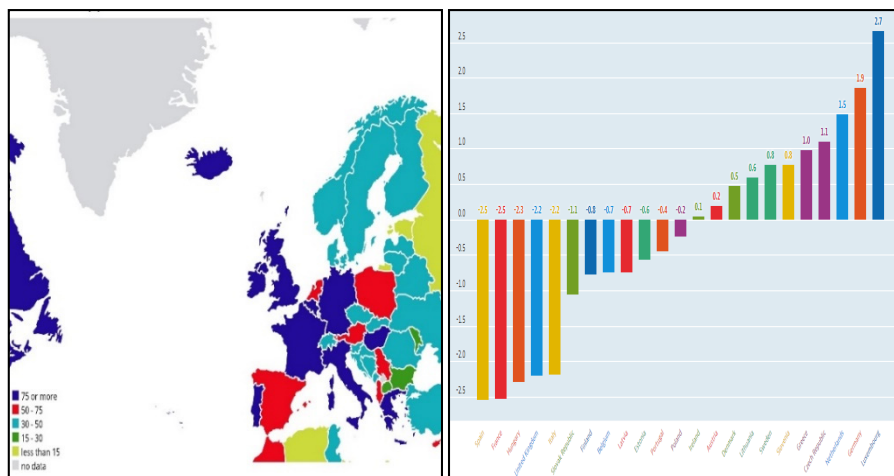
Table 2. Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
<i>Banking industry variables</i>					
NPL	250	7.172143	7.516652	0.1	47.7478
LNBCAR	243	1.926094	0.3309002	1.169074	2.654943
LNDVF	250	3.631575	0.3047243	2.683607	4.37778
ROA	252	0.1763278	1.53043	-10.4721	4.24146
<i>Macroeconomic variables</i>					
rgdpqth	252	1.169956	4.140125	-14.81416	25.16253
unmpr	252	9.327167	4.547674	3.434	27.466
Infl	252	2.127107	2.44798	-9.174	15.402
hpi	241	7.119917	26.13083	-43.6	162.1
dgdp	207	-3.618249	4.10927	-32.05951	5.108194

Source: results obtained by the authors

As we can see in the table above (Table 2), non-performing loans register an average of 7.17% compared to their maximum (47.75%) recorded by Cyprus in 2015 due to the Cypriot financial crisis in 2012-2013, the crisis that started from a loan based on collateral values and not on repayment capacity. At the same time, the profitability of banks' assets suffered both during the financial crisis and the recession period after it, the banks recovered with difficulty after the blow given by the crisis of 2007-2008. Regarding the growth rate of real GDP, the extreme negative value is due to the massive decrease in industrial production since 2009 due to the crisis, a situation encountered in the 3 Baltic states: Estonia, Lithuania, Latvia. The negative values recorded by inflation are represented by the massive and, in some cases, sudden decreases of the market prices, which led to deflation. The house price index registers negative values only when the crisis made its presence felt and caused a crash on the real estate market. The GDP deficit is given by the high values of expenditures compared to the low level of annual revenues.

A high average of non-performing loans (Appendix 1) in the analysis performed by us was registered by Cyprus (19%) and Greece (18%), countries that were severely affected by the financial crisis and which hardly managed to find solutions to improve the economic situation they were facing. During the financial crisis, the banks that recorded a high rate of non-performing loans (11.7%) were those in Lithuania. The recession did not mean a period of improvement for all countries. Some countries have encountered various difficulties such as the national crisis, the devaluation of the national currency, the high unemployment rate, etc., and this has made the banking systems of those countries record higher rates of non-performing loans than those recorded during the financial crisis (Bulgaria, Cyprus, Spain, Greece, Croatia, Hungary, Ireland, Italy, Lithuania, Romania, Slovenia).



Source: authors' work based on the data provided by International Monetary Fund (IMF) and Organisation for Economic Co-operation and Development (OECD)

Figure 1. Gross public debt (% of GDP) in EU and non-EU members

Countries with a low debt-to-GDP ratio are those countries that produce and sell enough goods and services to pay their debts. Although it is assumed that countries with larger economies can more easily secure their debt payments, we can see in the chart above (Figure 1) that this is partially correct. The countries of the European Union that have high salaries but which register high values of public debts are represented by Luxembourg (2.7%), Germany (1.9%) and the Netherlands (1.5%). The opposite situation of the level of public debts, but with salaries at a minimum to medium or even medium level are represented by Spain (-2.5%), France (-2.5%), Hungary (-2.3%), UK (-2.2%) and Italy (-2.2%).

Table 3. Fixed effects results

	[1]	[2]	[3]	[4]	[5]	[6]
LNBCAR	13.5712*** (2.0518)		6.3308*** (1.6320)		7.3515*** (1.6372)	4.6539*** (1.3116)
LNDVF	1.5611 (1.5937)			2.4057** (1.1429)	1.2913 (1.1374)	1.8652** (0.8791)
ROA	-1.5637*** (0.2598)	-0.2080 (0.1880)	-0.2764 (0.2161)	-0.0644 (0.1852)	-0.1781 (0.2104)	-0.2370 (0.1796)
RGDPG		0.0793 (0.0640)	-0.0113 (0.0664)	0.0094 (0.0671)	-0.0787 (0.0685)	-0.0698 (0.0573)
UNEMPR		1.3239*** (0.0893)	1.2668*** (0.0908)	1.4532*** (0.1041)	1.3773*** (0.1033)	1.1308*** (0.0863)
INFL		-0.2677** (0.1075)	-0.0425 (0.1160)	-0.2064* (0.1184)	-0.0002 (0.1238)	0.1848* (0.0994)
HPI				0.0232* (0.0132)	0.0223* (0.0129)	0.0028 (0.0110)

	[1]	[2]	[3]	[4]	[5]	[6]
DGDP						0.1012 (0.0680)
_CONS	-24.5091*** (5.8984)	-4.6976 *** (0.9854)	-16.9322*** (3.1564)	-14.9538*** (4.2727)	-24.8186*** (4.6958)	-20.2289*** (3.7713)
Adj. R ²	0.2696	0.2323	0.3092	0.1413	0.2367	0.3956
F-stat	26.48	85.89	74.80	62.92	60.03	56.07
AIC	1414.079	1316.511	1257.822	1221.89	1162.36	848.6206

Note: standard errors in parentheses

*** statistical significance level at 1%

** statistical significance level at 5%

* statistical significance level at 10%

Source: results obtained by the authors

As we can see in Table 3, the indicators that have a very high level of significance lead to an increase in non-performing loans. Thus, if we are looking at the above results, we can see that the bank capitalization and the unemployment rate are positively significant at the level of 1%, respectively the diversification and the housing price index which are significant at the level of 5%. This tells us that with an increase of all elements mentioned above, non-performing loans show an increase. Asset returns and inflation are negatively significant at the level of 1%, 5 and 10%, causing the level of non-performing loans to decrease and helping the bank's performance to register much higher values.

Looking at the average unemployment rate in 2007-2015 (Appendix 2), we can see that Greece has the highest percentage (21.5%), which is due to not overcoming the economic problems caused by the financial crisis of 2007-2008. This is followed by Spain (17.2) and Italy (11.2%) which face a large number of unemployed people. The countries that are better at this aspect are the countries with more developed economies and a more careful organization of the elements that make up or help the economy to grow.

4. CONCLUSIONS

Non-performing loans diminish banks' income, which forces banks to take measures to correct such situations or to eliminate them completely, if it's possible. The volume of non-performing loans is calculated as the ratio between the total value of non-performing loans and the total value of outstanding loans (loans for which payments were not honored for less or more than 90 days) from banks' portfolios.

Some banks prefer to sell non-performing loans to collection agencies or external investors in order to get rid of the risky assets they have and to improve their balance sheet situation. The sale of this type of loan contains both financial implications that lead to a decrease in profit and fiscal implications.

When the loans become non-performing, the chances of their repayment/recovery decrease significantly after the 90 days, which makes the

activity of the banks more difficult. Non-performing loans occur when the borrower goes bankrupt or loses the income with which he paid the loan installments.

In conclusion, a high ratio of non-performing loans indicates that banks have high-risk loans, which can lead in some situations to bank failures/bankruptcies, as well as to instability in financial markets, making investors less interested in stocks of those banks.

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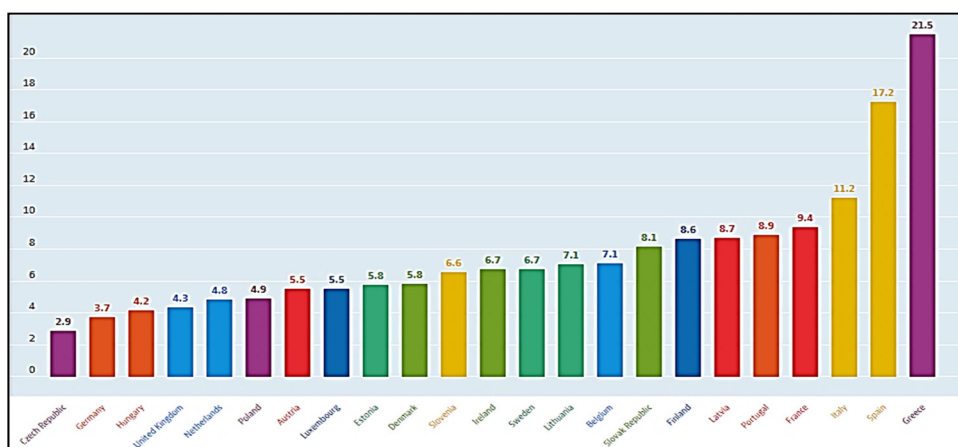
Appendix

Appendix 1. Average non-performing loans in EU member countries

Country	Full-sample	Average financial crisis period (2007-2010)	Average post-crisis period (2011-2015)	Country	Full-sample	Average financial crisis period (2007-2010)	Average post-crisis period (2011-2015)
AT	6.36666667	4.55	7.82	HU	10.0126667	5.65575	13.4982
BE	1.176	1.12	1.2208	IE	14.1996667	6.34875	20.4804
BG	11.1512111	5.7025	15.51018	IT	11.4045556	6.92225	14.9904
CY	19.4294822	3.4793	32.18962	LT	11.0933333	11.6775	10.626
CZ	3.27988889	4.45175	5.9038	LU	0.34574667	0.4868075	0.232898
DE	2.77777778	3.025	2.58	LV	9.92577778	9.9355	9.918
DK	3.49833333	2.29225	4.4632	MT	3.33333333	2.285	4.172
EE	2.78133333	3.56525	2.1542	NL	2.65555556	2.3	2.94
ES	7.934	4.07425	11.0218	PL	7.55966667	6.6775	8.2654
FI	0.32222222	0.475	0.2	PT	5.25077778	2.7375	7.2614
FR	3.83622222	3.325	4.2452	RO	12.629	6.27325	17.7136
GB	2.58333333	2.48025	2.6658	SE	0.72588889	0.5405	0.8742
GR	18.38196	6.354335	28.00406	SI	8.98888889	4.975	12.2
HR	11.617	7.19525	15.1544	SK	4.80011111	4.1015	5.359

Source: results obtained by the authors

Appendix 2. Average of unemployment rate in the period 2007-2017



Source: authors' calculations based on the data provided by Organisation for Economic Co-operation and Development (OECD)

ERP SYSTEMS AND THE PERFORMANCE OF THE COMPANIES – A LITERATURE REVIEW

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Abstract

The development of the technologies and the evolution of automated processes in recent decades have made increasingly intensive the use of ERP (Enterprise Resource Planning) systems by the companies. If at the beginning, they were used only by large corporations, they are nowadays used by more and more companies of different dimensions. The migration of the companies to the digital environment is increasingly significant in all the industries, and if the information is digital, it can be automated by ERP systems. The main effects and advantages of using the ERP systems are supposed to be: saving time, increasing the productivity, increasing the incomes, diminishing the expenses, redefining the business model, redefining the relationship with the customers, increasing the internal resources available in the company or increasing the competitive advantages, and so on. Taking into consideration the link between the use of ERP systems and the expected positive effects, many researchers have studied different assumptions. The purpose of this paperwork is to analyse the existent literature regarding the economic benefits of using the ERP systems. This paperwork is a review of the research articles published in the research magazines with a high impact factor.

Keywords: *ERP; financial performance; organizational performance; accounting and finances; efficiency.*

JEL Classification: M29

1. INTRODUCTION

1.1. Background information

The ERP systems date back to 1970s, and they were firstly used in the assistance of the manufacturing process (MRP – Material Requirement Planning), and afterwards, since the 1990s, their use has been extended to all the processes of a company and got close to the form of the actual application. Nowadays, the ERP systems have made a new step in their development by using the internet, through their integration with WEB pages, and through cloud computing, so as they can be remotely maintained or accessed.

The ERP tools are IT systems that ensure support for the companies in carrying out their activity, and they facilitate the globalization. They are

increasingly used by most of the companies, and their benefits can be seen in all the areas, at the level of financial management, operational management, strategic management, human resources management.

This paperwork examines the available studies, and it explores future directions of research about some critical problems regarding the increase of the performance of the companies in context of the use of ERP systems.

1.2. ERP Systems

The ERP systems (Enterprise Resources Planning) represents the software tools that generate digital data in a unique manner so as they can be easily managed, centralised and interpreted. The purpose of ERP systems is to ensure a data transparency within an organisation and to facilitate the access to them. An ERP system is modular and integrates more flows and processes within a company, processing a shared database, and it operates independently.

An ERP system facilitates the information flow between all the internal functions of a business, and manages the link with the external parts (Aldossari and Mukhtar, 2018). The different functionalities of the ERP systems allow the companies to plan their activities (Aburub, 2015). The ERP systems can integrate functionalities as accounting, acquisitions, marketing and sales, human resources, finances and manufacture, business intelligence, but also specific functionalities, developed based on the needs of the companies.

Through the implementation of some ERP systems, the companies aim to reduce the costs and to improve the effectiveness of total expenses through the creation of more efficient business processes. In order for them to enjoy the benefits of those systems, the organizations that implement them have to project their business strategy in the implemented ERP flows. The lack of alignment of the business strategy with the investment in the ERP technology is a major reason why some companies fail in the implementation, or they do not manage to fully enjoy the benefits of such a system.

The ERP system is defined as an integrated, multidimensional system which is based on the business model, and that supposes planning, control and optimisation, producing added value for all the involved parties (Slooten and Yap, 1999).

There are different ERP providers on the market, as for example SAP, Oracle, Microsoft and many others, the position of the ERP system on the market being established by its execution capacity and complexity, and by the diversity of its functionalities (Gartner Group, 1995). Therefore, ERP providers always try to improve the solutions they offer through their integration with the most recent technologies.

By using the ERP that integrates a unique database, the companies can better exploit the business data (Altamony *et al.*, 2016). They offer strategic advantages

by improving the decision-making process through the provision in a timely manner of appropriate information.

The systems standardization and processing are objectives to be achieved when the companies decide to implement an ERP system where the resources planning has a very important role (Koch, 2011).

2. ERP SYSTEMS AND THE PERFORMANCE OF THE COMPANIES

2.1. Performance measurement

From the financial perspective, the performance of a company can be measured either through its capacity to generate and to increase profit by increasing the revenues or by diminishing the expenses, or through increasing the productivity.

The potential benefits of the implementation of an ERP system can be the increase of the productivity, of the revenues, the decrease of some types of expenses, obtaining a competitive advantage, increase of the market value of the company or the increase of the performance of the company through efficiency.

In the analysed studies, in relation to the gained performance or not, upon the implementation of an ERP system, it is analysed through the following indicators:

- return on assets (ROA) (Hunton, Lippincott and Reck, 2003; Barber and Lyon 1996; Bharadwaj, 2000);
- return on investment (ROI), asset turnover (ATO), return on sales (ROS) (Hunton, Lippincott and Reck, 2003);
- value of shares (Hayes, Hunton and Reck, 2001);
- productivity, ratio of employees to revenues, ratio of cost of goods sold to revenues, ratio of selling, general and administrative expense to revenues, residual income (Poston and Grabski, 2001);
- non-profitability measures as inventory turnover (IT), fixed assets turnover (FAT), accounts payable (AP), sales day outstanding (SDO), current ratio (CR) (Matolcsy, Booth and Wieder, 2005).

2.2. Positive effects of ERP implementation on the performance

The productivity growth can be the effect of the processes' standardization and the decision-making improvement by accessing the data in real time. The perfect connection of the functional entities within a company through an ERP leads to the productivity growth (Legare, 2002).

It is assumed that when the companies implement an ERP system, they shall have a financial performance improved by the generation and fast delivery of financial report. The studies show that the output of own capitals, the profit margin, the return of assets will also be improved.

The ERP implementations have as a result the decrease of the expenses with the staff (direct salary expenses or indirect salary expenses), the decrease of the expenses with the acquisitions and the administrative expenses (Legare, 2002).

In a study from 2001, Poston and Grabski do not find a significant improvement of the revenues, but three years after the implementation of an ERP system, an improvement of the performance is ascertained, resulting from the decrease of the cost of goods sold. Furthermore, it is also ascertained a productivity growth (Poston and Grabski, 2001).

Hendricks finds an improved of the return of assets (ROA) for the ERP users (Hendricks, Singhal and Stratman, 2007).

In the study from 2003, Hunton (Hunton, Lippincott and Reck, 2003) finds an improvement of the ROA, ROI, ATO indicators for the companies who implemented an ERP system, compared to those that did not implement such a system. In this study, there are reported results somehow similar to the ones obtained by Poston and Grabski (2001), meaning that there cannot be found an improvement of the financial performance immediately after the implementation of an ERP system, but by comparing the performance of the companies that adopted an ERP system with the performance of the companies that did not implemented one, it results that the financial performance of the latter decreases in time, and the performance of the companies that implemented an ERP system remains the same.

A study that follows the reaction of the capital market at the announcement of the implementation of an ERP system, demonstrates that the investors' reaction to those announcements is a positive one, in the sense of the increase of the shares price for those companies (Hayes, Hunton and Reck, 2001). Furthermore, the forecasts of the companies' revenues that announced their intention to implement an ERP system, were reviewed upwards, the Hunton's behaviour study revealing the fact that those announcements had a positive impact on the behaviour of the financial analysts (Hunton, McEwen and Wier, 2002). Therefore, those announcements are connected to upcoming presumed revenues and increase of the performance.

In the study carried out by Matolcsy *et al.* on a group of companies that adopted ERP systems versus companies that did not adopt ERP systems, for a period of time of two years after the system implementation, it is revealed an improvement of global liquidity and an improvement of the debts management for the companies that implemented an ERP system (Matolcsy, Booth and Wieder, 2005).

2.3. Adverse effects of ERP implementation on the performance

In order for the ERP implementations to have the expected effects, they are always accompanied by a redesign of the business process. An inefficient

reconfiguration of the business process can be the cause of a loss of performance (Davenport, 2000).

Adverse effects can also be produced by eliminating the roles within the company, roles automated upon the implementation of an ERP system. The employees' redistribution to other processes can generate a productivity decrease (Arnold, Hunton and Sutton, 2000).

The performance of a company can also be measured by the increase of the shares price in the stock exchange for listed companies. If in the study of Hayes (Hayes, Hunton and Reck, 2001) the market reaction is a positive one, there are also studies (Hendricks, Singhal and Stratman, 2007) that show the fact that within a period of five years from the implementation of an ERP system, the performance of listed companies, measured through the shares price in the stock exchange, has no significant variation, produced by the implementations of ERP systems. Therefore, such investments have not always an impact on the investors' decision to buy shares.

In the study carried out in 2001 (Poston and Grabski, 2001), the authors do not find a significant improvement of the residual income (residual income = net operating income – imputed interest for cost of capital) or of the sales in none of the three years from the implementation of the ERP system.

3. CONCLUSIONS

The improvement of ERP systems has been and it still is a preoccupation for the IT developers, especially in the context of economic globalization. Furthermore, the companies invest important resources in the implementation of the ERP systems. Nowadays, they have become strategic instruments, a “must have” within each company that plans its long-term strategies. They integrate high volumes of data that they parametrised and from which the most complex reports, statements or forecasts result. The radical organizational changes could be helped by the use of some ERP systems (Legare, 2002). The existent literature has proven the positive effect the ERP systems produce on the performance of the companies.

The adverse effects found in the studies are more related to the lack of short-time positive effects, this aspect being first of all caused by the non-alignment and missing perfect integration of the business with the implemented ERP system. The productivity decrease, found in the studies, can be followed by its growth, in time, while the employees get familiar to the new roles (Arnold, Hunton and Sutton, 2000).

Even if the analysed studies took into consideration periods of up to 3 years for the study of the ERP benefits after their implementation, for more consistency and relevance, the upcoming studies should include longer-term analyses, up to 5 years after the implementation, considering the forecasted efficiency for the ERP system from 4 to 5 years (Wah, 2000; Wortmann, 1998). This way, there could also be registered indirect benefits of the implementation of ERP system.

If in the study from 2001 (Hayes, Hunton and Reck, 2001), when those systems were not used by the companies on such a large scale, the investors' reaction at the announcements of the ERP implementations is a positive one, 7 years later (Hendricks, Singhal and Stratman, 2007), the effect in the stock exchange is not a positive one, maybe also because of the fact that the use of ERP system within the company starts already to be an usual one, a "must have", especially within large companies.

As upcoming research directions, there shall be studied if the implementation of such ERP systems, more expensive, of which complexity was much more developed, produces the same effects that positively reflect in the performance of the companies nowadays too.

Furthermore, considering the fact that in the studied papers, it is analysed the ERP effect on the performance, and because the ERP system evolved as far as it concerns the complexity, in them being also integrated the BI (Business Intelligence) modules or management information systems (IS), operating in the cloud or through different remote tools, there shall be studied how they will influence the performance of the companies.

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Section II

EU ADMINISTRATIVE AREA

INSTITUTIONAL OBSTACLES IN CROSS-BORDER COOPERATION BETWEEN ROMANIA AND REPUBLIC OF MOLDOVA

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Abstract

With more than twenty years of experience in cross-border cooperation between Romania and Republic of Moldova, there are still many obstacles to be overcome. In this context, political, social and historical preconditions may be a relevant vantage point for explaining the complex context of CBC. Based on the existing research, institutional issues are considered to be the primary cause for the lack of effectiveness, which affects the level of involvement of each partner in specific projects and the impact of which can be noticed in the output of many of these projects. Therefore, the aim of this article is to identify the main sources of institutional inefficiency regarding cross-border cooperation between Romania and Republic of Moldova. In particular, our work provides an understanding of the causes that have a negative impact on institutional performance, but also of the factors that determine their resilience. The paper's methodology is based on descriptive analysis and case study. The analysis shows that there is no predominant factor which might explain the lack of effectiveness in CBC context; rather, there are several factors which affect it, such as political instability, institutional framework, geopolitical factors and also the national legislative framework. In general, it can be stated that cross border cooperations contexts tend to be a topic not widely analysed in the academic literature. Thus, this article also aims to encourage debate and research on CBC related topics.

Keywords: *administrative issues; cross-border cooperation; resilience.*

JEL Classification: O1, R1, F5

1. INTRODUCTION

For over 20 years, Cross-border cooperation has provided an effective framework for common engagement within several projects between Romania, Republic of Moldova and Ukraine. Specifically, cross-border cooperation represents a useful tool for territorial development, reduction of inequalities and offering new opportunities for people within cross-border regions. Given the fact that three different actors are involved, within this framework, it represents an

interesting case to study cross-border cooperation. Taking into account the different historical background, the regional specificities and distinct priorities followed by each partner, cross-border cooperation between Romania, Republic of Moldova and Ukraine has revealed several issues throughout the time that are still relevant and require practical solutions in order to be tackled. According to the available research, a wide variety of obstacles are influencing in a negative manner the cooperation between the three actors involved, such as geopolitical, legislative aspects, administrative issues or political instability. The geopolitical dimension is related to the country status, which in this case highlights two sides: Romania as a EU-country and Republic of Moldova and Ukraine as non-EU countries. This aspect has profound implication towards their foreign policy approach and their priorities. When discussing about political instability, it represents an endemic characteristic especially in the case of Moldova and Ukraine, while Romania has more efficient capabilities to manage their role within cross-border cooperation despite the internal instability. However, a significant amount of studies have indentified administrative issues as the main obstacles towards the trilateral cooperation format. Within our paper, we will analyse the main administrative issues and their sources in order to provide a better understanding of their nature related to each country and their impact on cross-border cooperation.

Within our work, we aim to highlight the idea that there is no single explanation of administrative issues, but it is rather a multidimensional framework, which requires zooming within the context, in order to provide a relevant answer. The academic literature provides several approaches regarding issues, which affect cross-border cooperation within the trilateral framework. Klojčnik (2012) identifies several factors, both positive and negative which are crucial for a succesfull cross-border cooperation, such as national administrative decentralization of the territory, administrative incompatibilities, different administrative procedures or different level of institutional competencies. European Commission final report on Cross-border cooperation (2018) has highlighted several categories of obstacles, and administrative dimension is one of the most important. According to Klojčnik (2012) the main obstacles to cross-border cooperation are the different administrative structures and legal systems.

Despite the fact that many studies have been conducted on cross-border cooperation, there still many details that should be covered. In this context, the aim of our paper is to contribute to the actual literature on cross-border cooperation, by analysing the key administrative issues related to trilateral cooperation between Romania, Moldova and Ukraine. Furthermore, our work wants to shed some light on factors that cause administrative issues which are the primary obstacle within cross-border cooperation according to the literature.

Our paper is divided in three parts. Within the first part a short literature review will be conducted on the available literature. The second section is focused

on political instabilities and the way how it influences cross-border cooperation. Within the third section we analyse the issues related to legislation and harmonization advantages.

2. LITERATURE REVIEW

Within this section, a short literature review on key issues related to cross-border cooperation is given in order to highlight which are the most important issues according to several authors. In general, studies focused on cross-border cooperation have highlighted several categories of issues, such as political instabilities, geopolitical factors, administrative issues etc. However, a special focus is given to administrative issues, as the primary obstacle for cross-border cooperation.

Borders regions are facing many obstacles, such as administrative and legal especially, which are affecting the efficiency of programmes implementation (Houtum, 2003; Hattenberg, 2007; Bufon and Markelj, 2010). According to Roşcovan (2003), administrative-teritorial structures from Moldova have reduced the capacity of promoting their own cooperation policies throughout the time, which has diminished the intensity of cooperation between the involved partners. Roşcovan *et al.* (2010) argues that many obstacles within cross-border cooperation are caused by differences of legal framework within the three partners, Romania, Moldova and Ukraine. In a similar manner, Bărbulescu, Brie and Toderaş (2016) mentioned several aspects related to administrative issues, such as different types and dimensions of teritorial-administrative units, the existance of different procedures, poor communication with institutions from partner countries and poor management are few of of cross-border cooperation issues. Furthermore, he adds that poor administrative capacity of managment structures within Joint Operational Programme between Romania, Ukraine and Republic of Moldova, such as limited human resources, poor logistic equipments are still issues within future cross-border cooperation programmes. Guţuţui (2012) identified several issues related to cross-border cooperation, like the lack of local financial resources, low institutional capacity and limited experience of local authorities, institutions and NGOs related to this kind of projects. According to Medeiros (2014) the different administrative and regulatory regimes such as taxes, customs are considered to be an important barrier within cross-border cooperation between partners. The element of differentiation between adminisitrative and territorial structures and legal systems is highlighted by Lepik (2009), which considers that it influences the level of activites and the management efficiency within programmes for cross-border cooperation. Furthermore, Lepik (2009) has provided some potential recommmendations to overcome the legal and administrative barriers, such as the need for preparing joint studies and improve mutual understanding are the most relevant. Many issues are related to institutions. For examples, Beck (2018) argues that the institutional activity and

project implementation processes depend on decisions made by actors from outside the local authorities which are responsible with the main activities. The differences between border institutions are the sources of several administrative issues. According to Eisenberg (2007) within the cross-border the legal and institutional context is not uniform, in this case the main challenge for the responsible actors is to manage the joint activities while disposing at their basis different administrative systems in terms of structures, management, resources and autonomy. In order to sustain cross-border cooperation, decisions are made from different political and administrative systems which are connected (Beck, 2015). Therefore, the main challenge is to ensure the coordination of CBC activities by managing the different mechanism provided by national administrative bodies (Beck, 2013; Eisenberg, 2007; Frey, 2003). Regardless to cooperation stage, in general the border problems require a joint effort despite the differences in terms of institutions (European by the Committee on Local and Regional Democracy, 2013).

Even if EU is providing technical assistance in order to support its partners, according to European Commission (2017) the responsibility of social security, labour movement, tax systems and administrative management is a national task. According to a study conducted by European Commission (2014) related to tax systems, such as lack of specialised staff, lack of bilateral and multilateral agreements related to cross-border cooperation and different interpretation given by the states on cross-border issues.

Cross-border cooperation has important implications towards supporting the development of border regions. In this context, a wide range of issues need to be tackled in order to improve the regional economy.

3. POLITICAL INSTABILITY AND INSTITUTIONAL RESILIENCE

As we shortly highlighted, within the academic literature, administrative issues are considered to be one the most important obstacles within cross-border cooperation. However, administrative issues are caused by several factors, which should be further discussed. Therefore, we aim to highlight the idea that there is no single factor that would be able to explain the entire nature of administrative issues. Furthermore, within the literature, administrative issues are only related to administrative units and structures as an internal problem. Thus, there are internal and external, direct and indirect factors, which should be analysed in order to provide a better understanding of administrative issues generators. In this section we will analyse the impact of political instabilities on administrative capabilities within cross-border cooperation.

In this case, when discussing about political instability, Republic of Moldova and Ukraine will be the actors we will be focused on, as we assume that in Romania the political situation has shown an improvement throughout the time and even if there are some political issues, it does not influence too much in a

negative way cross-border cooperation. In particular, political instability is an endemic characteristic for Moldova and Ukraine. As these two neighbours have the soviet legacy within their past, the present problematic situation does not surprise anyone. Since the establishing of euroregions, the process of cross-border cooperation was slowed by several factors such as ethnicity and political barriers, different juridical systems and administrative organization (Roşcovan *et al.*, 2010). As the administrative structures involved within cross-border cooperation do not possess their own political and legal power, central authorities are dominant within decisions making processes. Therefore, any political instability on central level has significant influence on regional level. One consequence of political instability at central level is that it determines significant delays within decision-making process at regional level. The According to Bărbulescu, Brie and Toderaş (2016), political instabilities have been identified as one of the most important obstacles within cross-border cooperation, as instabilities from central level will affect sooner or later the activity on regional level. The interaction between central government and regional authorities were analysed by several authors within the academic literature. Bufon and Markelj (2010) identifies that sometimes because of pursuing too ambitious objectives for increasing political power of local administrative structures

Due to the frequent changes within political system and government instability, the objectives of bilateral and multilateral cooperation are change often too, which affect the implementation of JOP. In this case, internal political disagreements towards projects proposals and technical assistance launched by Romania were the main cause. The mutual commitment represents one the basic principles of cross-border cooperation, however, the reality proved that the interests of political actors are above the common values of this engagement.

Also, while political stability is far from being reached, this fact is associated with a high country risk. In this case it has a direct influence on businessmen from Romania or others EU countries confidence when taking into consideration the opportunity of investing in Republic Moldova or in Ukraine. As unpredictability is generated by several factors, political instability is one of them, which businessmen consider first, before thinking to invest in a specific country. For a better understanding of issues related to the political realm, external factors are also important, as one hand there is EU's weak capacity to guide its partners, and on the other hand there is Russia which has proved an assertive behaviour towards its neighbours. Therefore, the international geopolitical context should be further considered in the case of cross-border cooperation. The unstable situation in the Eastern part of Ukraine has enormous implications in security. In particular, Odessa region as a partner within cross-border cooperation within the Lower Danube euroregion, is in a permanence exposure to security issues, due to its proximity to the Eastern Ukraine.

In this case it is important to understand that political or geopolitical instability have an indirect impact on cross-border cooperation. What we are trying to highlight is that due to a low resilient capacity of local institutions, the impact of the shock has a much stronger influence. As the responsible institutions that are dealing with cross-border cooperation are exposed to so many risks from internal and external environment, then there is a practical need for building institutional resilience. Resilience is a multidimensional concept, still quite unclear to how it would bring practical application, however its conceptual vitality brought a conceptual vitality within the literature. A region would be resilient if it would be able to resist in the case of a shock or to recover fast after this (Martin, 2012). An approach based on resilience concept might bring a new perspective on issues related to cross-border cooperation, especially in the case of trilateral cooperation between Romania, Moldova and Ukraine, due to the exposure of a wide range of threats. Furthermore, the concept of resilience has practical implications in two ways: on one hand, it is important that institutions should be resilient and well prepared and, on the other hand, border regions should become resilient in order to handle an unexpected shock. Also, it should be pointed out that regional resilience should be the output of cross-border cooperation, as due to border effect and other obstacles, border regions are subjects to several obstacles.

Building institutional resilience would strengthen local administrative units, which due to several factors are weak towards an efficient management in order to address potential weaknesses and threats to manage the projects implementation processes. Therefore, it is important to identify which are those internal weaknesses and what capacity institutions have towards tackling them. In this case a special focus should be given to internal factors that would lead to a better understanding of how to strengthen institutions. A special focus should be given to human resources within institutions, as many issues related to this. Klojčnik (2012) identified several internal obstacles and issues related to institutions such as lack of skilled and motivated staff, low development potential of border regions and weak competencies of regional authorities. However, it should be pointed out that there is not a single framework of obstacles which could be applicable for all the situations.

4. HARMONIZATION OF THE LEGISLATION

After two decades of experience within cross-border cooperation experience the legal and institutional framework of Romania, Moldova and Ukraine has changed throughout the time. In order to stimulate cooperation between neighbours, the legislative harmonization was a requirement to create political, social and cultural links between partners. There are many issues and factors associated with the inefficiency of actions within cross-border cooperation. However, the analysis conducted within the previous section of this article has

shown that all of them are strongly interconnected. Issues related to legislative framework could be overcome only through a gradual political harmonization. However, political harmonization and economic integration could be done only through active involvement and political willingness from all the partners who take part within cross-border cooperation. The lack of political will is an impediment for an efficient and adapted harmonization process. Even after two decades of cross-border cooperation within Eastern neighbourhood under EU supervision, there are still many things to be done in this area. In general, when discussing about harmonization process, EU is the main decision maker actor. EU is responsible for creating the required conditions for harmonization of legal framework of partners with EU (Sirbu, 2012). As in this case more partners are involved, a multilateral convergence is required in order to undertake the harmonization process, based on an efficient exchange of ideas and interests. Because of issues related to legislation, the most affected actors within cross-border cooperation are local and regional authorities, due to numerous legal restrictions. Legal issues have accentuated differences within administrative structures and competences of responsible institutions from border regions.

A gradual harmonization of the legislation between all the partners involved requires a perspective for long term. An important step towards cooperation between EU, Republic and Moldova and Ukraine was the signing of Association Agreement in 2014 with EU. The bilateral agreements involve the liberalization of trade, the reduction of tariffs and the harmonization of the legislation according to EU's *acquis* (Bărbulescu, Brie and Toderaş, 2016). The Association Agreement implies a wide range of key objectives regarding the internal political and economic stability, and also security and justice.

5. CONCLUSIONS

Cross-border cooperation represents a key priority for EU external policy. Within European Neighbourhood Policy, cross-border cooperation has important implications for promoting regional cooperation, reducing the barrier effect and improving the life conditions of people within border regions. Despite of almost two decades of cooperation, many issues are still hard to solve and required a common engagement.

The aim of this paper was to shed some light on key administrative issues within cross-border cooperation between Romania, Moldova and Ukraine. To be more precise, the main idea of this paper was to highlight the factors that affect administrative structures within cross-border cooperation. Our study shows that administrative issues are generated by many factors, internal and external, and also they impact in a directly and indirectly way. We analysed the available literature focused on cross-border cooperation and we noticed a scarce of research on negative factors that impact the administrative structures. Therefore, we attempted to highlight the idea that in order to enhance the administrative capacity

of institutions, a multidimensional perspective on issues is required. We identified several external factors that in general they are ignored when discussing about administrative issues. However, the most important and unpredictable are the political instability and geopolitical context.

Nevertheless, we used the resilience concept in order to promote the idea that due to so many unpredictable factors, the responsible institutional actors should be prepared and resilient, especially within the context of Ukrainian conflict in the Eastern part, which poses serious threats to cross-border cooperation within Lower Danube Euroregion.

The main limitations of the research are related to resilience concept per se. A broader picture is needed in order to highlight the relevance of this concept within cross-border cooperation. More research is expected in the future in order to explain the practical relevance of resilience concept as an efficient tool for building resilient institutions.

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STUDY ON COMMUNICATION BARRIERS BETWEEN MEDICAL TEAMS

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Abstract

The main specific objectives pursued in this research are: determining the current behavior of the nurse/midwife by presenting the main aspects of the issue in communication; testing the concept of nurse/midwife by exploring motives, attitudes and values; identifying the opinions and associated values of the nurse/midwife by presenting the main aspects of the communication issue; establishing the causes of the behaviour towards the patient/belonging; creating a model of the communication process between the members of the medical teams in order to improve the efficiency of the patient care service.

The concept of communication is of extreme interest because it is based on this process. The purpose of this research is to clarify the nature of this issue through a quantitative study/opinion questionnaire conducted among nurses in Romania.

In order to investigate the factors that influence the form of the communication process of the health professionals in the medical act, the target group from the first stage are the nurses/midwives from the public and private systems in Romania.

After the first analysis performed in the focus group meetings, the analysis will be extended to other health professionals: doctors, nurses, health registrars to identify specific causal relationships between the of communication modes adopted between members of medical teams and the efficiency of care services.

The creation of a model of the communication process between the members of the medical teams aimed at improving the efficiency of the patient care service will generate: the increase of a quality management system through an efficient addressability between professionals; the elimination of ingrained mentalities in health systems to solve the patients' safety, to increase the professional standard; the increase of patients' confidence through measures to improve the communication process and the quality of health services.

Keywords: *health services; quality assessment; patient's satisfaction; care plan; performance.*

JEL Classification: I12, I18

1. INTRODUCTION

Berkane (2017) specified the importance of the communication process as an essential factor for professional performance and its effects on team motivation, especially aspects related to non-verbal communication, listening behaviors,

impression management and manager training. The factors that separate teams from groups are roles and responsibilities, identity, cohesion, facilitation, communication, morale, flexibility. Teams replace factors that promote division, fear, competition by factors that promote unity, cooperation, coordination, communication to achieve the common goal (Vladescu *et al.*, 2000).

The loyalty of health professionals (doctors, nurses, etc.) is addressed primarily to the patients and their professions. The most important assets that teams have are individual skills, competencies and talents.

Luchian (2005) specifies that the need for development must be adapted to the expected evolution of the health structure, which depends on the policies and strategies of the system, the adopted program and the training cycle followed, in order to provide staff, increase motivation, improve performance, develop knowledge and skills in the administration of therapeutic acts (quality, modern techniques, new types of treatments and interventions). Staff development aims at improving the employees' knowledge, skills and abilities to enrich the general knowledge base of the organization and to prepare the framework for people to think strategically, even if strategic thinking is not imposed by their current positions (Mathis *et al.*, 1997).

1.1. Defining communication

According to the *Romanian Explanatory Dictionary* (Academia Română, Institutul de Lingvistică, 2009), the notion of communication represents the action of communicating and its result. 1. Notification, news; rapport, relationship, connection. 2. Presentation, in a circle of specialists, of a personal contribution to a scientific issue. From a sociological perspective, communication is perceived as a fundamental way of psycho-social interaction of people, achieved through the articulated language or other codes, in order to transmit information, to obtain stability or changes in individual or group behaviour.

Communication is a set of actions that have in common the transmission of information under the form of messages, news, signs or symbolic gestures, written texts. The notion of communication is found in a multitude of meanings and interpretations. The term has interdisciplinary meanings, being explained and developed in several scientific fields: philosophy, psychology, medicine, pedagogy, sociology, history, political science and administration.

In the literature, we find many definitions given to communication by several well-known authors in the field, where the communication process represents: social interaction between sender and receiver; an encrypted transfer of messages, information; orientation, perception and interpretation of information; the influence and impact of information; encoding and decoding of information; information storage.

1.2. Communication structure

The communication process is the transmission and exchange of information (messages) between people. In order to unfold, there must be a Sender and a Receiver in the communication process. In order for the message to reach from the Sender to the Receiver, there must be a transmission channel.

In the work *Introduction to the theory of communication* (Haneş, 1998) he explains the simple form of communication proposed by Karl Bühler in 1934 in his work *Die Sprachtheorie*, later completed by the linguist Roman Jakobson.

The communication process (Figure 1) includes the following elements: sender, message, means of communication, language of communication, receiver, context.

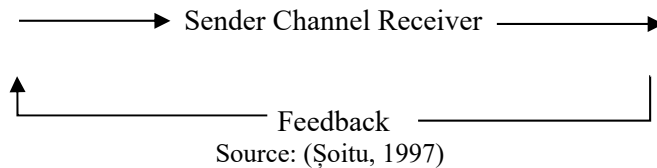


Figure 1. Communication model

The sender is the initiator of the communication, the one who elaborates the message. He chooses the means of communication and the language, so that the receiver understands his message. The sender has the right to choose the receiver with which he wishes to communicate. *The message* is the physical form in which the sender encodes the information; it can be an order, an idea, or a thought. The message aims to inform, convince, impress, amuse, or get an action. The message is the subject to an encoding and decoding process between the two people. The sender encodes the sent message and the receiver decodes the received message. The message is the element that contains the verbal and non-verbal symbols. *The means of communication* or the communication channel is the path taken by the message from the sender to the receiver. It can be *formal* – communication that follows the hierarchical structure of the organization and *informal* – when the communication comes from social interactions and informal connections within the organization. The latter can take the form of ideas, opinions, or rumors. The means of communication includes face-to-face discussions, official correspondence, meetings, phone calls, fax, internet. *The language of communication* can be: verbal – through words; non-verbal – through body language, time, space, things, clothes; paraverbal – by using tone, emphasis, or speech rhythm. *The receiver* is the person who receives the message, but listening to the message is as important as sending it. *The context* is very important because the same words will sound different in an office than on the street. Every communication has its context (Pănişoară, 2006). The perception of the message is achieved through feedback.

2. CASE STUDY

This paper focuses on a fundamental study of the knowledge of the communication process within the members of the medical teams in the health system, which is presented as a case study, a quantitative research of the survey/opinion questionnaire among nurses in the public system and private in Romania (N = 90).

2.1. Specific objectives

1. Determining the current behavior of nurses by outlining the main aspects of the issue in the communication.
2. Testing the concept of nurse by exploring motives, attitudes and values.
3. Identifying the opinions and associated values of nurses by outlining the main aspects of the issue in communication.
4. Establishing the causes of behavior towards the patient/relative.

2.2. Research method

The identification of the factors that influence the form of the communication process of the health professionals in the medical act was carried out through: *quantitative research* by applying a survey/ opinion questionnaire among nurses/ midwives from Romania; *qualitative research* by applying interviews that are based on the idea that in the generation of ideas or in the evaluation process, various groups of specialists who do not communicate with each other can be used.

2.3. Data collection

The questionnaire entitled “*Questionnaire for identifying communication barriers in the nurses’ activities and ways to overcome them*” was made of 4 sections:

- I. Sample structure
- II. Identifying the concept of nurse
- III. Identifying the opinions and associated values of the nurse in various collaborative relationships to ensure patient care
- IV. Establishing the causes of behavior towards the patient/relative by identifying barriers in communication.

2.4. The questionnaire

“*The questionnaire for identifying communication barriers in the nurses’ activities and ways to overcome them*” was put into practice through: Continuing Medical Education (EMC) courses of the Order of General Nurses, Midwives and Nurses in Romania (OAMGMAMR), Iasi branch, as well as on the professional development blog for trainers in healthcare and other related fields: Elites in Romanian healthcare.

2.5. Target group

In order to investigate the factors that influence the form of the communication process of health professionals in the medical act, the target group was made of nurses from the public and private system in Romania.

2.6. Statistical analysis

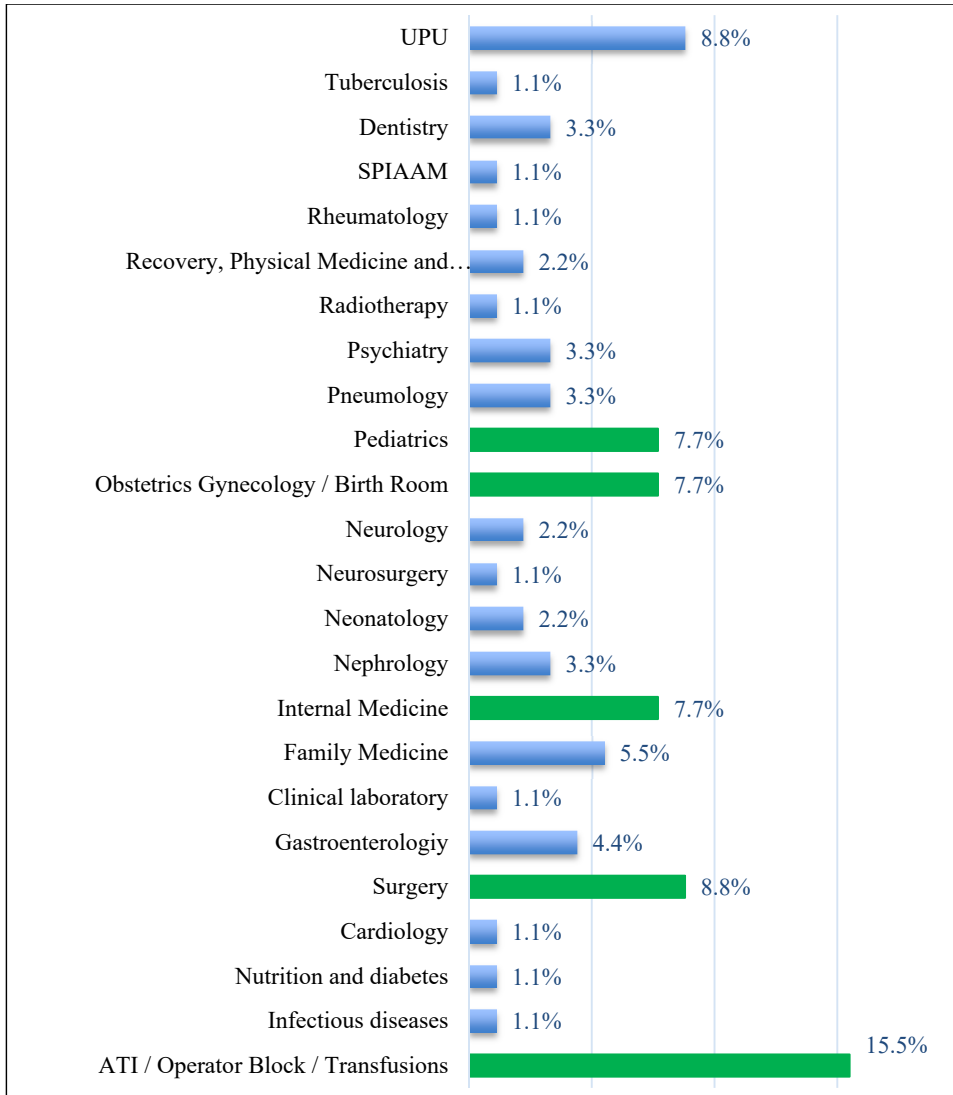
The statistical analysis of the study group was performed by a stratified probabilistic sampling, in nests, being more operative, more economical, it is performed in a shorter time, fewer registration errors occur, providing representativeness of the sample and of a higher precision, applied in hospitals/ outpatient clinics in Romania. This analysis was performed in the SPSS program.

2.7. Results and discussions

The structure of the sample of investigating the factors that influence the form of communication process of health professionals in the medical act, the target group was formed (N = 90) of nurses (92.2%) and midwives (7.8%), mainly hospital environment (88.9%) from the public system (91.1%) and from the private system (8.9%) in Romania. The representativeness was 57.8% in Iasi county. In the study group (N = 90), the representation by age groups was by nurses in full maturity of life: 40-44 years (28.9%), 45-49 years (22.2%), 50-54 years (21.2%), predominantly female (94.4%), with professional experience of over 25 years (41.1%), between 15 and 25 years (26.7%), between 5-15 years (22.2%).

The distribution of the study group by level of education was performed with the high school and equivalent to undergraduate studies (14.4%), post-graduate studies (33.3%), bachelor's degree (41.1%) and master's degree (11.1%).

As for the profile of the activity sector, 95.8% of the total respondents answered, the representativeness being the nurses from Intensive Care Anesthesia (ATI)/ Operating Room/ Blood Transfusions (15.5%), Emergency Reception Unit (UPU) and surgery (each with 8.9%), pediatrics, obstetrics and gynecology, internal medicine (each with 7.7%) (Figure 2).

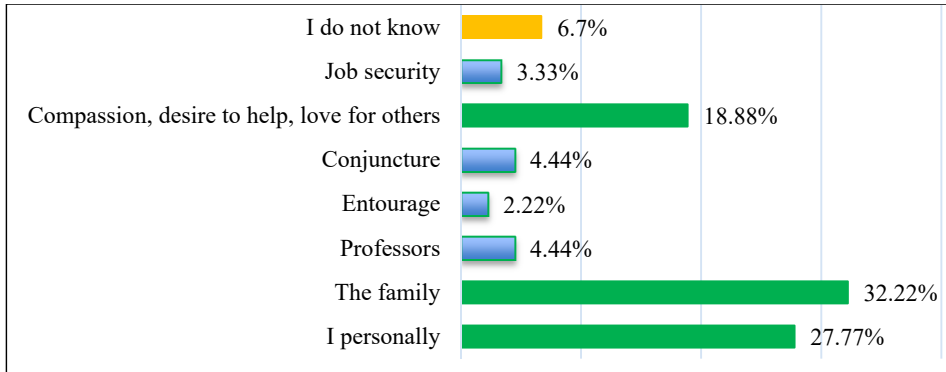


Source: own calculation (N = 90)

Figure 2. Distribution of the study group by department/ clinic profile

Identifying the concept of nurse

The motivation of the individual and the medical team is achieved in a system of values, where the important role is played by the way in which the objectives were organized in order to avoid the demotivating effects at work. The system of the most defined values is obtained from the family/personal environment with a representation of 6 out of 10 respondents, where compassion, desire to help and why not, love for others are fundamental qualities for medical staff (Figure 3).



Source: own calculation (N = 90)

Figure 3. What or who determined you to choose the profession of nurse/ midwife?

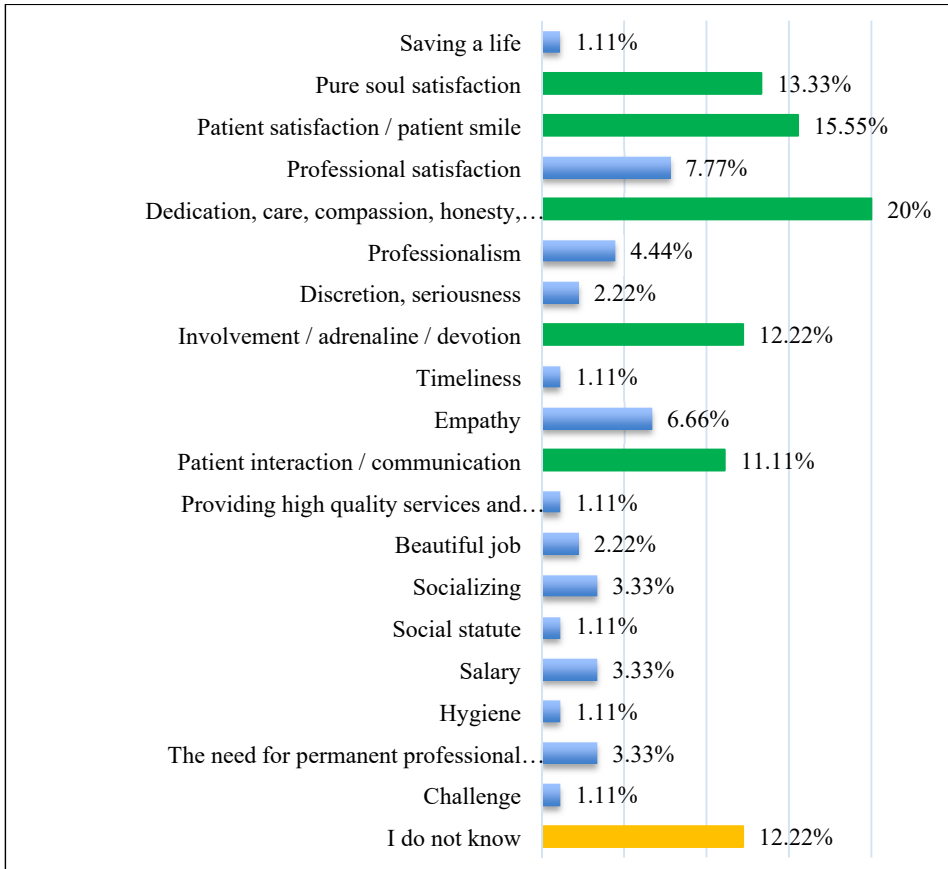
The staff's motivation must be understood from two perspectives: *the psychological one* defined as a process that takes place at the level of each individual and is characterized by certain essential components, and *the managerial one*, approached as a responsibility where certain levers and resources are used to achieve performance, as comfortable and efficient as possible, the objectives of the organization with the needs and interests of its employees (Mathis *et al.*, 1997).

However, the profession of nurse is the first health care profession in Europe to enjoy the initiative to adopt a common European code since 2007, the “*Code of Ethics and Conduct for European Nursing*”, developed by the European Federation of Nursing Regulators (FEPI). The dedication, the care, the compassion, the honesty rank first among the respondents to the question *What do you appreciate most in the profession of nurse/midwife?* (Figure 4), with a score of 20% of the total respondents. This aspect is the one that stands out in the patients’ satisfaction (15.55%), through a communication with the patient (11.11%), in the same extent to the personal satisfaction (13.33%), through involvement, devotion (12, 22%).

The Code refers to 13 fundamental principles, based essentially on patients’ rights (FEPI, 2012): quality and excellence; continuous professional development; human rights; equitable access to quality health care; compliance with the European code of ethics and conduct, honesty and integrity; relationships with others; information; informed consent; maintaining confidentiality; conflicts with moral and ethical beliefs; delegation to support staff; and its supervision; professional liability insurance (Agheorghiesei, 2012).

Tavares, Bowles and Donelon (2016) describe several aspects that can be associated with professional behavior to excel, such as *empathy, compassion, ethics, honesty and morality of the health care provider*. Honesty was the highest attribute rank desired by all participants in his study (Kilner, 2004) and was

recommended as an essential quality to be considered when recruiting health professionals (AlShammari, Jennings and Williams, 2018).



Source: own calculation (N = 90)

Figure 4. What do you value most in the profession of nurse/ midwife?

Identifying the opinions and associated values of the nurse in different collaborative relationships to ensure patient's care

A review of the organizational communication literature shows that a common barrier to effective communication and cooperation are hierarchies. Healthcare activity means interaction on several levels, with different patients and medical staff, which can sometimes lead to barriers against communication and cooperation. Barriers against communication that may arise are: personal values and expectations, personality differences, hierarchy, culture and ethnicity, age/generation differences, gender, historical interprofessional and intra-professional rivalries, differences in professional schedule and routine as well as in the level of responsibility, salary and rewards. Medical staff should be aware of

the existence of barriers in communication, although, by continuously checking the information transmitted/received and by providing proper feedback, unpleasant situations can be avoided (Dansereau and Markham, 1987).

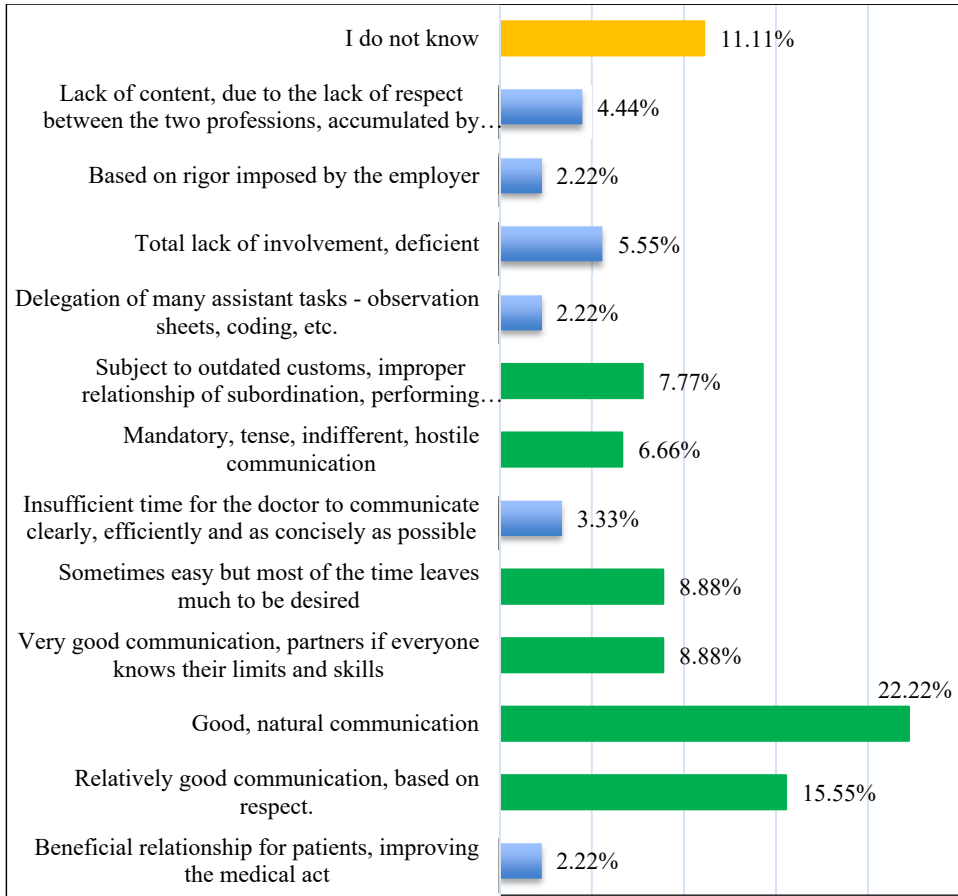
There are problems within medical teams regarding the different communication styles due to the education and professional training, as follows: the nurses were educated to present more descriptively, while the doctors must be very concise (Leonard, Bonacum and Graham, 2002).

Collins (2005) specifies that there are specific features in communication between nurses and physicians during examinations. Nurses achieve mediated communication through patient contribution while physicians' communication provides a global perspective on the examination. While the nurses' explanations start with the patient's responsibility and behavior, physicians' explanations start with biomedical intervention.

Cooperation within medical teams involves different specialists who have complementary roles, knowledge and skills, and who cooperate together, sharing responsibility for solving patient care issues.

Pitariu (1994) presents the evaluation and objective appreciation of individual performance, which is the basis for job improvement and improved work motivation. Labor relations (Figure 5) generate and maintain the beneficial climate to obtain the performance of the individual and the medical team through good communication (22.22%), based on respect (15.55%), but still distant (8.88%).

The verbal communication is one of the main types of communication, whether it is a direct conversation, or on the phone. In communicating with another medical staff it is important to use clear speech, appropriate language, tone, rhythm and intensity, active listening skills that involve engaging in conversation and asking questions. Direct communication includes both verbal and non-verbal communication, where the posture, facial expression, eye contact, proper use of touch and personal space and gestures are followed.

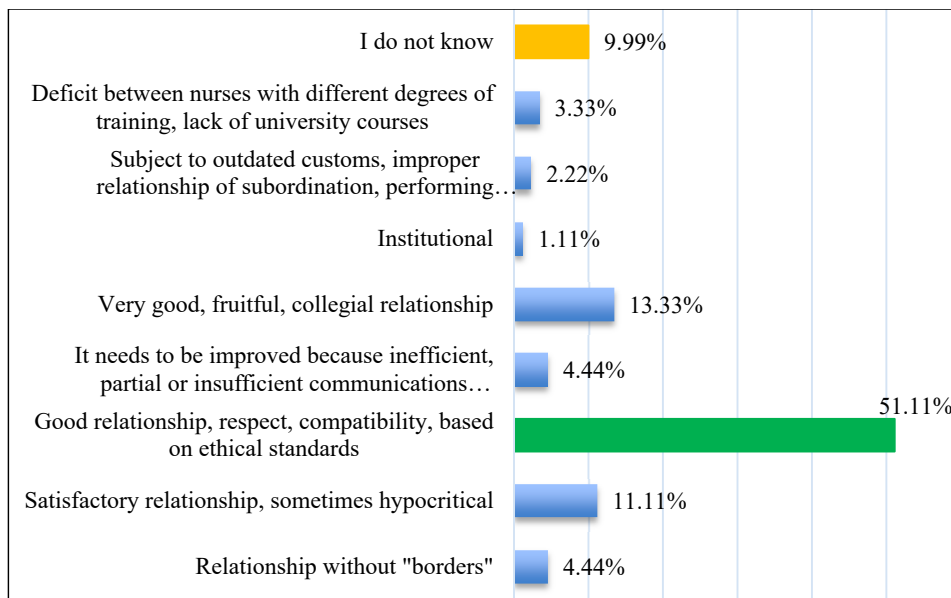


Source: own calculation (N = 90)

Figure 5. How do you appreciate the nurse/ midwife-doctor communication relationship?

By developing the cultivation of team spirit among employees through the so-called teambuilding, it is possible to strengthen their loyalty to it and renew their joy of working together, seeking to improve staff loyalty through motivation (Grancea, 2017).

The value approach of motivation assumes that people will be motivated by the activities and results they appreciate (Maslow, 1943; Pinder, 1997), respecting (Figure 6) the code of ethics (51.11%), developing collegial relationships (12.33%), professional satisfaction (11.11%).



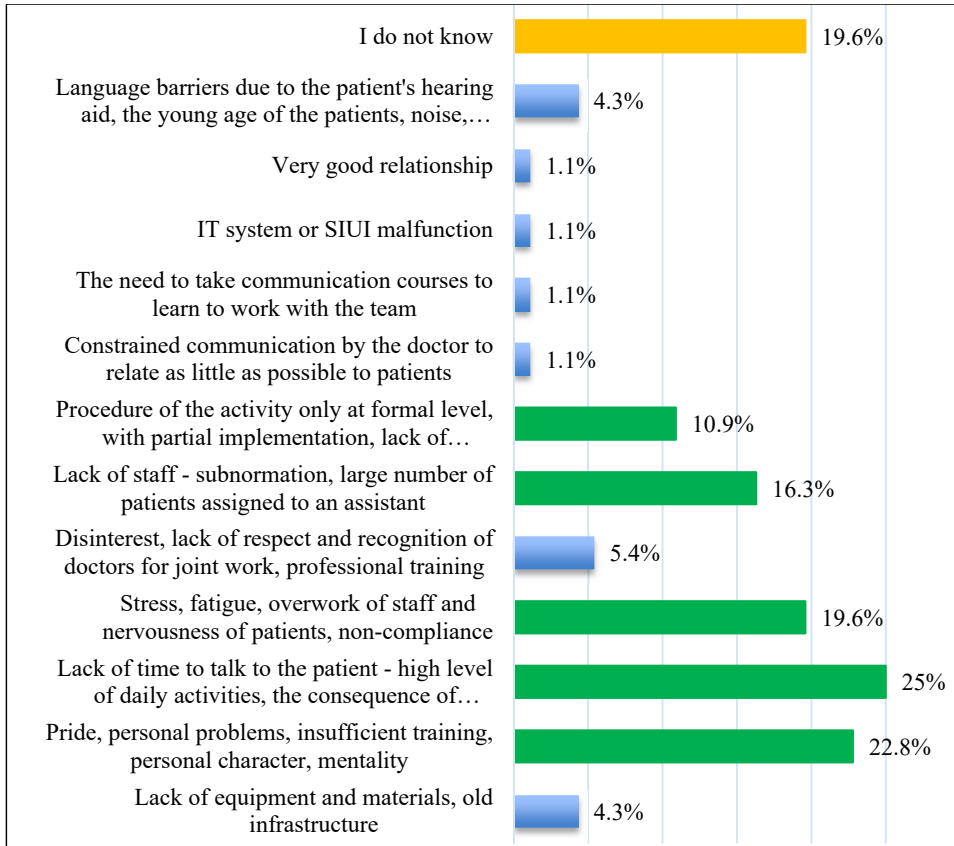
Source: own calculation (N = 90)

Figure 6. How do you appreciate the communication relationship nurse/midwife – nurse/midwife?

Establishing the causes of behavior towards the patient/relative by identifying barriers in communication

Cole and Kelly (2015), present the issue of motivation in close connection with the attitude, which belongs, on the one hand, to the strictly personal characteristics of an employee, such as conscientiousness or the awareness that the employer must give something in exchange for rewards offered to him/her by the organization in which he/she works, but, on the other hand, it belongs to a greater extent, perhaps even more external, to elements outside that employee, but which have a major influence on him/her, such as the leadership style of the direct boss, but also of those at higher levels, the relationship with team colleagues, the availability of resources and authority appropriate to the specifics of his/her work, culture and organizational climate.

We can conclude (Figure 7) that the employee's external elements are those that define the activity in hospitals, due to an organization of formal time activities (10.9%) that leads to reduced time of interviews with patients (25%), to stress, tiredness, staff overload (19.6%), staff shortages (16.3%) also supported by the analysis report (OECD, 2017).



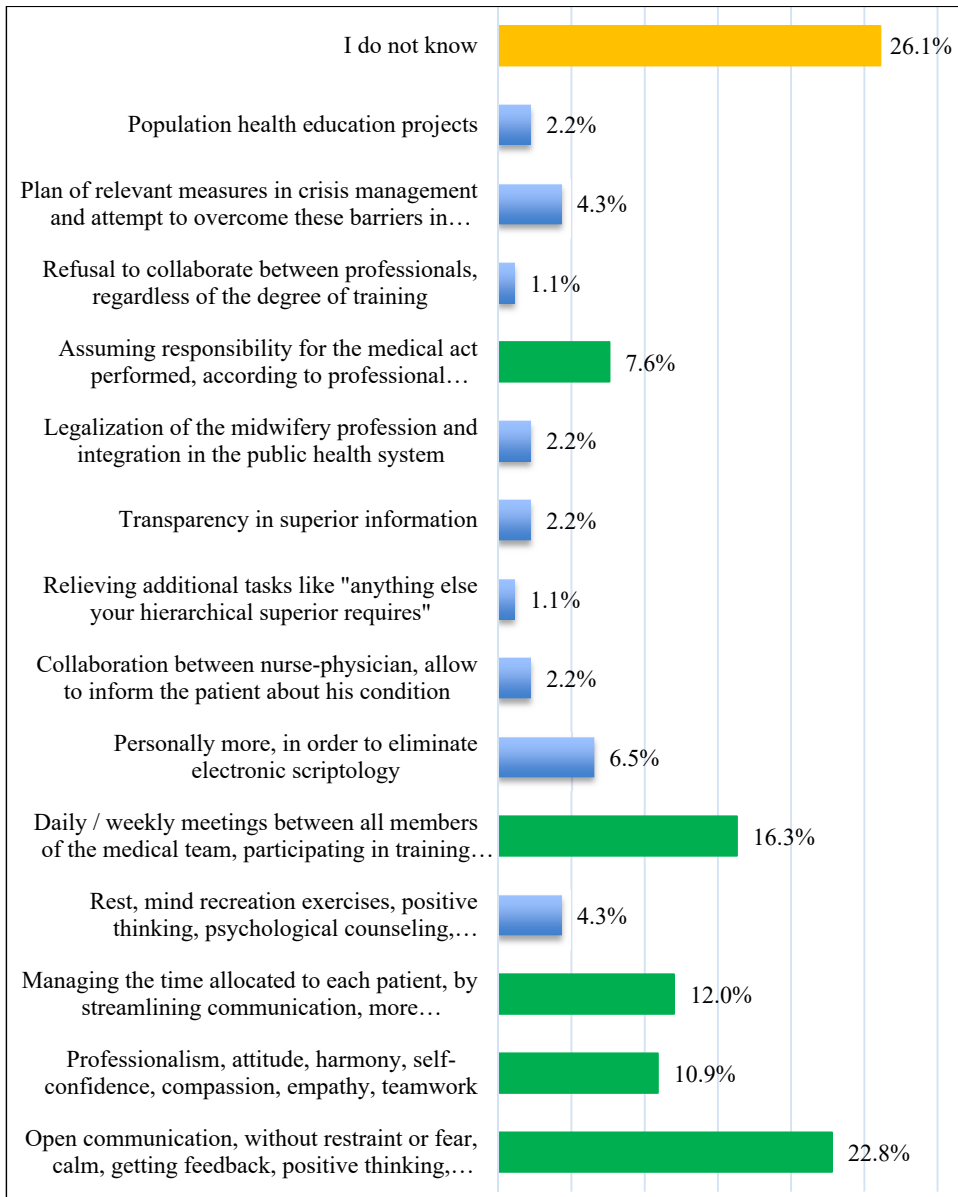
Source: own calculation (N = 90)

Figure 7. Do you perform an analysis of the disruptive factors of the communication process in the nurse/midwife activity?

Mathis *et al.* (1997) argue that performance is a technical process used to monitor the results and to identify employees who, in similar conditions of equipment and medical equipment, give different performance, quantitative and qualitative.

Communication skills are essential for those working in the health field, and interprofessional cooperation and communication is a key means of improving the quality and safety of patient care (Figure 8). Nurses need to train and strengthen their professional communication techniques (22.8%) and apply them constantly to create an optimal health environment (16.3%) through daily/weekly sessions, participation in training courses. They must be able to use communication strategies to respond professionally, with a positive attitude, self-confidence, to know how to work in a team with empathy and compassion (10.9%) to provide

health needs to patients, facilitating a positive work relationship, through a time management allocated to each patient (12%).



Source: own calculation (N = 90)

Figure 8. Expose the solutions to overcome your own communication barriers

If policies and procedures are consistently implemented, they will help in supporting communication, avoiding conflicts and solving issues. Clear policies and procedures for team communication, prompt resolution of complaints, professional development, performance assessment and occupational health and safety can support employees in fulfilling their commitments and tasks. Standardized communication tools are therefore effective in overcoming this difference between communication styles (Hughes, Lloyd and Clark, 2008).

Team performance is determined by a wide range of factors such as: team composition (size, skills, knowledge, diversity), team task, organizational context, team processes, task effort level, adequacy of task implementation strategies and resources available to the team (Hackman, 1987).

The behavior of the team leader has the potential to influence all the factors that contribute to team innovation, but especially the team processes described above (clarification of objectives and encouragement of participation, commitment to quality and support for innovation) (Cannon-Bowers *et al.*, 1995). The leader brings expertise, skills and attitudes within the team that influence group design and norms and, through monitoring, feedback and coaching, develops these processes, allowing the team to achieve tasks (McIntyre and Salas, 1995) and innovate. The leader also helps in defining work structures and assures that there are organisational supports for the team (Mathieu, Heffner and Goodwin, 2000). Zaccaro, Rittman and Marks (2001) proposed that there are three critical factors for the effective performance of the team: first, the ability of team members to successfully integrate their actions, and second, their ability to adaptively operate when coordinating their actions. They argued, however, that the third factor, team leadership, is the most important to success.

The extent to which the leader defines team goals and organizes the team to ensure progress in order to reach those goals substantially contributes to team innovation. A great part of the research on team leadership has focused on the contribution brought by a single leader. However, leadership may also be provided to one or more individuals who are either officially appointed for the role or appear from the team. Leadership is important even in self-managed teams, affecting both organizational factors, such as the acquisition of resources for the team, and the behavior of team members, such as encouraging the team to take control of its activities (Nygren and Levine, 1996). Indeed, research on self-managed cross-functional project teams shows that they are less likely to succeed if they do not have a leader (Cohen and Bailey, 1997). We propose that regardless of the type of team and the task of the team, a factor that is essential for the role of management in promoting team innovation, is that team members have a clear idea of who is in this role (regardless of whether leadership is shared). Unlike classical leadership research (Yukl, 2002), where the attributes of an individual in a leadership position are usually conceptualized as leadership (e.g., leadership style, leadership behavior) the concept used here is at the level of the assessment team. Leadership

clarity refers to the common perceptions of group members about the extent to which leadership roles are clear within the team. We argue that a lack of clarity on leadership will be negatively associated with team innovation.

3. CONCLUSIONS

Effective medical teams have to focus on the human factor, which is characterized by trust, respect and cooperation. Good communication encourages cooperation and helps preventing adverse events, medical errors, compromises in patient safety and patient mortality. Addressing this issue, health care facilities have the opportunity to improve their clinical outcomes through communication and cooperation between professionals and effective teamwork.

ACKNOWLEDGEMENTS

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APPROACHES TO IMPROVE YOUNG PEOPLE'S EXPERIENCES ON THE LABOR MARKET

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Abstract

The purpose of this paper is to highlight the evolution of young people in the labor market, the correlation of the professional training with the demands on the labor market, the importance of coaching and the importance of policies regarding the adaptability of young people in the labour market and underline the socio-economic risks that could affect the integration of young people into the labor market. The access of young people to education and employment is an essential component of their transition to adulthood, and implicitly, of social integration.

The present study wanted to emphasize the socio-economic aspects of disadvantaged young people in terms of access to education, training and employment, but also the main problems encountered by disadvantaged young people in the transition from school to work, at the Romania level. Also, the analysis undertaken indicates the importance of coaching in the development and integration of young people in the labor market, by choosing the jobs they want.

Keywords: *employment; professional orientation; higher-education; unemployed; coaching.*

JEL Classification: E24, J23, L26

1. INTRODUCTION

The future of the labor market is a topic under constant debate, but despite the fact that experts have different opinions on what will be, there is a consensus that education systems must prepare young people for an economic environment in change and characterized by uncertainty.

The demand for certain occupations and the difficulty of finding a job for young people with higher education is influenced by parallel processes, of which the most important are the sectoral changes in the economy, the competition in the commodity markets, the globalization and the technological progress (Lall, 2004; Vivarelli, 2014; Cooper, 2007).

The expected changes in the structure of the labor force demand are important for the education system, whose main task is to provide training for the professions that will register a growth in demand (Borghans and Heijke, 1996; Freeman, 1986). In the context of globalization, knowing the transformations and trends in the economies of other countries, on all markets, including the labor market, helps to understand the steps to be taken in modifying and adapting the occupational structure (Acemoglu, 2002; Lall, 2004).

Romania has recorded, since the beginning of the 2000s, a decrease in the number of employees, a decrease that can be explained in particular by the high rate of inactivity recorded in the working population (15-64 years), by the large number of people working in agriculture of subsistence, as well as labor migration, in other EU countries, which meant significant loss of human capital (Ministry of Labor, 2018).

Also, the early school dropout of the education system has affected the competitiveness of the Romanian labour force (Badea, 2011; Frunză, Maha and Mursa, 2009). At the level of young people, we observe the phenomenon of slight, constant increases in activity rates, from 12.8% to 14.9% for the 15-19 age group. From 49% to 54.9% for the 20-24 age group, from 81.5% to 83.7% for the 25-29 age group and finally from 83.3% to 84.6% for the 30-34 age group in 2018-2030 period, against the background of a slight decrease in the total activity rate from 54.2% to 53.3% at the level of the year 2018 (European Commission, 2018).

This fact reveals a stable, growing attachment of young people, relative to the labor market, with beneficial effects on the national economy. The issue of youth in the context of education and the labor market is very important at the level of any national economy, because the existing problems can affect several sectors of activity and, finally, the whole economic activity both in the short term, as well as in the medium and long term (Allmendinger, 1989; Folger and Nam, 1964).

In Romania's case, the problem is all the more important as there are factors that can reduce the capacity, either of market mechanisms or of economic policies, to remedy these gaps and to mitigate the negative impact on the whole economy. At the youth level, there are special problems generated by the specificity of this age category, affected by high unemployment rates, lack of experience, lack of skills and qualifications necessary to exercise the professions desired and/ or required in the labor market.

2. LITERATURE REVIEW

The global demand for labor represents the demands of the labor market expressed by economic agents within the national economy (Hawthorne, 2008). Labour demand depends on a number of variables: economic growth rate, demand for goods and services, investment rate, technical progress, labor cost, etc. (Pagano, 1993).

Under ideal conditions, having a perfect competitive labor market would be possible only with a very good communications system, characterized by information decentralization, giving the individual the opportunity to choose between different variants, but also taking into account the disadvantages of risking (Lundberg and Startz, 1983; Magnac, 1991).

In general, in Romania, due to a deficient information system on the labor market, it is only possible to estimate the total demand and activities at a certain time, taking into account the working population, the employed population and the active population (Ștefănescu-Mihăilă, 2015).

The indicators used in analyzing the labor supply are:

- The number and structure of the unemployed (by gender, age group and education) (Gastwirth, 1973);
- BIM (International Office of Work) unemployed who worked before by age and age groups (BIM unemployed who worked before refers to persons from the BIM unemployed who have previous work experience (who worked before entering unemployment).

In the basic sense, the labor shortage occurs when the demand of the employees of a specific occupation exceeds the offer of employees who are available, qualified and looking for a job (Visco, 2001). According to this definition, we can distinguish two types of employment deficit (Boswell, Stiller and Straubhaar, 2004). The first one the aggregate employment deficit and the second one the employment deficit due to labour market asymmetry.

The aggregate labour deficit appears where there is full or near full employment and is generally manifested by a difficulty in finding qualified and competent employees to fill the vacancies currently available on the labour market (Hotchkiss, 2009). Regarding the employment deficit due to the asymmetry of the labor market, it is important to note that this deficit due to the inadequacy of the labor market can coexist with significant levels of unemployment.

A detailed analysis of the factors that influence the supply and demand of the labor market is not absolutely necessary to make forecasts of the employment deficit, but it is the crucial point of defining the policies in the field of labor (Wilson, 1994).

3. THE PROBLEM AND THE VARIABLES OF THE RESEARCH

Supporting entrepreneurship has become a priority as a solution to exit the crisis and stop the worrying rate of unemployment. In recent years, governments are constantly allocating resources for the recovery of businesses in different forms of aid: guarantees for loans, tax subsidies, loans for research and development meant to force innovation or to encourage startups.

Young unemployed people should not have as an alternative only the status of employee, even if it is a comfortable option for many of them and they feel protected. However, it is not necessarily a healthy measure. Young unemployed

people should be encouraged to be willing to take it from scratch, to get their knowledge and money and to fight bureaucracy for their business idea to come to life.

Given that the number of entrepreneurs in Romania is low compared to the number of the population, it is even more imperative to encourage young unemployed people into the business field. But here we do not necessarily refer to the number, but rather to their success rate, their survival and growth on the market. According to the statistical data obtained by the National Trade Register Office in 2018, there were 1,359,362 entrepreneurs, of which 851,050 male entrepreneurs and 508,312 female entrepreneurs.

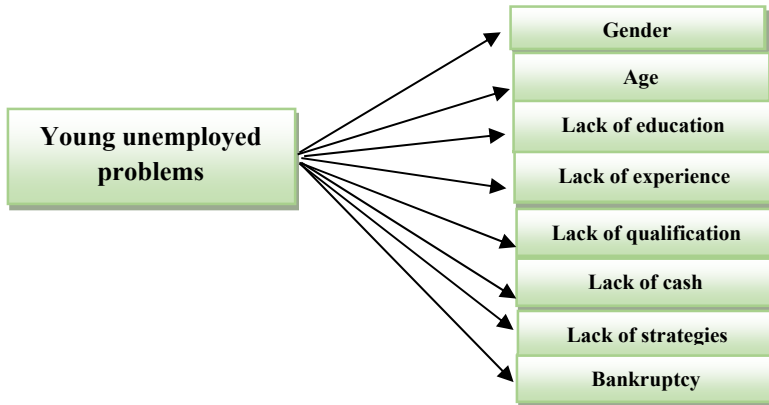
More worrying is that over 50% of businesses go bankrupt within the first 3-5 years of operation (Charitou, Neophytou and Charalambous, 2004; Berryman, 1983). Thus, bankruptcy involves a number of bureaucratic elements and legislative frameworks, which discourage and emotionally affect the entrepreneur, in the future to develop new businesses (Visco, 2001).

The causes of the bankruptcy are due to the lack of essential information, which will help the entrepreneur to make the best decisions: and here we mention the lack of the business plan, the fact that the entrepreneur did not establish and define his strategy correctly, as well as the investment decisions. (Bradley and Cowdery, 2004).

Then, other causes of bankruptcy are that the entrepreneur does not have sufficient liquidity, he faces too high costs, he has unpaid debts and the entrepreneur is not satisfied with the attitude of the shareholders (Bradley and Cowdery, 2004; Bradley, 2000).

And last but not least, the entrepreneur did not do thorough market research, he mistakenly calculated business performance and made incorrect estimates, neglected human capital (by not employing professional people on the principle that they are expensive) (Bradley and Cowdery, 2004).

Based on the analysis of the specialized literature and the studies undertaken so far, we have highlighted the problems faced by the young unemployed (Figure 1).



Source: the authors

Figure 1. The problems of the young unemployed

To achieve the objective of the quantitative study, we established as dependent variable the unemployment duration, and as independent variables: gender, age category and education level.

4. RESEARCH METHODOLOGY

The purpose of this paper is to highlight the profile of the relationship of young people in the labor market, the correlation of the professional training with the demands on the labor market, the importance of coaching and the importance of policies regarding the adaptability of young people in the labor market and highlighting the socio-economic risks that could affect the integration of young people into the labor market.

In this research we will apply triangulation of data. Regarding the qualitative study we aim to make the documentary analysis of the policies, respectively of the measures to support the access of young people to education, training in the labor market, and at the same time to make the documentary analysis of the relevant studies and research reports.

Regarding the quantitative study, we will use the database provided by the INSSE, on registered unemployed, monetary rights beneficiaries, after the duration of unemployment, by age groups and gender, for 2016-2018 years. The target population of the quantitative study is made up of young unemployed people from Romania, with the age group under 25, 25-29 years, respectively 30-39 years. This study represents a cross section of the target audience, for 3 years 2016-2018.

The research objectives include:

01. Documentary analysis of policies/measures to support young people's access to education, training on the labor market.

O2. Documentary analysis of relevant studies and research reports.

O3. Secondary analysis of statistical and research data, coming from official reports on the youth unemployment rate in Romania.

O4. Identify the main problems encountered by the disadvantaged young people in the transition from school to work and the possible solutions to these problems.

O5. Highlighting the current situation of youth unemployment rate, at national level and making recommendations for a better social inclusion of young people.

O6. Creating a model for improving the profile of young unemployed people.

Regarding the secondary analysis of statistical and research data, coming from official reports on the unemployment rate among young people in Romania, the central question used to guide the research is: “How does the unemployment duration influences the age category of the unemployed in Romania?”

Thus, we formulated the following objective and the following hypotheses:

- Hypothesis **H0**: The unemployment duration negatively influences the age group.
- Objective **O1**: Analysis of the influence of demographic criteria on the unemployment duration.
- Hypothesis **H1**: The unemployment duration positively influences the age group.

5. THE MAIN RESULTS OBTAINED

We will analyze the first indicator: the number and structure of the unemployed (by gender, age groups and studies level). For this purpose, we set out to realize the descriptive analysis on frequencies, to apply the principal component analysis (ACP) method and to apply the Student t test, in SPSS version 26. Therefore, in the first phase we want to realize the descriptive analysis on frequencies in order to analyze the distribution of the categories we are interested in.

Table 1. Years of unemployment

Year		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2016	12	21.4	60.0	60.0
	2017	4	7.1	20.0	80.0
	2018	4	7.1	20.0	100.0
	Total	20	35.7	100.0	
Missing	System	36	64.3		
Total		56	100.0		

Source: authors' results from data processing in SPSS

EU ADMINISTRATIVE AREA

2016 is the year in which most unemployed were (60%), followed by 2017 with 20% and 2018 with 20% (Table 1).

Table 2. Unemployed by age group

Age_group		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	under 25 years	10	17.9	40.0	40.0
	25-29 years	8	14.3	32.0	72.0
	30-39 years	7	12.5	28.0	100.0
	Total	25	44.6	100.0	
Missing	System	31	55.4		
Total		56	100.0		

Source: authors' results from data processing in SPSS

40% of the unemployed fall under the age group under 25, 32% of the unemployed have the age group between 25-29 years, while 28% of the unemployed have the age group 30-39 years (Table 2).

Table 3. Unemployment duration

Unemployment duration		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 day-6 months	12	21.4	60.0	60.0
	12 months and over	4	7.1	20.0	80.0
	over 27 months	4	7.1	20.0	100.0
	Total	20	35.7	100.0	
Missing	System	36	64.3		
Total		56	100.0		

Source: authors' results from data processing in SPSS

In 60% of cases, the unemployment duration is between 1 day-6 months, in 20% of cases the duration of unemployment is between 12 months and over, respectively 20% of cases the duration of unemployment is over 27 months (Table 3).

Table 4. Unemployed gender

Gender		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	10	17.9	50.0	50.0
	female	10	17.9	50.0	100.0
	Total	20	35.7	100.0	
Missing	System	36	64.3		
Total		56	100.0		

Source: authors' results from data processing in SPSS

We find that both categories, both men and women are equally affected by unemployment (Table 4).

Table 5. Studies of the unemployed

Studies		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Gymnasium and professional mayor	9	16.1	45.0	45.0
	High school and post high school	6	10.7	30.0	75.0
	Academic studies	5	8.9	25.0	100.0
	Total	20	35.7	100.0	
Missing	System	36	64.3		
Total		56	100.0		

Source: authors' results from data processing in SPSS

45% of the unemployed have primary, secondary and professional education, while 30% of the unemployed have high school and post-secondary education and 25% of the unemployed have university education (Table 5).

In order to be able to analyze the correlations between unemployment duration and age group, we will apply the principal component analysis (ACP) method.

Objective **O1**: Analysis of the influence of demographic criteria on the duration of unemployment.

Hypothesis **H1**: The duration of unemployment positively influences the age group.

Table 6. Descriptive statistics

Descriptive Statistics	Mean	Std. Deviation	Analysis N
Age_group	1.6000	.68056	20
Unemployment_duration	1.6000	.82078	20
Gender	1.5000	.51299	20
Year	1.6000	.82078	20
Number_unemployment	3.5000	1.79179	20
Studies	1.8000	.83351	20

Source: authors' results from data processing in SPSS

The age group under 25 is unemployed between 1 day and 6 months (Table 6).

Table 7. Matrix of correlations between variables

Correlation Matrix ^a							
	Age_group	Unemployment_ duration	Gender	Year	Number_ unemployment	Studies	
Correlation	Age_group	1.000	.264	.000	-.113	.345	-.056
	Unemployment_ duration	.264	1.000	.000	-.563	-.358	-.200
	Gender	.000	.000	1.000	.000	.000	-.123
	Year	-.113	-.563	.000	1.000	.859	-.046
	Number_ unemployment	.345	-.358	.000	.859	1.000	.070
	Studies	-.056	-.200	-.123	-.046	.070	1.000
Sig. (1- tailed)	Age_group		.131	.500	.318	.068	.408
	Unemployment_ duration	.131		.500	.005	.061	.199
	Gender	.500	.500		.500	.500	.303
	Year	.318	.005	.500		.000	.423
	Number_ unemployment	.068	.061	.500	.000		.384
	Studies	.408	.199	.303	.423	.384	

a. Determinant = .022

Source: authors' results from data processing in SPSS

The unemployment duration positively influences the age group, with a score of 0.264 (Table 7).

Table 8. KMO test statistic values and Bartlett test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.246
Bartlett's Test of Sphericity	Approx. Chi-Square	61.967
	df	15
	Sig.	.000

Source: authors' results from data processing in SPSS

We note that $\text{sig} = 0 < 0.05$, which means that the hypothesis H_0 is rejected (Table 8). One can guarantee with a 95% probability that there are significant statistical links between the statistical variables. We note that KMO is 0.246, so it is a good solution after applying the principal components analysis method. By applying the student t test, we want to analyze if there are differences between unemployed age group, regarding the unemployment duration. Therefore, we have:

Table 9. Output from Independent-Samples T Test

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Age_group	25	1.8800	.83267	.16653
Unemployment duration	20	1.6000	.82078	.18353

Source: authors' results from data processing in SPSS

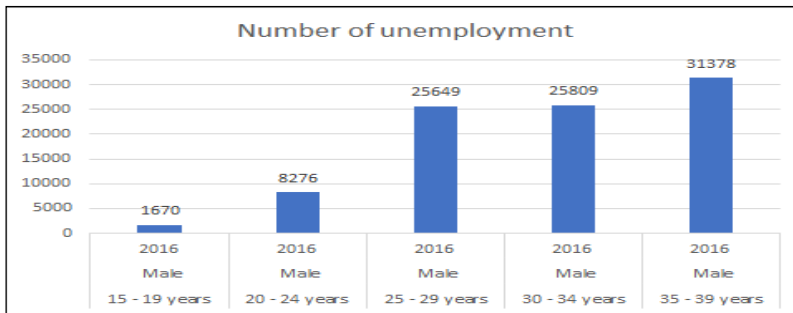
We observe that the duration of unemployment is influenced by the age category (Tables 9 and 10).

Table 10. One-Sample Test

	Test Value = 0					
					95% Confidence Interval of the Difference	
	T	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Age group	11.289	24	.000	1.88000	1.5363	2.2237
Unemployment duration	8.718	19	.000	1.60000	1.2159	1.9841

Source: authors' results

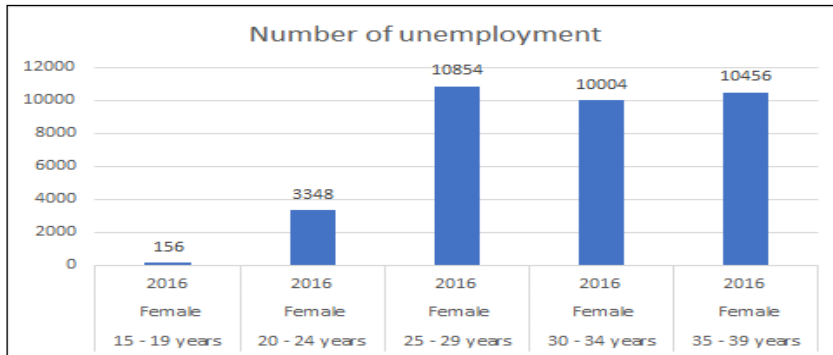
Regarding the student t test, we find that there are differences between the age group and unemployment duration. We will also analyze the second indicator: BIM unemployed who have worked previously by age and gender groups. For this, we used frequency analysis in the Excel program. BIM unemployed who have worked before refers to persons from the BIM unemployed who have previous work experience (who worked before entering unemployment).



Source: authors' results

Figure 2. The number of people who have worked before, by age group and of male gender for 2016

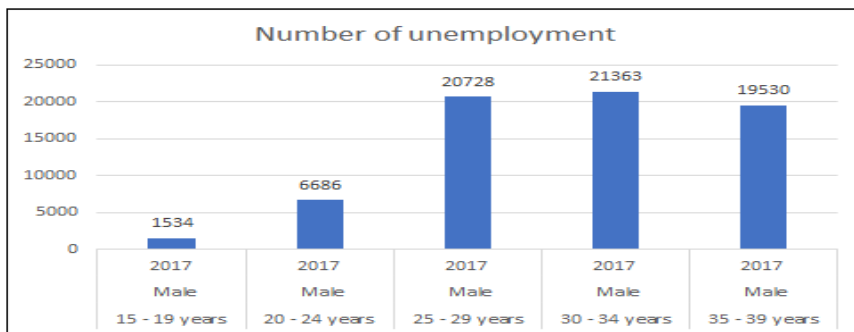
Most unemployed persons of the male gender for the year 2016 are found for the age group between 35-39 years with 31,378 unemployed persons, followed by the age group 30-34 years with 25,809 unemployed persons, and immediately followed by the age group 25-29 years with 25,649 male unemployed persons (Figure 2).



Source: authors' results

Figure 3. Number of people who worked before by age group and female gender for 2016

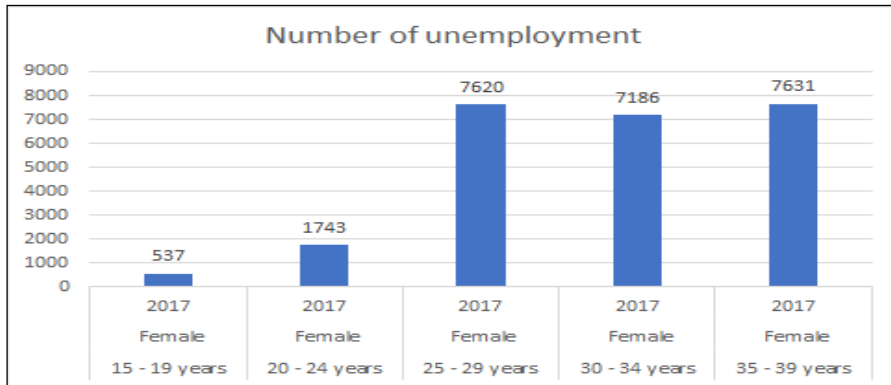
Most of the unemployed persons of the female gender for 2016 we find for the age category between 25-29 years with 10.854 unemployed persons, followed by the age category 35-39 years with 10.456 unemployed persons. In the third place is the age group 30-34 years with 10,004 female unemployed persons (Figure 3).



Source: authors' results

Figure 4. Number of people who have worked before by age group and male gender for 2017

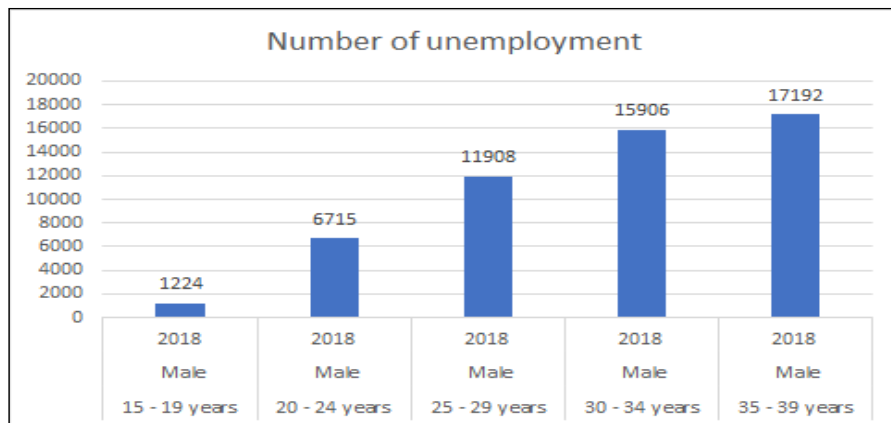
Most unemployed persons of the male gender for the year 2017 are found for the age category between 30-34 years with 21.363 unemployed persons, followed by the age group 25-29 years with 20.728 unemployed persons (Figure 4).



Source: authors' results

Figure 5. Number of people who have worked before by age group and female gender for 2017

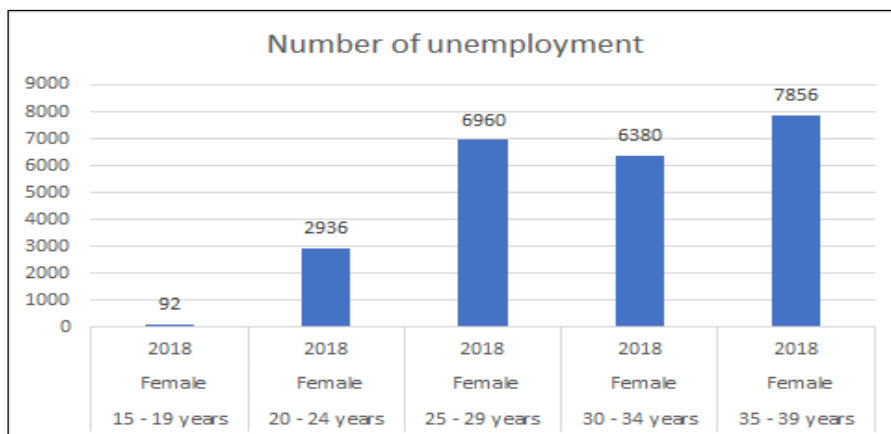
Most unemployed persons of the female gender for the year 2017 we find for the age category between 35-39 years with 7631 unemployed persons, followed by the age group 25-29 years with 7.620 female unemployed persons (Figure 5).



Source: authors' results

Figure 6. Number of people who have worked before by age group and male gender for 2018

Most unemployed persons of the male gender for the year 2018 are found for the age category between 35-39 years old with 17,192 unemployed persons, followed by the age group 30-34 years with 15,906 unemployed persons and immediately followed by the age group 25-29 years with 11,908 male unemployed persons (Figure 6).



Source: authors' results

Figure 7. Number of people who have worked before by age group and female gender for 2018

Most unemployed persons of the female gender for the year 2018 can be found for the age category between 35-39 years with 7,856 unemployed persons, followed by the age group 25-29 years with 6,960 female unemployed persons and 6,380 unemployed persons for the age group 30-34 years (Figure 7).

6. PROPOSED DISCUSSIONS AND SOLUTIONS

Following the quantitative study, for the first indicator: The number and structure of the unemployed (by gender, age groups and studies), we obtained the following: 2016 is the year in which most young people were unemployed (60%), followed by 2017 with 20% and 2018 with 20%. In Romania, at the level of 2016, employment services didn't play an important role in integrating young people into the labor market. Regarding the age group, 40% of the unemployed have the age group under 25, 32% of the unemployed have the age group between 25-29 years, while 28% of the unemployed have the age group 30-39 years.

Young people under 25 are more affected by unemployment, because they are not qualified, they do not yet have experience in the field of work and do not have the necessary expertise to think mature about the business side. In 60% of cases, the unemployment duration is between 1 day-6 months, in 20% of cases the unemployment duration is between 12 months and over, respectively 20% of cases the unemployment duration is over 27 months.

The analysis, indicate that both categories, both men and women are affected by unemployment. Contrary to expectations, we were surprised by this result because we could think that women find their jobs easier, as opposed to men. This is partly due to the fact that women have taken over positions that were largely run by men, including in the fields of IT, production, etc.

At the same time, we have shown that the duration of unemployment is influenced by the age category. We still remain in the quantitative study, for the second indicator, BIM unemployed who have worked previously by age and gender groups, we obtained the following:

- Most unemployed persons of the male gender, for 2016 we find for the age category between 35-39 years with 31,378 unemployed persons; most unemployed persons of the male gender, for the year 2017 we find for the age category between 30-34 years with 21,363 unemployed persons;
- Most unemployed persons of the male gender, for the year 2018 we find for the age category between 35-39 years with 17,192 unemployed persons.

We observe for the years 2016-2018 the age category most affected by unemployment, in the case of men it is the one between 30-39 years. In 2016, the highest number of unemployed men was 31,378 unemployed persons. The years 2017 and 2018 had a downward slope, 21,363 unemployed persons, respectively 17,192 unemployed persons.

Regarding the female gender, we obtained the following:

- Most unemployed persons of the female gender, for 2016 we find for the age category between 25-29 years with 10,854 unemployed persons;
- Most unemployed persons of the female gender, for 2017 we find for the age category between 35-39 years with 7631 unemployed persons.

Most unemployed persons of the female gender, for the year 2018 we find for the age category between 35-39 years with 7,856 unemployed persons.

We observe for the years 2017, respectively 2018 the age category most affected by unemployment, in the case of women it is the one between 35-39 years.

In the case of 2016, the age category most affected by unemployment, in the case of women is the one between 25-29 years.

In 2016, the highest number of unemployed women was 10,854 unemployed persons. The years 2017 and 2018 had a downward slope, 7,856 unemployed persons, respectively 7631 unemployed persons.

Following the study, we find that there are fewer unemployed people with university studies (25%), unlike those with secondary education (45%), respectively 30% unemployed people with primary, secondary and professional studies.

Also, in the case of unemployed young people with higher education, we recommend them to become entrepreneurs, since the entrepreneurs with higher education have the necessary skills, discipline, motivation, information and self-confidence, necessary to achieve higher growth rates in their business, such as and to perceive and exploit business opportunities (Cooper, 2007; Ucbasaran, Westhead and Wright, 2008).

On the other hand, we note that in the case of those with high education they lack the strategic vision, they did not learn how to delegate tasks, they do not have

well-developed knowledge regarding the management of human, financial-accounting and legal resources.

Apart from the traditional education, young unemployed people need a financial education, in order to become entrepreneurs, because it is not enough to have the business idea. They need to be passionate about a particular field in order to be successful in business. Another reason why financial education is needed is that it can give young unemployed people the opportunity to become entrepreneurs and multiply their businesses, which would increase the financial well-being of the community they belong to.

Thus, we find that it is education that promotes intellectual openness and flexibility. Which means that education increases openness to activities and ideas that are not routine but central to the value orientation of stimulation. Instead, education undermines the values of conformity and tradition (Schwartz, 2007).

Also, education contributes to national production and, in the context of economic growth, the extent to which increased educational attainment contributes to long-term productivity growth (Freeman, 1986).

We conclude by saying that entrepreneurship and innovation are at the heart of the creative process in the economy and in promoting productivity growth and job creation (Reynolds, Hay and Camp, 1999), in the North-East region of Romania.

Other solutions we propose for the young unemployed to become entrepreneurs, refer to the provision of incentives from the EU regarding: personalized professional counselling offered to young unemployed people, consulting services in entrepreneurship (proposing simple business ideas based on their talents, support in the realization of the business plan step by step), business initiation courses, mentoring and coaching activities, online training programs for young unemployed people.

Although the government allocates money for start-ups through the Start-up Nation program, it is not enough, because it is necessary to simplify the legislation for small and medium-sized enterprises. In order to prevent youth unemployment, it is recommended to introduce into the school program of entrepreneurship courses, starting from the primary cycle, to the high school cycle.

Another solution could be for young people to have much easier access to franchise businesses, because they have the whole business concept and plan, only the capital is missing. In order to support the franchise idea, the state could help young people by borrowing for a period of 2-3 years, when they will be able to make a profit. It is also necessary to promote the Romania brand abroad, in order to attract investors, as is the case in Israel for example. It is imperative to conduct market research by young people before launching into the market, very well documented and thorough, in which to discuss with businessmen working in the field, to conduct opinion polls among the population to find out the needs of the market and to test products and services before starting the business.

Therefore, we find in the case of the quantitative study that the H0 hypothesis: The duration of unemployment negatively influences the age group – it is rejected.

Regarding the objective **O1**: Analysis of the influence of the demographic criteria on the duration of unemployment – it is achieved.

And hypothesis **H1**: The duration of unemployment positively influences the age group – it is accepted.

And hypothesis **H0**: The unemployment duration negatively influences the age group – it is rejected.

Regarding the qualitative study, the research objectives are achieved:

O1. Documentary analysis of policies/ measures to support young people's access to education, vocational training and the labor market – is achieved.

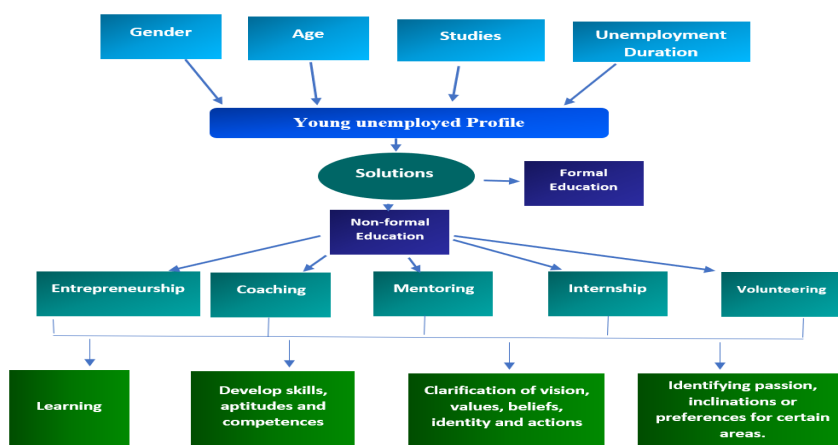
O2. Documentary analysis of relevant studies and research reports – is achieved.

O3. Secondary analysis of statistical and research data, coming from official reports on the unemployment rate among young people in Romania – is reached.

O4. Identifying the main problems encountered by disadvantaged young people in the transition from school to work and possible solutions to these problems – is achieved.

O5. Highlighting the current situation of youth unemployment rate, at national level and making recommendations for a better social inclusion of young people – is achieved.

O6. Creating a model for improving the profile of young unemployed – it is achieved.



Source: the authors

Figure 8. Model for improving the profile of young unemployed

Finally, we created a model for improving the profile of young unemployed (Figure 8).

7. CONCLUSIONS, RECOMMENDATIONS AND FUTURE DIRECTIONS OF RESEARCH

The purpose of this paper was to highlight the profile of the relationship of young people in the labor market, the correlation of the professional training with the demands on the labor market, the importance of coaching and the importance of policies regarding the adaptability of young people in the labor market and highlighting the socio-economic risks that could affect the integration. to the demands of the labor market.

The present study wanted to highlight the socio-economic aspects of disadvantaged young people in terms of access to education, training and employment, but also the main problems encountered by disadvantaged young people in the transition from school to work, at the level Romania.

Following the analysis, we have highlighted the importance of coaching in the development and integration of young people in the labor market, by choosing the job they want and want.

This paper presented the ways to improve the chances of young people in the Romanian labor market, using the following indicators, which were subsequently subjected to analysis:

- The number and structure of the unemployed (by gender, age group and education) (Gastwirth, 1973);
- BIM unemployed who worked before by age group and gender (BIM unemployed who worked before refers to persons from the BIM unemployed who have previous work experience (who worked before entering unemployment).

Then, in this study, we showed that young people's access to education and the workplace is an essential component of their transition to adulthood, and implicitly their social integration.

We also find that young people's access to education and employment is an essential component of their transition to adulthood, and implicitly, to social integration.

Our recommendation for young unemployed people is to identify their passion, inclinations or preferences for certain areas.

Also, they need to clarify their vision of their own life, and here we refer to the share of values, beliefs, identity and actions that need to be correlated with the vision of the organization they will develop.

At the same time, we recommend young people to participate in various internships, volunteering, where they learn about others' money and are self-taught. In this way, most of them develop many skills, skills and competencies and start their business from time to time or after finishing college.

In the case of jobs for people without university education, they exist, although they are in a continuous decline, because computers and the related technology take over the routine functions historically managed by low-skilled employees (Connelly, 1986).

The projected employment by education levels indicates an increase of the share of the personnel with professional education level accompanied by a proportional decrease of the personnel with average level of training.

We find that educational opportunities and the specific structures of educational systems are very important for labor market mobility (Allmendinger, 1989).

For future studies, we propose to produce statistics on the number of young people who have reoriented themselves professionally, given that the market requirements are constantly changing.

An example in this regard is the online domain which has seen a great deal of progress lately with us in the country, on the part of specialized courses in marketing and online commerce or public speaking and many more.

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THE EQUIPMENT OF ROMANIAN PRE-UNIVERSITY EDUCATION UNITS, SUPPORT OF TEACHING ACTIVITIES IN THE CONTEXT OF THE COVID-19 PANDEMIC

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Abstract

The educational sector is a special one which, like many others, has its particularities, needs and challenges. Among them there are poorly qualified teachers, the decline of school population, students' safety issues, corruption or underfunding, and the list does not end, unfortunately, here. All of these weaken social trust and erodes development. The computerization of the educational field is a problem that affects both the administrative activity and the personal development of students and teachers. The COVID-19 pandemic challenged us to find out what level of computer equipment Romanian schools have, referring only to pre-university education units (it was obvious to us that higher education have a completely different "story"). This research study has only dealt with computers because performing a more complex analysis, including other types of smart educational equipment such as tablets, smart blackboards, interactive projectors, printers, laptops, would have required a larger data volume and more generous working time. The paper empirically analyses the relationship between the number of computers and the number of school units, on each level of study and by counties. The aim of this study was to verify both public and private systems from both environments: urban and rural. We used public data offered by the National Institute of Statistics from Romania and by the Romanian Ministry of Education and Research, reported for the 2018-2019 school year. All Romanian counties were analysed using SPSS application, excluding the city of Bucharest, due to the fact that it reflected an extreme (aberrant) value which would have distorted the "behaviour of the series".

Keywords: *challenges; education; technologies; equipment; pandemic.*

JEL Classification: I21, I25, I28

1. INTRODUCTION

What would life be like if we would not have such clear borders between our personal activities, school and work? What if technology gave us more freedom than anything we have experienced so far? Technological change certainly had a fantastic growth rate over the last 20 years, but perhaps in the context of the Covid-19 pandemic, we have really had the opportunity to understand whether or not we are ready to face it. Does school become, in this version as we know it until today, irrelevant? In order for the schools to keep up with these revolutions, does the

education reform provide the necessary material basis to move this type of learning into the virtual environment, even if it were only partially or temporarily? Underfunding is a real problem for a lot of educational systems, even for a strong one like the Norwegian system (Kirya, 2019). The pre-university education institutions wish to participate and align themselves with the European context through the support provided by European funding programs. Having this goal, they are forced to constantly improve their resource management system (Bush, 2015). This is a research theme for a lot of educational systems, especially the education resources control (Al-Kake, 2019).

Having the “suspicion” that the “student-technology” team is not yet fully operational in Romanian schools, we tried to make an analysis of the equipment degree with desktop computers in pre-university education units. We only stopped at computers because performing a more complex analysis, including other types of smart educational equipment such as tablets, smart blackboards, interactive projectors, printers, laptops, would have required a larger data volume and more generous working time. However, we consider it a starting point for a future study, larger and more complex.

The idea which determined this article started from consulting the results of a study, performed online between the 3rd and the 8th of June 2015 by the Epson Company, entitled “The role of electronic equipment in the educational process” (EPSON, 2020). The above study compiled the answers of 2.469 major respondents who have at least one student in the household, answers were provided by using a single public opinion polling platform.

60% of the respondents suggested that the use of electronic equipment in the educational process brings as advantages:

- ✓ a better students’ participation in lessons (66.71%);
- ✓ a faster accumulation of information (64.57%);
- ✓ improving technical skills (61.73%);
- ✓ shortening the time allocated to learning (37.2%);
- ✓ obtaining superior results by children in the educational process (31.52%).

It is easy to understand that the use of such technologies in school is, for most of the students from the urban areas (in fact, more than 90%, as the same study reveals), a natural continuity of how these technologies become part of their current family life. Users of at least one electronic device, in July 2015, registered for different equipment as: TV – 87.19%; tablet – 71.53%; desktop computer – 70.94%; laptop – 69.75%; printer – 52.19%; different audio systems – 46.26%; DVD player – 38.55%; video projector – 5.46%. In the urban educational environment, such equipment was registred: 72.59% – desktop computers; 69.38% – video projectors; 51.98% – printers; 39.13% – audio systems; 37.62% – laptops.

If the percentage shown above was at this level 5 years ago then we naturally wonder how well prepared the pre-university education system is today, facing

the Covid-19 pandemic, analysing both educational environments: rural and urban. On what foundations does this level of education rely on when it hopes to develop pupil's technological skills and when it is required, suddenly, that they need to settle comfortably in the virtual classroom? It is very true that the current circumstances did not require students to use the computers from their classroom, inside the school, but we considered the level of equipment as an indicator of the attention that the education system needs to pay into attaching students to technological reality. If each student should rely exclusively or for the most part, as it happened in this pandemic context, on the technological support provided by his family, then many children have started “with no chance”!

2. EMPIRICAL STUDY

2.1. Presentation of empirical data

As we previously pointed out, the researched problem has a strong practical character. It aims to emphasize the equipment of pre-university education units in Romania, for the entire pre-university education system, including both public and private systems from both environments: urban and rural. The research methodology chosen was an empirical study developed on quantitative information, following the existing correlation between the number of computers and the number of school units, on each level of study and by counties. The aim was, first of all, to identify the factors influencing the studied phenomenon, especially the way in which it is determined by the changes on the number of school units, on each level of study. The data that we used were taken from the websites of the National Institute of Statistics (Nis, 2020) and that of the Ministry of Education and Research (Ministry of Education, 2020), reported for the 2018-2019 school year. All Romanian counties were analysed, excluding the city of Bucharest, determined by the fact that it reflected an extreme (aberrant) value that would have distorted the “behaviour of the series”. The data source was represented by the statistical researches reflected by the education units on each level of study and structured in valid reports of the 2018-2019 school year: pre-primary education, primary and secondary in regular education, primary and lower secondary in special education, upper secondary education and post-secondary non-tertiary education.

In the 2018-2019 school year, the school population in the pre-university education system was about 3 million students, distributed according to the environment of residence and the level of education attended (Table 1).

Table 1. School population by educational levels in 2018-2019 school year

-people-

Educational levels	ISCED levels of education	Total	Urban¹⁾	Rural¹⁾
TOTAL		3.013.552	2.019.550	994.002
Pre-primary education	ISCED 0	547.283	325.995	221.288
Primary and secondary in regular education	ISCED 1 and 2	1.653.688	938.024	715.664
Upper secondary education	ISCED 3	720.206	665.373	54.833
Post-secondary non-tertiary education	ISCED 4	92.375	90.158	2.217

¹⁾ According to Nomenclature of Statistical Territorial Units (NUTS).

Source: The National Institute of Statistics (NIS) from Romania, *Exhaustive statistical research on education statistics in 2018-2019 school year* (NIS, 2020)

For these students, the national education system has created over time a material base from which we have chosen as relevant to highlight the existing classrooms, school laboratories, swimming pools, gyms, school workshops and sports fields (Table 2).

Table 2. The material base in 2018-2019 school year

Educational levels	ISCED educational levels	Classrooms	School laboratories	Swimming pools	Gyms	School workshops	Sports fields
TOTAL		138.401	16.617	37	4.632	4.292	5.280
Pre-primary education	ISCED 0	28.504	-	-	-	-	-
Primary and secondary in regular education	ISCED 1 and 2	70.493	8.146	27	3.175	485	3.691
Upper secondary education	ISCED 3	38.270	8.080	10	1.446	3.770	1.575
Post-secondary non-tertiary education	ISCED 4	1.134	391	-	11	37	14

Source: NIS, *Exhaustive statistical research on education statistics in 2018-2019 school year* (NIS, 2020)

The categories of units that we have chosen to analyse are educational institutions that offer educational services for the next levels (this numbering

system with roman numeral will be used in all tables and figures to highlight each educational level):

- I. first level of pre-primary education** – this includes, in particular, nurseries, kindergartens with normal or extended programs dedicated to preschool children (up to the age of 3);
- II. the second level of pre-primary education** – the second level of early education (age between 0 and 6 years) is the preschool level that includes both units and schools that have organized in their structure classes or kindergartens that function as structures subordinated to school units;
- III. primary and lower secondary in regular education** – this group includes the units destined for primary education (preparatory grades up to the 4th grade), as well as those from lower secondary education (5th up to the 8th grades);
- IV. primary and lower secondary in special education** – includes as beneficiaries the same categories of students mentioned above; students benefit services in schools for children with special educational needs;
- V. upper secondary education** – includes upper secondary education units that offer only high school studies (theoretical, vocational, technological);
- VI. first level of post-secondary non-tertiary education** – only units that offer so called “professional studies”;
- VII. second level of post-secondary non-tertiary education.**

Table 3. Number of education units in 2018-2019 school year

County/ Educational level	I	II	III	IV	V	VI	VII	PC
Alba	1	17	79	1	36	2	5	6.684
Arad	0	19	87	2	41	0	3	7.899
Argeş	0	35	125	2	44	0	6	10.290
Bacău	0	12	129	2	36	0	5	9.940
Bihor	0	35	107	4	51	0	2	11.346
Bistriţa-Năsăud	0	14	67	4	27	1	4	4.574
Botoşani	0	10	86	0	30	5	2	5.464
Braşov	0	57	82	2	41	2	3	12.926
Brăila	0	16	64	1	22	1	2	4.241
Buzău	0	16	95	0	31	2	5	6.779
Caraş-Severin	0	16	73	4	29	0		3.994
Călăraşi	1	10	66	1	17	0	1	3.736
Cluj	4	64	106	5	68	3	12	39.061
Constanţa	0	51	98	2	64	0	6	12.813
Covasna	1	7	52	2	18	0	1	3.272
Dâmboviţa	0	18	101	1	30	0	3	8.295
Dolj	0	28	124	2	46	2	10	11.638

County/ Educational level	I	II	III	IV	V	VI	VII	PC
Galați	1	30	109	3	34	1	7	9.929
Giurgiu	0	8	64	1	12	0	2	2.189
Gorj	0	12	67	1	33	0	3	6.123
Harghita	1	15	72	2	38	0		6.080
Hunedoara	1	10	63	2	33	0	1	6.787
Ialomița	0	7	59	1	18	5	1	3.492
Iași	1	40	135	2	48	22	6	19.928
Ilfov	2	51	59	1	18	0		3.976
Maramureș	1	30	99	4	42	7	4	8.135
Mehedinți	0	9	75	1	20	0	2	3.411
Mureș	0	17	123	3	34	0	6	10.880
Neamț	0	5	90	3	35	1	3	7.536
Olt	0	12	116	1	30	1	2	5.106
Prahova	0	38	135	5	44	4	7	11.147
Satu Mare	1	22	76	1	30	1	2	5.178
Sălaj	1	16	66		20	5	3	4.001
Sibiu	0	47	85	2	33	2	7	11.075
Suceava	0	24	141	2	43	3	11	13.857
Teleorman	0	9	106	2	20	0	3	4.108
Timiș	4	50	114	6	57	2	2	19.881
Tulcea	0	5	54	1	18	2	1	3.468
Vaslui	1	17	100	3	24	1	4	5.777
Vâlcea	0	13	88	1	25	0	3	4.809
Vrancea	0	14	80	0	22	0	4	4.739
Bucharest	8	245	189	14	120	2	11	52.050
TOTAL	29	1.171	3.906	97	1.482	77	165	396.614

Source: NIS, *Exhaustive statistical research on education statistics in 2018-2019 school year* (NIS, 2020)

Following the descriptive indicators (Table 3), a natural conclusion was that the best equipment in schools are owned by the cities where the school population is the largest, and these are the largest counties of the country: Cluj, Iași, Timiș, Suceava, Brașov, Constanța. The dependent variable that we have chosen is the number of PC's found in each county. These are defined as computers with a hard disk, monitor and keyboard, that we found in the administration of pre-university education units in the 2018-2019 school year which was chosen as a reference moment for performing the analysis. The independent variable is represented by the number of public entities (education units) existing on each level of study. The "number of computers" was chosen as a dependent variable determined by the fact that it is directly influenced by the existence of education units and,

equally, by the number of users (for each county, the better developed and wider the school network is, the greater the number of computers will be).

2.2. Cross-sectional data analysis. Quantitative exploratory analysis

We found necessary to perform such an analysis due to the fact that the data we have offers the possibility to make an observation regarding a certain characteristic, obtained at a given moment, by reporting to a large number of entities.

2.2.1. Quantitative exploratory analysis

It has been used to achieve several objectives in data analysis: to achieve a deeper knowledge of the data, to reveal their structure, to detect extreme values and anomalies, and, finally, to identify a series of hypotheses regarding the origin of the observed phenomena.

Table 4. Indicators of descriptive statistics – quantitative variables

		Statistics							
		I	II	III	IV	V	VI	VII	PC
N	Valid	41	41	41	41	41	41	41	41
	Missing	0	0	0	0	0	0	0	0
Mean		.51	22.59	90.66	2.02	33.22	1.83	3.76	8404
Median		.00	16.00	87.00	2.00	33.00	1.00	3.00	6684
Mode		0	16	59 ^a	1 ^a	18 ^a	0	2 ^a	2189 ^a
Std. Deviation		.952	15.770	24.877	1.440	12.904	3.674	2.853	6469.76
Skewness		2.614	1.113	.360	.905	.751	4.418	1.162	2.986
Std. Error of Skewness		.369	.369	.369	.369	.369	.369	.369	.369
Kurtosis		7.494	.209	-.930	.492	.458	23.365	1.277	12.14
Std. Error of Kurtosis		.724	.724	.724	.724	.724	.724	.724	.724
Minimum		0	5	52	0	12	0	0	2189
Maximum		4	64	141	6	68	22	12	39061

a. Multiple modes exist. The smallest value is shown

Source: table made using the SPSS application

Above (Table 4) are illustrated the typical values corresponding to a data analysis: the measure of the central tendency, of the deviation and of the form of distribution. Thus, the average of the data series was illustrated, determined by summing all the values and dividing by the number of records. The median illustrates the value found in the middle of the data series. This will show in a more accurate way the central tendency, not being as sensitive to extreme values as the average reacts.

2.2.2. Multivariate statistical analysis

Using the principal components analysis we will highlight the correlations between the number of computers reported by the education units and the types of units on each level of education analysed, the similarities and differences between counties, and the explanation of these similarities and differences between statistical units and the variables we used in the analysis (Table 5).

Table 5. The output of factor analysis variables Correlation Matrix^a

		I	II	III	IV	V	VI	VII	PC
Correlation	(I)	1.000	.496	.012	.447	.363	.147	.102	.596
	(II)	.496	1.000	.371	.474	.710	.230	.462	.736
	(III)	.012	.371	1.000	.405	.620	.298	.686	.547
	(IV)	.447	.474	.405	1.000	.593	.048	.281	.562
	(V)	.363	.710	.620	.593	1.000	.229	.590	.828
	(VI)	.147	.230	.298	.048	.229	1.000	.227	.337
	(VII)	.102	.462	.686	.281	.590	.227	1.000	.682
	PC	.596	.736	.547	.562	.828	.337	.682	1.000

a. Determinant = .006

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.751
Bartlett's Test of Sphericity	Approx. Chi-Square	189.689
	df	28
	Sig.	.000

Source: table made using the SPSS application

Testing hypothesis of independence between variables:

- Hypothesis: H_0 : Independence hypothesis

H_1 : Dependency hypothesis

Sig = 0,00 , $\alpha = 0,05 \Rightarrow \text{sig} < \alpha \Rightarrow$ the null hypothesis is rejected.

The data summarized above reveal that, with a probability of 95%, it can be guaranteed that the variables are correlated, and the description of the correlations between the variables can be made using principal component analysis method.

Table 6. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.227	52.841	52.841	4.227	52.841	52.841	2.835	35.439	35.439
2	1.280	16.001	68.842	1.280	16.001	68.842	2.672	33.403	68.842
3	.934	11.680	80.522						
4	.583	7.283	87.805						
5	.417	5.208	93.013						
6	.250	3.123	96.135						
7	.231	2.888	99.024						
8	.078	.976	100.000						

Extraction Method: Principal Component Analysis.

Source: table made using the SPSS application

The highest eigenvalue (4,227) (Table 6) corresponds to the first factorial axis and explains 52.841% of the pointcloud variance. The second value is 1,280 and explains 16.001% of the total variance. The first two factorial axis, together, explain 68.842% of the total variance; this percentage justifies the interpretation of the first two factorial axis.

Table 7. Component Matrix^a

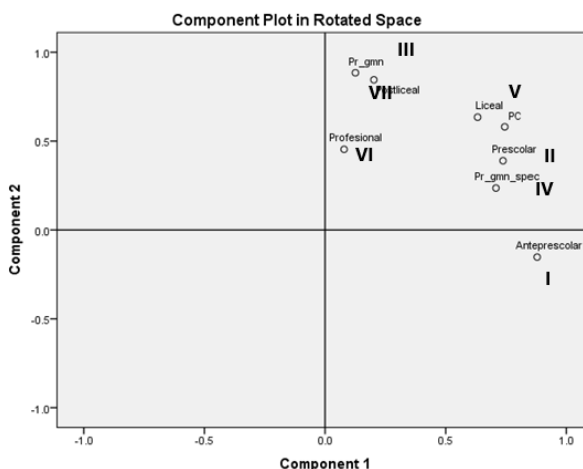
	Component	
	1	2
I	.534	.715
II	.803	.224
III	.699	-.556
IV	.676	.315
V	.895	-.026
VI	.369	-.275
VII	.728	-.475
PC	.940	.090

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Source: table made using the SPSS application

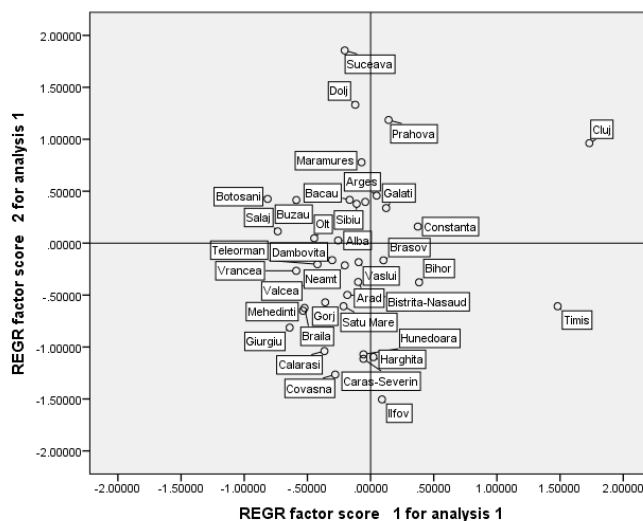
The components in space rotated figure (Figure 1) illustrates a relevant presentation of each level of study and number of PCs. The first factorial axis highlights a positive correlation between the first and the second levels of pre-primary education, primary and lower secondary in special education, upper secondary education and the number of PCs.



Source: figure made using the SPSS application

Figure 1. Component Plot in Rotated Space

The second factorial axis explains the number of PCs, primary and lower secondary in regular education, first level of post-secondary non-tertiary education and the second level of post-secondary non-tertiary education.



Source: table made using the SPSS application

Figure 2. Regression factor scores

Observing Figure 2, the first factorial axis highlights two groups of counties: the first group consists of Cluj and Timiș, which reported high values of upper secondary education units, second level of pre-primary education units, primary and lower secondary in special education units, first level of pre-primary education units that are characterized by an important number of PCs; the second group consists of the counties Giurgiu, Brăila, Mehedinți, Vâlcea, Neamț, Vrancea, Teleorman, Sălaj, Buzău, Botoșani which are characterized by low values of the analyzed variables.

The second factorial axis also highlights two groups of counties: the first group consists of Suceva, Dolj, Prahova, Cluj and Maramureș, which are characterized by high values of primary and lower secondary in regular education, first and also second level of post-secondary non-tertiary education which revealed an important number of computers. The second group consists of the counties of Mehedinți, Satu Mare, Brăila, Giurgiu, Călărași, Covasna, Ilfov, Harghita, Hunedoara, Caraș Severin which are characterized by low values of the same variables.

3. CONCLUSIONS

As the title suggests, this paper intended to analyse the equipment of Romanian pre-university education units. In fact, we would like it to be only a

starting point for a future study, larger and much more complex. The COVID-19 pandemic challenged us to find an answer to this question: “On what foundations does the Romanian education system rely on when it hopes to develop pupil's technological skills and when it is required, suddenly, that they need to settle comfortably in the virtual classroom?”

We know that, in the near future, we will be able to access data that will synthesize the number and the technical method that students from Romania used to access the online educational activities. The pre-university education units from our country had to report in the second half of March: if families offer to their children (perhaps the most correct term would be – if they can afford) adequate technical support to access the online school, what device they use (computers, laptops, tablets, mobile phones), what type of internet connection they have (wired or wireless), and so on. Even in such a catastrophic situation as the pandemic, we found the context truly ironic: it was the educational system that, although it should have been the first resource for all categories of students, regardless of their social situation, began to question the parents; or, it should have been maybe exactly the opposite. So, having the “suspicion” that the “student-technology” team is not yet fully operational in Romanian schools, we tried to make an analysis of the equipment degree with desktop computers in pre-university education units. The result was not a big surprise at all. It is true: is not yet fully operational. Only one in eight schools has a laboratory (not necessarily in computer science) and almost 7,5 students are assigned to a computer in the pre-university education units, referring to the entire pre-university education system, including both public and private systems from both environments: urban and rural.

The research methodology chosen was an empirical study developed on quantitative information, following the existing correlation between the number of computers and the number of school units, on each level of study and by counties. The aim was, first of all, to identify the factors influencing the studied phenomenon, especially the way in which it is determined by the changes on the number of school units, on each level of study. The data that we used were reported for the 2018-2019 school year. All Romanian counties were analysed, excluding the city of Bucharest, determined by the fact that it reflected an extreme (aberrant) value that would have distorted the “behaviour of the series”. The data source was represented by the statistical researches reflected by the education units on each level of study and structured in valid reports of the 2018-2019 school year: pre-primary education, primary and secondary in regular education, primary and lower secondary in special education, upper secondary education and post-secondary non-tertiary education.

In the 2018-2019 school year, the school population in the pre-university education system was about 3 million students (almost half of them are included in primary and secondary regular education, about 25% in upper secondary education), and the number of desktop computers was almost 400.000 units. As

the above study reveals, the best equipment in schools are owned by the cities where the school population is the largest, and these are the largest counties of the country: Cluj, Iași, Timiș, Suceava, Brașov, Constanța.

Identifying the correlation coefficients highlights the fact that there are direct and significant correlations between the dependent variable represented by the number of computers in schools and the independent variables represented by the educational cycles on each level of study analyzed.

Using the principal component analysis, the correlations were established between the number of computers reported as existing equipment in the educational units and the types of units on each level of education analysed, the similarities and differences between Romanian counties, and the explanation of these similarities and differences between the statistical units and the variables that were used. Following this method, two axes were identified. The first axis highlights two groups of counties: the first group consists of Cluj and Timiș, which reported high values of upper secondary education units, second level of pre-primary education units, primary and lower secondary in special education units, first level of pre-primary education units that are characterized by an important number of PCs; the second group consists of the counties Giurgiu, Brăila, Mehedinți, Vâlcea, Neamț, Vrancea, Teleorman, Sălaj, Buzău, Botoșani which are characterized by low values of the analyzed variables.

The second factorial axis also highlights two groups of counties: the first group consists of Suceva, Dolj, Prahova, Cluj and Maramureș, which are characterized by high values of primary and lower secondary in regular education, first and also second level of post-secondary non-tertiary education which revealed an important number of computers. The second group consists of the counties of Mehedinți, Satu Mare, Brăila, Giurgiu, Călărași, Covasna, Ilfov, Harghita, Hunedoara, Caraș Severin which are characterized by low values of the same variables. Following the verification of the hypotheses regarding the errors of the regression model, it was found that they are observed.

Based on what the pre-university system offers, we must point out a number of serious issues: when families must pay to get an appropriate technical support, this puts poor students in disadvantage and limits the equal access to education. Not knowing students' personal situation, some teacher's demands may cause some students dropping out of school. So we must say that the public procurement reform for the pre-university educational system can no longer be postponed.

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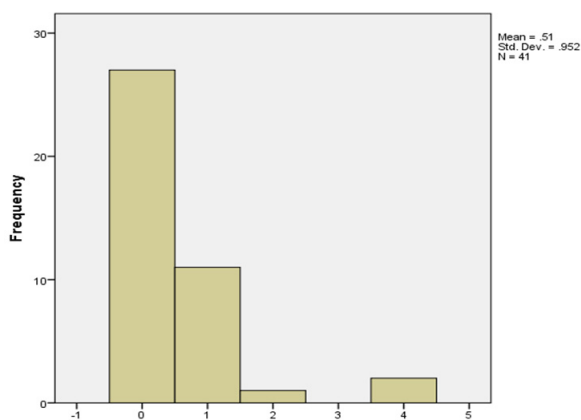
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Appendixes

Appendix 1. First level of pre-primary education units

On average, in the 2018-2019 school year, a number of 0.69 education units were registered all over the country. It is certainly an explanation for the fact that in recent years, private education dedicated to children under the age of 3 has increased both in number of units or structure and in the diversity of services offered to beneficiaries in this field. The number of pre-primary education units deviates on average, compared to the average value, by ± 0.952 units (Figure 3).



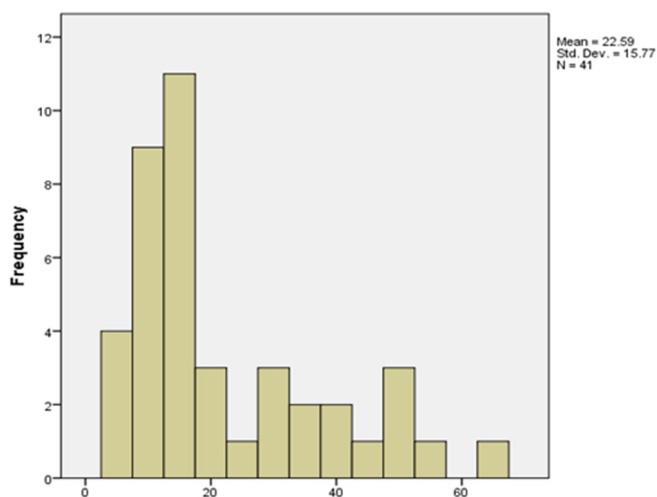
Source: figure made using the SPSS application

Figure 3. The distribution of Romanian counties by the number of first level of pre-primary education units (histogram and statistical data related to variable First level of pre-primary education)

According to the asymmetry coefficient (Skewness), the distribution of counties corresponding to the number of school units for the first level of pre-primary education units is a right-skewed distribution. According to coefficient of Kurtosis, the distribution is leptokurtic. All over the country, the minimum number of such units was 0, and the maximum value was 4 education units.

Appendix 2. Second level of pre-primary education units

Regarding the number of second level pre-primary education units in Romania, in 2018-2019, this kind of units registered an average of 22.59 (Figure 4). Half of Romania's counties reported up to 16 preschool units, while the other half have more than 16 such units. Most counties have a number of 16 preschool units (mode = 16). The standard deviation equal to 15.77 indicates that the number of second level pre-primary education units deviates, on average, from the average level by +/- 15.77 units. The value of the asymmetry coefficient Skewness = 1,113 indicates that we have a right-skewed distribution as well. The value of the Kurtosis coefficient equal to 0.209 shows a leptokurtic distribution. The minimum value registered was 5 units, and the maximum of 64 second level of pre-primary education units.



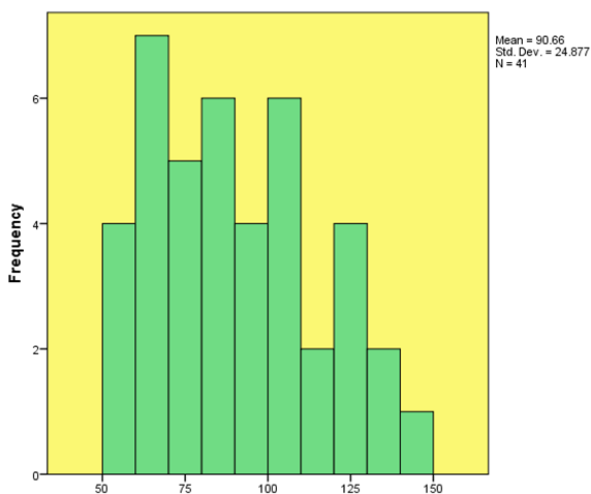
Source: figure made using the SPSS application

Figure 4. The distribution of Romanian counties by the number of second level of pre-primary education units (histogram and statistical data related to variable second level of pre-primary education)

Appendix 3. Primary and lower secondary education units from the regular education system

For the primary and lower secondary education levels (Figure 5) an average of 90.66 units were registered. Half of the counties registered up to 87 such study units, while the other half registered values above this. Also, most counties had a number of 59 primary and lower secondary education units. The number of primary and lower secondary varies on average, compared to the average level, with +/- 24,877 units.

According to the asymmetry coefficient, as well as the histogram, the distribution of primary and lower secondary schools is a right-skewed distribution which is characterized by a concentration of frequencies towards low values of the variable. In the below figure we can observe the platykurtic curve.

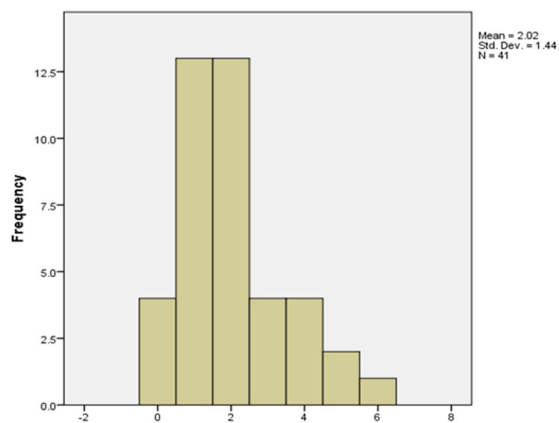


Source: figure made using the SPSS application

Figure 5. The distribution of Romanian counties by the number of primary and lower secondary education units (histogram and statistical data related to variable primary and lower secondary education)

Appendix 4. Primary and lower secondary in special education units

For Primary and lower secondary in special education units an average of 2.02 units were registered (Figure 6). Half of the counties registered up to 2 units, while the other half registered values above this. Also, most counties had just one primary and lower secondary in special education unit. The number of primary and lower secondary in special education units varies on average, compared to the average level, with $\pm 1,440$ units. According to the asymmetry coefficient, as well as the histogram, the distribution of primary and lower secondary in special education units is a right-skewed distribution which is characterized by a concentration of frequencies towards low values of the variable. Figure no. 6 highlights the leptokurtic curve.

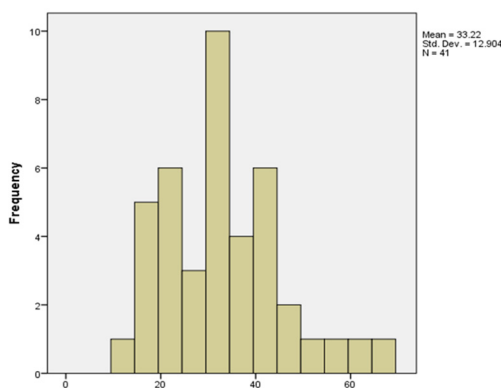


Source: figure made using the SPSS application

Figure 6. The distribution of Romanian counties by the number of primary and lower secondary in special education units (histogram and statistical data related to variable Primary and lower secondary in special education)

Appendix 5. Upper secondary education units

Speaking about upper secondary education units, from the data analysis we will notice that an average of 33.22 units were registered at national level (Figure 7). Half of the counties registered a number of up to 33 such study units, while the other half registered values above. Most counties had a number of 18 high school units.



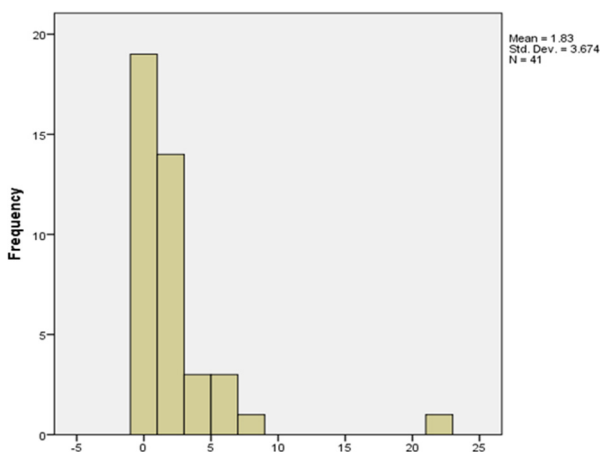
Source: figure made using the SPSS application

Figure 7. The distribution of Romanian counties by the number of upper secondary in education units (histogram and statistical data related to variable Upper secondary education)

The number of upper secondary units varies on average, compared to the average level, with +/- 12,904 units. Noting the asymmetry coefficient, as well as the histogram, the distribution of upper secondary education units is a right-skewed distribution which is characterized by a concentration of frequencies towards low values of the variable, more precisely it is highlighted that in Romania, counties register a number of low units. Figure no. 5 highlights the leptokurtic curve. The minimum number of schools reported at the level of a county was 12 high school units, and the maximum number is 68 of such units.

Appendix 6. First level of post-secondary non-tertiary education units

Referring to the vocational education units, it results, on average, 1.83 this kind of units registered at national level (Figure 8). Half of the counties registered such a study unit, while the other half registered values above one. Also, most counties did not report having education units of this level in their school network.



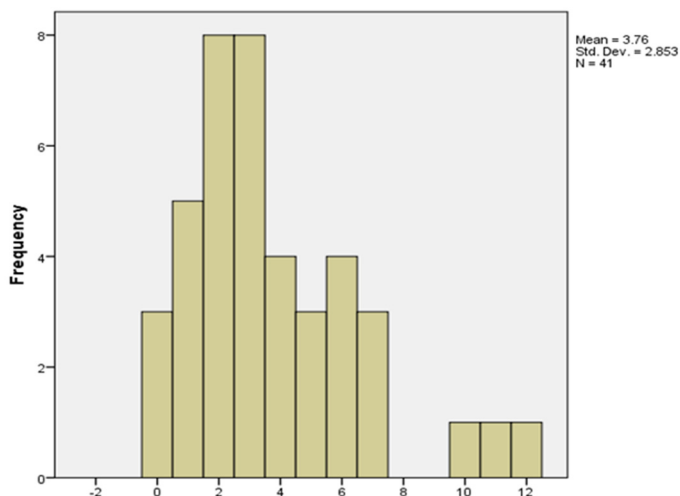
Source: figure made using the SPSS application

Figure 8. The distribution of Romanian counties by the number of first level of post-secondary non-tertiary education units (histogram and statistical data related to the variable)

The number of vocational school units varies, on average, compared to the average level, with +/- 3,674 units. According to the asymmetry coefficient, as well as the histogram reveals, the distribution of vocational level units is a right-skewed distribution which is characterized by a concentration of frequencies towards low values of the variable; counties register a low number of units. Figure no. 6 illustrates a leptokurtic curve. The minimum number of first level of post-secondary non-tertiary education units reported at the level of a county was 0, and the maximum number of 22 such units at the level of a county.

Appendix 7. Second level of post-secondary non-tertiary education units

For this category, an average of 3.76 units were registered at national level (Figure 9). Half of the counties registered a number of up to 3 education units, while the other half registered values above this number. Also, most counties reported having 2 education units of this level in their school network.



Source: figure made using the SPSS application

Figure 9. The distribution of Romanian counties by the number of second level of post-secondary non-tertiary education units (histogram and statistical data related to the variable)

The number of vocational school units varies on average, compared to the average level, with +/- 2,853 units. According to the asymmetry coefficient, as well as the histogram, the distribution of professional level units is a right-skewed distribution. The minimum number of post-secondary school units reported at the level of a county was 0, and the maximum number of 12 such units at the level of a county.

CONSIDERATIONS REGARDING THE NOTION OF CONSUMER OF THE MINORITY SHARE-HOLDER IN BANK CREDIT CONTRACTS- JURISPRUDENTIAL ASPECTS

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Abstract

The notion of consumer is explained by the Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts transposed in the Romanian national law through Law no. 193/2000 regarding unfair terms in contracts concluded between consumers and professionals.

The understanding of the consumer notion has been the subject matter of a wide Romanian national and European jurisprudence.

The case law in Romania is not unified regarding the acknowledgement of the status of a consumer towards the minority share-holder that has underwritten the company's debts with his own assets.

There are Courts that have considered that the Council Directive 93/13/EEC is applicable to surety contracts signed by the company's minority share-holder does not rule out his status of a consumer.

There are also other Courts that consider that the minority share-holder acts on behalf of the company and has a link of a functional nature with the commercial company even if he has guaranteed the company's debt under his own name.

The European Court has concluded that it is in the national Court's duty to assess if the associate has acted in his professional activity or not.

The European Court of Justice does not rule out the possibility of acknowledging the consumer status in the circumstance in which a person is not the company's administrator or has an negligible equity participation, meaning that he does not have a link of a functional nature with the commercial company.

We consider that the bank loan guarantor is a consumer and has the right to claim the nullity of the unfair clauses from the main credit contract concluded between consumers and professionals according to the European Court of Justice's jurisprudence. The national Court has the duty to verify if this guarantor falls under the notion of consumer, as was defined by the Council Directive 93/13/EEC as any natural person who, in contracts covered by this Directive, is acting for purposes which are outside his trade, business or profession.

Keywords: *unfair clauses; the notion of consumer; contradictory jurisprudence; European Directives.*

JEL Classification: K12, K42

1. THE ANALYZED SITUATION – THE PREMISE

In the Case no. 10391/3/2019 of Bucharest Tribunal that we submit for discussion, the Court considered that the claimant does not have the quality of consumer in order to invoke the provisions of Law no. 193/2000 on unfair terms in consumer contracts.

According to art. 2 paragraph (1) of Law no. 198/2000, the notion of consumer is defined as “any natural person or group of natural persons constituted in associations, which, under a contract, that falls under the incidence of this law, acts for purposes outside its commercial, industrial or production activity, artisanal or liberal”.

Although, by the notion of consumer included in the definition given by Law no. 193/2000 is understood to be the natural person beneficiary of some goods and/or services that are offered to him for a fee by a professional.

The present situation has been the subject of other previous judgments, and among these is Decision no. 763 of March 10, 2015 pronounced on appeal by the Second Civil Section of the Romanian High Court of Cassation and Justice regarding abusive clauses in consumer contracts.

Of the same conclusion is the European legislation, and according to the provisions of art. 1 para. (1) and art. 2 lit. (b) Directive 93/13 on unfair terms in consumer contracts shows its purpose, respectively, to approximate the laws, regulations and administrative provisions of the Member States concerning unfair terms in contracts concluded between a seller or supplier and a consumer.

In the present case, the contracts whose terms are contested by the applicant were concluded between a company and a bank, and the applicant acted as guarantor for those contracts, so that, according to national law, they do not fall within the purpose of consumer law and therefore the applicant cannot stand as a consumer in the present case.

According to European law, the applicant is not a consumer.

Even the Court of Justice of the European Union has analyzed this possibility and limited it only to the case of the guarantor without a direct interest.

From the documents in the file, however, it appears that the claimant is associated with a company that has concluded two banking contracts, so he has a direct interest in obtaining the loan. He has a direct relationship with the borrowed company where he owns 10% of the shares, acting for purposes that are in the field of activity. It follows that the provisions of Directive 93/13 EEC and the national legislation on consumer protection are not applicable in the present case, as the applicant is not a consumer.

In these conditions, the court did not apply the provisions of Directive 93/13/EEC, respectively the provisions of Law no. 193/2000 considering that the claimant does not have the quality of consumer.

2. ARGUMENTS PROVING THAT THE MINORITY SHAREHOLDER OF A COMPANY HAS THE QUALITY OF CONSUMER AT THE TIME OF AGREEING TO A BANK LOAN

The quality of consumer is defined by art. 2 lit. b of Directive no. Council Regulation (EC) No 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts.

For the purposes of the Directive, consumer means any natural person who is acting for purposes which are outside his trade.

Directive no. 93/13/EEC was transposed into national legislation by Law no. 193/2000 regarding the abusive clauses from the contracts concluded between professionals and consumers (r).

According to art. 2 para. 1 of Law no. 196/2000 (r), a consumer is any natural person or group of natural persons constituted in associations, who, under a contract falling within the purpose of this law, acts for purposes outside its commercial, industrial or production activity, artisanal or liberal.

The meaning of the notion of consumer has been the subject of extensive national and European jurisprudence.

The court [1] notified the Court of Justice of the European Union with a request for a preliminary ruling, the questions addressed to the Court being whether art. 2 lit. b) of Directive 93/13/EEC on the definition of “consumer” must be interpreted as including or, on the contrary, excluding from this definition natural persons who have signed as guarantor additional documents and surety contracts, auxiliary documents of a credit agreement concluded by a commercial company in order to carry out its activity, provided that the natural persons have no connection with the activity of the commercial company and have acted for purposes that are outside their professional activity.

The Court was also asked to rule on whether art. 1 para. 1 of Directive 93/13/EEC must be interpreted that only contracts concluded between professionals and consumers having as their objective the sale of goods or services, or contracts such as those at issue, fall within the purpose of that directive.

The European Union Court of Justice [2] in Case C74-15, Tarcau v. Sao Paolo Romania SA and others stated that Article 1 (1) and Article 2 (b) of Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts must be interpreted that the directive may apply to a security or surety agreement concluded between a natural person and a credit institution in order to guarantee the obligations which a company has contracted with that institution under a credit agreement if the natural person has acted for purposes that do not fall within his professional activity and does not have a functional relationship with the mentioned company.

In the considerations of the above-mentioned decision, in paragraph 28, the Court held that the national court has the obligation to verify, taking into account

all the circumstances of the case and all the evidence, whether the contractor in question could be classified as a consumer within the meaning of the Directive.

The same view was maintained in other cases [3] which were the subject of the analysis of the Court of Justice of the European Union: In case C-534/15, having as object a reference for a preliminary ruling formulated under Article 267 TFEU by the Satu Mare Court, by decision of September 30, 2015, received by the Court on October 12, 2015, in the procedure of Pavel Dumitras, Mioara Dumitras against BRD Groupe Société Générale – Satu Mare County Branch.

Article 1 and Article 2 (b) of Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts must be interpreted as meaning that this Directive applies to a security agreement concluded between individuals and a credit institution in order to guarantee the obligations contracted by a commercial company towards a bank institution under a credit agreement. It is necessary that these individuals have acted for purposes that do not fall within their professional activity and do not have a functional relationship with the borrowed company.

Thus, both Directive no. 93/13/EEC and Law no. 193/2000 are applicable to the presented case.

Moreover, the fact that the claimant acted for “purposes that do not fall within his professional activity” and that he is a consumer within the meaning of the law results from art. II of the Additional Act no. 1 to the Surety Agreement, the parties agree to clarify the fact that the guarantors have signed the surety agreement in their own name and not as legal representatives of the borrowed company.

Thus, although the Court stated that there is a functional link between the applicant and the main debtor, it is clear from the contractual relationship between the parties that this relationship between the petitioner and the main debtor is not taken into account.

3. ARGUMENTS AGAINST THE IDEA THAT THE CONSUMER MAY BE THE MINORITY PARTNER IN SURETY CONTRACTS

The claimant cannot avail himself of the provisions of Law no. 193/2000, as he is not part of the category of consumers protected by Law no. 193/2000 regarding the abusive clauses from the contracts concluded between professionals and consumers.

The guarantor does not have the quality of a consumer, as he is not a party to the concluded credit agreement, but only contracted the obligation to guarantee the credit granted to the borrower, the latter being the one who has the quality of consumer in relation to the contract.

Moreover, the borrowed company is a legal entity, thus being excluded from the notion of a consumer, as defined by Law no. 193/2000.

The provisions of law no. 193/2000 are applicable exclusively with regards to synallagmatic contracts, having as their main purpose the provision by a professional of goods and/or services for the benefit of a non-professional

(consumers), in exchange for the latter performing a obligation in favor the professional (usually consisting of paying a sum of money).

A consumer is a natural person that benefits of some goods and/or services that are offered to him for a fee by a professional, and in the light of these considerations it results that the claimant does not fall under the incidence of Law no. 193/2000. The guarantee contract signed by the claimant has a unilateral character, not synallagmatic, thus contracting obligations exclusively for the guarantor, without the Bank committing itself to a consideration in exchange for the guarantee.

The bank credit contract for natural persons establishes the main obligatory relations between the creditor and the debtor. The guarantees of the main obligation are regulated by the suretyship contract concluded under the conditions of the law between the creditor and the guarantor.

Thus, the applicant is an associate in the borrowed company, holding 10% of the shares, acting for purposes that are within the scope of his professional activity. The provisions of Directive 93/13/EEC and national legislation on consumer protection are not applicable in the pending case as the claimant does not have the quality of consumer.

4. CASE LAW IN FAVOR OF THE IDEA ACCORDING TO WHICH THE CONSUMER IN THE BANK CREDIT AGREEMENTS CAN BE THE COMPANY'S MINORITY PARTNER

1) As regards the procedural capacity of the applicant.

By a majority of votes, it is established that the guarantor of a bank loan has the procedural capacity to request the cancellation of abusive clauses in the main contract concluded between the consumer and professionals, according to the case law of the Court of Justice of the European Union falls within the concept of consumer, as defined by Directive 93/13/EEC [4].

2) Case C-534/15 [5], Dumitras, CJEU Ordinance of 14 September 2016 revealed that Article 1 (1) and Article 2 (b) of Council Directive 93/13/EEC of 5 April 1993 on unfair terms in contracts concluded with consumers must be interpreted as meaning that this Directive applies to a surety agreement concluded between natural persons and a credit institution in order to guarantee the obligations which a company has entered into with that institution under a contract of interest. The question if these natural persons have acted for purposes which are outside their professional activity and do not have a functional relationship with that company is a matter for the national courts to solve.

3) As regards the applicant's status as a consumer.

Beyond the quality of the legal person's administrator, only a non-negligible participation in the share capital of the legal person would be able to exclude the quality of consumer of the credit guarantor [6].

4) The tribunal, examining the documents and works of the case, will admit the appeal, will annul the sentence and will send the case for retrial to the same court, as the first instance wrongly admitted the exception of inadmissibility of the action and rejected the action as inadmissible, as long as the execution of the obligations was actually taken over at this moment by the guarantor, the signatory part of the credit contract, and this person has the quality of consumer and therefore, the clauses of the contract can and should have been examined in the light of the provisions of Law no. 193/2000.

The disputed contract was signed on the one hand by Individual Law Firm E U on one hand and RB society on the other hand, and following the death E U, his heirs – the surviving wife and his two sons, have procedural capacity, E U being both party to the contract as well as successors, which requires that in the light of the normative act invoked as the basis of the claims and defenses made, to benefit from the provisions of Law no. 193/2000 and to examine the abusive nature of the clauses expressly mentioned in the application.

Therefore, the Individual Law Firm U E does not have the quality of consumer, but the natural person U E (through his heirs) and the natural person U E have this quality, therefore applying in this case also the provisions of Law 193/2000 [7].

5. CONCLUSIONS

In the case of a natural person who has guaranteed the performance of the obligations of a company, it is therefore for the national court to determine whether that person has acted in the course of his professional activity or by virtue of functional relations with that company, such as the administration or a non-negligible shareholding in his share capital, or if he has acted for personal purposes.

If the claimant holds a 10% shareholding in the borrowed company, this is a negligible shareholding within the meaning of the Court of Justice of the European Union.

In order to be able to maintain the existence of a functional link between the borrowed company and the applicant, it is necessary for it to hold the majority of shares, which would give the claimant effective decision-making power in the company.

The mere fact of investing in the borrowed company does not determine the existence of a functional link, in the sense retained by the Court of Justice of the European Union.

When concluding surety contracts, it is important to act outside any profession. It must be considered whether, at the time the loan was taken out, the applicant had any power in the borrowed company.

Consumer status was established *inter partes* by the concluded agreement, and by virtue of the principle that the contract is the law of the parties. Thus, it

cannot be derogated from the fact that the claimant signed as a natural person, in his own name and not for the company, without any functional connection with the debtor. This is the will of the bank that wrote the contractual clause.

The decision of the Romanian High Court of Cassation and Justice no. 763 of March 10, 2015 is in clear contradiction with the case law of the European Union Court of Justice.

The aforementioned decision was not pronounced on appeal in the interest of the law, and does not bind the national courts of this solution.

The decision of Romanian Bucharest Tribunal under analysis in this paper is surprising given that before it, the Court of Justice of the European Union ruled in the Tarcău case a contrary decision.

A surety contract is presented, from the point of view of the contracting parties, as a separate contract, since it is concluded between persons other than the parties to the main contract.

Thus, in the situation subjected to analysis, the surety contract is distinct from the main one.

Therefore, the parties to the surety contract are those in relation to whom the quality in which they acted must be assessed.

Thus, even if the High Court's decision were given in an appeal in the interests of the law, national courts have an obligation to apply Community law as a matter of priority over national law.

Considering the obvious contradiction between the Decision of the High Court no. 763/2015 and the jurisprudence of the Court of Justice of the European Union, we are of the opinion that the court had the obligation to give efficiency to the European case law and not to the national jurisprudence.

Bank credit guarantee contracts are proving to be some of the most burdensome obligatory situations for debtors. In this context, an effective means of protection must be provided for the "weaker" part of these contracts, and national courts must pay greater attention to the situation where the guarantor, a natural person, requests the finding of abusive clauses stipulated in credit agreements.

We are of the opinion that the natural person who guarantees a loan contracted by a legal person should not be excluded from the notion of consumer.

It is for the national court to determine whether the guarantor acted within his professional activity or separately from it. The court's analysis must relate to the specific circumstances of the case.

One and the same person can act as a consumer in certain operations and as a trader – a person who acts in his commercial, industrial or production activity in other operations.

A 10% participation in the share capital of the borrowed company does not determine the exclusion of the claimant from the application of the provisions of Law no. 193/2000 and Directive 73/13/EEC.

We believe that the principle of protecting the economic interests of consumers must be given priority and that the scope of the notion of consumer must be interpreted extensively in accordance with the case law of the European Union.

NOTES

- [1] Oradea Court of Appeal, Decision no. 52/C/2016-A, pronounced in case no. 3312/83/C/2013.
- [2] European Union Court of Justice, Case C-74/15 Tarcau, 19th November 2015.
- [3] European Union Court of Justice, Case C-534/15 Ordinance from 14th September 2016.
- [4] Pitești Court of Appeal, Minute of non-unitary practice, 2016.
- [5] European Union Court of Justice Pavel Dumitraș and Mioara Dumitraș versus BRD Groupe Société Générale, Case C-534/15.
- [6] Cluj-Napoca Court, Decision no. 6953 of 14th July 2016.
- [7] Gorj Tribunal, Decision no. 519 of 18th October 2016.

References

- 1) Bucharest Tribunal, Case no. 10391/3/2019.
- 2) Cluj-Napoca Court, Decision no. 6953 of 14th July 2016.
- 3) European Directive 93/13/EEC of the Council of the European Communities of 5 April 1993 on unfair terms in consumer contracts.
- 4) European Union Court of Justice, Case C-534/15 Pavel Dumitraș and Mioara Dumitraș versus BRD Groupe Société Générale.
- 5) European Union Court of Justice, Case C-74/15 Tarcau, 19th November 2015.
- 6) European Union Court of Justice, Case C-534/15 Ordinance from 14th September 2016.
- 7) Gorj Tribunal, Decision no. 519 of 18th October 2016.
- 8) Law no. 193/2000 on abusive clauses in contracts concluded between professionals and consumers.
- 9) Law no. 134/2010 on the Code of Civil Procedure.
- 10) Romanian High Court of Cassation and Justice Decision no. 763 of March 10, 2015 pronounced on appeal by the Second Civil Section regarding abusive clauses in consumer contracts

LEADERSHIP AS THE MAIN DRIVER FOR ORGANIZATIONAL INNOVATIVE CLIMATE

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Abstract

Transformational leadership style, also known as contemporary leadership, is described as the ability of leaders of promoting innovation, instilling entrepreneurship and bringing change within organizations. In order to be successful, IT companies should pay more attention on how to maintain a constant innovative attitude among their members. Added value can only be achieved if factors and dimensions like leadership, culture, innovative climate behavior and organizational culture rally towards the same goal. While building the right organizational structure, where ideas and processes will be developed and implemented, innovation will create value depending on the organizational climate; this dimension, which is the key for organizations towards achieving the goal of being industry leaders by favoring the right attitude and building a creative climate, will drive individual innovative behavior to enhance perception to a new level on the market.

The aim of this article is to examine the relationship between the transformational leadership style and the perceived organizational climate for innovation within software companies. We used a 50 items structured questionnaire developed by Delaney and Huselid in 1996 and applied it for a number of software developers as active members within organizations. The results will be analyzed using the Statistical Program for Social Sciences (SPSS) 2.0 and a few statistical techniques will be applied. Results will show if there is an impact of transformational leadership on the organizational climate for innovation, on all the nine dimensions that were taken into consideration.

Keywords: *leadership; innovation; organizational climate.*

JEL Classification: M12

1. INTRODUCTION

This research is part of an ongoing project that aims to create a link between transformational leadership and innovation. Considering leadership, from the three main styles – transactional, transformational and laissez-faire, we chose transformational leadership, since this style enhances organizational change on the best limits. But the equation of innovation is vague; when analyzing the literature in regard with this subject, a single result shows: innovation is a broad term that includes a multitude of dimensions as organizational performance, organizational climate, and innovative work behavior.

With the purpose of creating and analyzing an equation among transformational leadership and innovation, for the purpose of this paper, it was chosen to be studied the organizational innovation climate. As the methodology will show, there were used two different questionnaires, comprising a total of 70 questions, applied physically within two software development companies in Iasi, Romania. The response rate was more than 85% for both cases.

Results will show that being a young IT company does not create the favorable premises for transformational leaders to act, and either for a software developer to interact and make performance.

2. INNOVATION AND THE WORKPLACE

Most of the definitions in respect with innovation focus of two process areas: outcomes and the process of innovation. Starting with the Porter's theory of innovation from 1990 where are taken into consideration on one side the improvements in technology and also better methods for achieving results, it appears that this view over innovation with two main dimensions, as a process and as a result, is not rather new. Subsequent literature that rally this definition, describes the outcome as being operationalized by the number of patents, new products or scientific papers (Treuer, 2012) that were considered as gold start for innovation. Tidd, Bessant and Pavitt (2001) analyzed the measurements used for the innovation as a process, and brought into light the importance of customer satisfaction surveys along with the ones used for quality improvement traceability.

Despite the fact that Porter inserted a correct view on innovation within both practice and literature, the evolving economic environment along with technology developments brought into light new modern views and approaches towards the processes and results of innovation. Slappendel (1996) puts the accents over the innovation context where innovation is regarded either as an organizational outcome that becomes effective, but also as a process based on new ideas generation and implementation. The outcomes of innovation defined alike are widely known and accepted, evolving by creating new processes and procedures, developing the existing ones and also reinventing them along time. Innovation becomes, as Scott and Bruce claim in 1994, a multi stage process. Staring with this view, authors considered the decision of examining the workplace innovation as the natural next step; the most accurate and reliable environment where innovation could be studied, analyzed and measured within this new perspective could only have been the organizational environment (Oeij *et al.*, 2018).

Representative views among literature with regard to innovation bring into light Amabile and Conti (1999) with the individualist approach, while Damanpour (1997) and Hage (1999) proposed the structuralist context, while the interactionist perspective was widely adopted, after being proposed by Pienaar and Boshoff in 1996 and resumed by Amabile and Conti in 1999. Innovation diverts thereby from the individual level seen as the idea of a human being, and given a form according

to the labor division and functional differentiation within a given organization, being shaped by the structural influences and individual actions alike.

The measurement of innovation became an increasing concern for companies' management that target performance, various different levels being taken into consideration. Innovation practices and behaviors, both internal and external can be measured both critical and soft; the weight of these measurements is being transposed to the view towards results and outcomes, as a result of the process innovation; in this regard, in 1996, Chiesa, Coughlan and Voss, and further Coughlan *et al.* (2000) support the idea that innovation depends on the internal management processes, where knowledge creation (Karanika-Murray and Oeji, 2017), the transfer and information diffusion are the main ingredients for achieving qualitative results.

Hence, when studying the soft version of organizational performance, it must always be considered the internal processes carried on many and different levels, where different organizational climate effects surpass. McMurray and Dorai (2003) grant this observation and complete it by distinguishing among four different innovation factors: at first the organizational innovation and secondly the organizational climate for innovation, both being considered as individual innovation and team innovation are nurtured and further separately measured.

3. TRANSFORMATIONAL LEADERSHIP

Also called the leadership of the century or contemporary leadership, studies do not fully identify all the main features of a real and true leader, Si and Wei (2012) assimilate leaders with charisma, but make a difference about how a leader brings change and triggers within an organization. Promoting innovation is the main job of a contemporary leader, but the methods and processes are the key that differentiates a transformational from a transactional leader. Brews and Hunt (1999) emphasizes the emotional and symbolic aspects of leadership, whilst Moss and Ritossa (2007) define leadership in terms of trust, loyalty and admiration, meaning their effect on the followers. Transformational leaders consider individuals and their needs, taking place as a coach or even as mentors for their teams, by putting aside self-interests and promoting change on both personal and organizational levels (Hernandez *et al.*, 2011).

The current continuously changing economic environment makes transformational leaders to be considered essential for organizational innovation and new product development, in order to be able to overcome new business trends and interfering landscapes (Chen and Chen, 2012).

4. ORGANIZATIONAL INNOVATION

Literature considers three must be components when about defining innovation: shared vision, leadership and also a more delicate part, the organizational volition for achieving performance. The three components are in a

deep relation with the organizational structure (Hesselbein, Goldsmith and Beckhard, 1997); as a support for this view, Prais (1995) stated that the continuous improvement and development, education, and also training of both board management and employees, increases the level of skill and competencies internal development. Another important factor – communication on both internal and external plan, on both horizontal and vertical levels has shown improvement for the processes and results of innovation (Francis and Young, 1988). Along come the organizational customer culture (both internal and external views) and also the proactive attitude of a so called, learning organization (Rothwell, 1992). All these components, attitudes and behaviors imply a high degree of involvements and organizational experimentation, where the right employee attitude is that of a problem solver, an accurate communicator, by sharing experiences and testing results (Tidd, Bessant and Pavitt, 2001). One last but highly important factor is the organizational support for innovation, fund allocation and dedicated procedures for supporting innovation on both individual and team levels.

IBM Global CEO Study from 2006 (IBM, 2006) is one of the few relevant studies that were performed in order to identify and analyze the innovation processes among large organizations. It considered more than 750 world's top CEOs; results show that large organizations changed their focus towards innovative business models and operations, while new products and services are on a secondary plan. Hence, the world's business model innovators are on a competition for achieving a high specialization and a higher focus on their business model.

5. ORGANIZATIONAL CLIMATE FOR INNOVATION

There are not too many contextual theories in regard with organizational creativity and innovation which identify different innovation related work environments. Isaksen and Ekvall (2010) developed a model that was further refined by a model proposed by Ekvall, identifying nine climate for innovation dimensions, as a result of several large analytic studies. There is no complete definition of organizational v=climate, but as Klijn and Tomic (2010) suggested, the list of Barron and Harrington (1981) list of innovation related traits can perfectly stand for an self-explaining definition: it starts with sensibility to internal and external problems, a high consideration for the aesthetics, broad interests, high energy, compelled with the judgment independence, autonomy and intuition; there were added dimensions as self-confidence, creative senses, playfulness and also, the most important, an ability of accommodating opposite traits within a single individual and use it for solving problems.

Hence, these measures are used for determining and also examining the psychological life within a given organization; research has shown that it is an complex and multileveled action, since an organization can host multiple climates at one time, according to different locations, organizational levels and departments

within a specific geographic location; as Koys and DeCotiis (1991) agreed, all these situational views add to the organizational climate research complexity.

6. MEASUREMENTS FOR LEADERSHIP AND INNOVATION EQUATION

The first scale used for this research was based on the the Multifactor Leadership Questionnaire, abbreviated as MLQ 5X Questionnaire developed by Bass and Avolio in 1995, having as an independent variable the transformational leadership, and the dependent variable, the group creativity (Bass *et al.*, 2003). This instrument is widely used for assessing transformational leadership theory, a highly validated measure and considered to be most reliable and stable.

Despite the fact that literature proposes several measurement units for organizational climate, for the purpose of this paper there was selected the Situational Outlook Questionnaire (SOQ) a 50-item instrument that comprises a 5 point Likert Scale, where response range from 1 – strongly agree to 5 – strongly disagree. Eight dimensions were considered: autonomy, cohesion, trust, pressure, recognition, fairness, innovation. Initial questionnaire proposed three more dimensions: innovation, pressure and fairness, but were proved to be imperfect, so ruled out of the initial questionnaire.

The ecological validity of his scale resides in the examination of various climate constructs, identified among previously performed studies that were put together, tested and validated, presently used as basis for the development of the questionnaire.

The vast majority of global companies perform service-based activities; despite this fact, it appears to be little research on innovation and innovative capability within the service sector (Balan and Lindsay, 2007). Comprising many industry sectors, literature shows little research in the area of IT companies, despite the fact that they are subject to a not previously achieved level of performance and development.

The aim of this study is to analyze the organizational climate factors that may increase the workplace innovation in a software development company. For this purpose, the first research question must respond to “What is the relationship between leadership and organizational climate for innovation?”. Responses led to the following next question: “Are the organizational climate factors sensitive to how transformational leadership is performed?”

As a result, the hypothesis states: different dimensions of transactional leadership have a positive effect on different levels of organizational climate.

7. METHODOLOGY

This research was conducted physically, within two SME software development companies in Iasi; they received two questionnaires, a sequence of the MLQ and the full SOQ. Only the surveys filled in by software developers were

considered. In order to be more specific, the survey will only be applied to software development companies that perform activities in Iasi City, Romania.

Along with the 20 item MLQ was also used the 50 items SOQ, but also a demographic sheet. Demographic items include organizational position, number of experience years, age, gender and the last studies level achieved. Since this is a running research, preliminary results will be shown.

Research population in Iasi comprises 419 companies and 4286 programmers. Transformational leadership will be comprised through four dimensions: idealized influence, inspirational motivation, individual consideration and intellectual stimulation. The constructs that are considered for SOQ stipulate the idea of liberty, challenge, idea generation, idea development, debate, conflict, self-trust, risk taking and also playfulness.

<u>Survey</u>	<u>Cronback's alpha (internal consistency)</u>
MLQ	0.91 (9035301)
SOQ	0.98 (2133016)

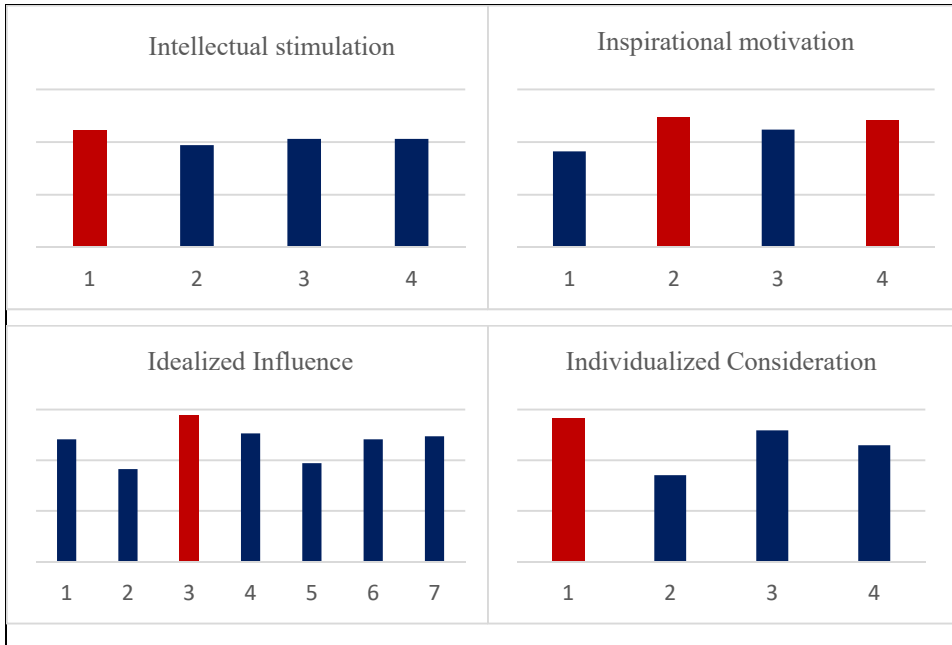
Since both surveys are reliable and can be considered for a further research, we will proceed for a preliminary analysis in order to achieve partial results in regard with the link between organizational climate for innovation and transformational leadership.

8. PARTIAL RESULTS

When taking into consideration the four dimensions in regard with transformational leadership, data provided the following results: 1. Software developers within the two considered companies developed below 3.0 scores; 2. There is a tie average among two constructs: individualized consideration and idealized influence; 3. Intellectual stimulation scores lowest, with an average of 2.07 while inspirational motivation scores slightly higher with an average of 2.35 (Figure 1).

It seems that the two considered IT companies do not have a very strong organizational background, whilst leaders do not achieve to inspire and motivate teams. IT seems that results show the lack of a certain maturity degree in taking decisions for both companies, despite the effort of leaders for inspiring, teaching respect and emphasizing the effects of non-ethical and immoral decisions.

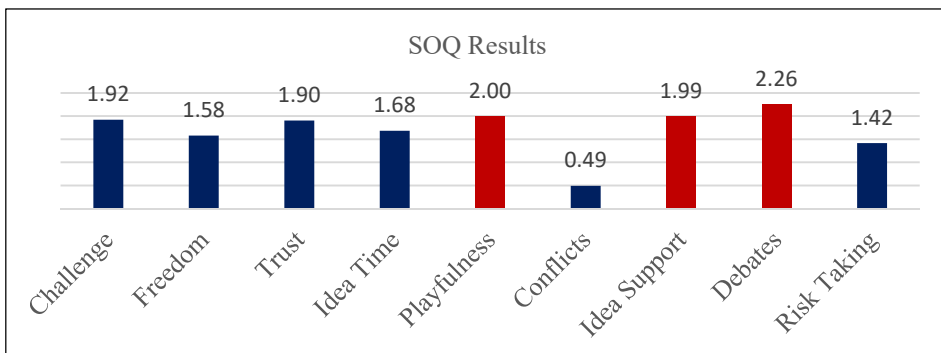
If analyzing the organizational climate for innovation within the given sample, results do not differ from the leadership transformation. The highest score of the nine dimension is 2.26 that represent the debates which seem to be the most productive, since company members discuss about different point of views and share information, by feeling as taken into consideration. The lowest score finds the conflicts area, meaning that the two companies do not feel a great deal of tension coming from power and prestige supremacy fight, resulting in personal tensions, released by gossiping and slander.



Source: own processing

Figure 1. Partial results for transformational leadership within software development companies

The ideas of playfulness, idea support, trust and challenge are highly valued, given the organizational environment; coming from software companies, where the age difference is insignificant and the age average is not beyond 25, results show among companies members a great deal of independence features, desire to stand up and affirm itself; this behavior is not supported though by assuming actions and reactions, since the mean risk taking only reaches 1.42 (Figure 2).



Source: own processing

Figure 2. Partial results for SOQ within software development companies

When analyzing together the results of surveys – transformational leadership and organizational climate for innovation, following conclusive ideas are in order: 1. Being a young company with a low age average is not advantageous for leaders to work with, since ego and supremacy battles are in order; 2. Despite the facts that leaders try to work individually and consider each individual, despite working in teams or individually, SOQ results that ideas like freedom and a predilection for debates undermine their actions; 3. Software development companies assume a high degree of intellectual stimulation for their members *per se*, which is why leaders do not find this dimension easily to implement; this conclusion is supported by the 1.68 idea time score from the SOQ survey, meaning that it is not a leaders job to encourage an employee to test and implement new ideas, since the job requirements essential reason to be is exploring ideas and performing for the company; 4. transformational leaders still have the chance to motivate and inspire, by challenging employees to do a good job by creating the right atmosphere, in order to determine people inside the company to contribute to the success of the organization.

9. FINAL REMARKS

Most of the software development companies suppose a low degree of interaction among its members and an increasing high degree of using one's imagination and creative perspectives. The two companies considered for this research do not have more than 10 years of experience and average not more than 40 collaborators. Software development requires occasional team work and team interaction, most of the time being used for coding, and front and back end activities.

Analyzing the results for the two surveys, data shows a below average transformational leadership effects, where individual consideration and idealized influence have most effects among the companies' members.

Being a small company with a relatively small amount of members makes it even more difficult for the leaders to implement strategies and procedures, to motivate and create added value, affirmation supported by the previously discussed results. When about the climate for innovation we speak about internal values and beliefs, transposed from the individual internal feelings and opinions towards the organizational processes and procedures. Within the two considered companies, there is a very low rate of conflicts and gossiping and slander, a situation given in our opinion by the educational background of the two companies' members and their educational interests. On the opposite side, a high degree of playfulness, freedom and debates show a rather horizontally oriented management interaction, where there is not a clear line coming from ranking, status within in and out of the company, all provided by facilitating and implementing direct communication habits.

This is only a preliminary interpretation of a larger database currently under development. If further results will concur with the preliminary assessment presented, it will bring a new light over the subject, compared to the previous literature results that show a very strong connection among transformational leadership effects and climate for innovation components and further behaviors.

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BUSINESS CONTINUITY MANAGEMENT IN HIGHER EDUCATION INSTITUTIONS

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Abstract

Higher education establishments are large and complex organizations that can face numerous challenges in their daily activities. In an ideal situation an incident is quickly approached, very good handled, prevented or avoided. But in other situations, the institutions should find the solution for minimizing the disruption and protect their activities, community of students and of course the staff. A common approach that helps organizations to plan a response to potential interruptions of the business activities is Business Continuity Management (BCM). This enables higher education institutions to keep the pace and then return to a normal course of operations as soon as possible; it enables in times of activity interruption to continue performing the activity of education which is vital to a society. The COVID-19 pandemic has lately “forced the hand” of many higher education institutions to comprehensively and immediately adopt the online learning and teaching, and also all other activities from the educational system in order to handle and prevent the potential outbreaks. Therefore, the time has come to implement the IT business continuity (BC) plan, these are created to make sure that the organization would be able to go on with critically needed activities in times of emergency situations. This paper analyzes the challenges and readiness of higher education system to adapt to current pandemic situation, and namely, to implement the continuity plan if any existed. The need for IT business continuity was certainly considered just a concept until it has become a reality. Most of the higher education establishments did not have sufficient time, resources and incentive for making use of information technology in continuing their activities. The pandemic situation has caught the education system on moving ground and is presenting it as overwhelmed with challenges. The movement of all the course offerings into online environment and supporting students, professors, and faculties to conduct the learning, teaching, researching, and working remotely has come with great efforts and challenges. The BCM concept requires a change before the change, or before the emergency forces to change, because one of the key activities of business continuity and disaster recovery planning is certainly change management; which has the goal to introduce and implement changes into the institution/organization, process or system in coordinated way and by handling the circumstances and issues during the way. The maturity of higher education’s business continuity plans it is questionable when seeing how hard the latest pandemic hit the system. It is clearly that institutions have now understood the importance of the “joker” from the pocket – a well-established plan that will become the new normality, because this is the major part in covering the gap in crisis situations.

Keywords: *business continuity; higher education; IT; academic planning.*

JEL Classification: M10, I23

1. INTRODUCTION

Planning for crisis time in higher education institutions means focusing mainly on three main pillars: emergency management, physical safety and technology. While these are really important factors, a lot of other aspects of planning for operations' continuity have been ignored, including the delivery of academic programs.

The term of "academic continuity" as part of institutional planning is very fresh in higher education. Therefore, discussions on academic continuity specifically, have often focused on technology-based education and online teaching and learning in the unfortunate event of crisis. The online approach, however, is only one aspect of the continuity planning in academic environment.

Universities are large organization with a lot of resources and great responsibility for a wide range of stakeholders. They are expected to be able to handle the most situations. Business Continuity Management (BCM) provides a holistic approach, which can help to identify and mitigate the threats, but when an incident occurs, supplementary measures are required. Planning ahead is essential, especially for detailed business continuity and it may need to set up arrangements and key processes in advance.

In the case of the latest outbreak, universities are scrambling to make plans and transfer courses online. Nearly three hundred million students worldwide were required to stay home and do not physically go to classes anymore. Many universities around the world announced that they will conduct remote teaching and exams for the remainder of the university year. High-quality online degree usually takes months or even years to be well established, but the latest pandemics forces many institutions to offer hundreds of online courses in just a few weeks. For some institutions, especially those who are hesitant or unwilling to accept online education, this represented certainly a huge challenge.

This paper presents an approach to business continuity planning, the importance of business continuity and exercising pandemic preparedness in higher education institutions.

2. BUSINESS CONTINUITY MANAGEMENT FOR UNIVERSITIES

In higher education sector, emergency situations or disaster management has firstly focused on facilities and/or information technology resources. Hsing, Peterson, and Chapel (2003) detailed the need for ensuring business continuity in higher education and then Educause (2005) followed with and established guide for business continuity for universities. Therefore, early approaches of business continuity focused mostly disruption to information systems, however later the continuity management approach has been perceived in a broader way (Hiles,

2011). A business continuity plan describes how the organization will continue to play a role during or after an emergency, disaster or disruptive event. It involves planning the status of key services or products and the restoration of critical business and systems.

Algonquin College's (2009) developed a plan to support academic continuity for the students that are temporarily absent from classes in response to the H1N1 virus epidemic back in 2009. Since then many institutions realized that it could be a viable response to other events from weather and disasters to family issues for both students and faculty. Georgetown University, after the major snowstorms from 2010, stated that though it is no really possible to predict certain circumstances that could impact class schedules, whether it is related to illness, weather, or other different factors, there are a number of required steps, that range from simple to complex that a university can take in order to prepare themselves along with their students for academic interruptions.

Every business/organization and operation are unique, especially higher education institutions, which are one of key drivers of growth performance, prosperity and competitiveness in developing a society. As already mention for education sector a more common term for BS would be academic continuity (AC). This is actually the process, which involves maintaining continuity of teaching and learning in a situation that makes it difficult or even impossible for students and/or instructors to attend classes. It in is human nature not to pay too much attention to “unlikely” to happen events. Therefore, during years the institutions have been focusing on plans and procedures for events that had a kind of certainty to happen, like earthquakes for example.

Each institution, school, organization or university has a good appointed plan for such unfortunate events. Usually, all the employees, students and generally all the involved persons are instructed how to proceed in such situations and even simulations are done through a year. However, no simulations are done for pandemic crisis, meaning that the higher education institution did not experience for example a “one -week online learning plan” or “a social-distancing day”, they did not have a tested plan that would help the academic environment to be more prepared for situations such as the latest pandemic COVID-19.

2.1. Planning for a pandemic

Many campuses did not have strategic plans for recovery in case of pandemic. Universities around the world crowded to use the platform of the moment Zoom Conference. Whereas, a continuity plan should follow a procedure and it is not only about teaching online instead of face-to-face classes (The TPHE Collective, 2020). The business continuity planning is usually conducted by a team, which analyses the risk and business impact. The team is meeting on a regular basis to emphasize details and test the hypotheses. The objective of a BC plan is to ensure that the institution can operate further, while protecting students

and staff. There are many aspects that should be taken into consideration in this regard (New College Oxford, 2011):

- *Admissions;*

The incidence of an outbreak of pandemic would require a different procedure for students' admission, that should be documented and well-prepared.

- *Examinations;*

Conducting an examination could be rather challenging, not only the environment is changed but also the content itself. Instructors might need to adjust the examination procedures and to spend extra time to adapt the exams to the new normality.

- *University services;*

The incidence of an outbreak can definitely lead to closure or withdrawal of laboratory, lecture and library facilities, as we have seen happening lately.

- *Staff and services;*

The university's ability to provide business continuity can vary depending on the incidence of pandemics among the local society. Services could be completely cancelled, but some important services are not allowed to be interrupted since the goal of business continuity must be balanced with the operation continuity, of course in safe conditions.

- *Teaching;*

Because of the pandemic situations it is highly recommended to avoid large gatherings to reduce the spread of infection the university services are generally cancelled, the courses taught may be delayed or migrated online environment. A common description of a such situation is lately known as – emergency online teaching (McMurtrie, 2020).

- *Library;*

In an optimistic scenario opening hours may have to be restricted but most probably libraries are also closed in such conditions. In such situation institutions might think of a back-up for students like granting limited access to online resources.

- *Information technology;*

There are three employees dedicated to IT department that need to help maintaining the computer rooms and the university digital infrastructure. The staff from this department is the pillar in this short digital transformation process.

The BCM Planning Cycle is a complex process that could really help an institution cope with crisis situation in a more settled way. Given that teaching, research and learning are the main activities of the university that are most susceptible to interruption during crisis the following elements are primary guidelines to be considered during the development of your unit academic continuity plan (Gulachek, 2005; Hanover Research, 2010):

1. Commitment of the institution;

The plan begins with a university-wide commitment for development and supporting. The plan will be initiated when the situation clearly indicates that the business has been or will be interrupted for longer than a short or acceptable time. The plan is not intended to resolve routine interference, such as planning or routine maintenance. On the contrary, during and after a catastrophic event, it is crucial to have a good and tested plan, because a catastrophic event prevents normal business operations from being resumed within a clearly defined time frame.

2. Framework and planning cycle;

Having a framework ensures the planning process, the formulation of the plan, the priorities and dependencies in the plan, the testing of the plan, the procedures for maintaining and updating the plan, and the definition of the responsibilities of individuals and units before, during, and after the activation of business continuity plan.

3. Involved team;

Representatives of each functional area or business unit are responsible for determining, prioritizing, recording and updating their plans, covering all aspects of services and facilities. The members of the business continuity team are responsible for summarizing and integrating all inputs from each functional area into the overall plan. The team coordinator is responsible for the overall coordination, deployment and improvement of the plan. They must be good, reliable managers, have strong leadership and problem-solving skills, be able to organize work according to procedures, and be creative when things are not going according to plan.

4. The scope of the plan;

The scope of the business continuity cannot be unlimited, so it is specifically important to define the comprehensiveness of the plan: whether it covers all major potential threats (serious weather events, terrorist threats, cyber-attacks, pandemics) or a subset of these events. It should be defined whether the plan covers the campus entirely or partially.

5. Business continuity and risk management;

This stage maintains the academic continuity plan in ready state. Maintaining the BCM process must be constant and dynamic, a BCM that is not tested and updated in a constant manner will be of little use if a disruptive event hits the institution. These changes have to be monitored continuously; impacts, risk and strategies reevaluated. The risk analysis, which is composed of risk assessment and evaluation, is also critical processes. The basic deliverable on this level is the identification of threat scenarios (Sheehan and Yanosky, 2007).

6. Analysis of business impact;

Business impact is the analysis of the financial and operational impact of disruptive events on the organization's business areas and processes. Financial impact refers to monetary loss and operational impact represents non-pecuniary

losses related to business operations, including loss of competitive advantage, low employee morale, and damage to institution's reputation.

7. Documentation;

All necessary information related to plans, critical resources, facilities, management structures, priority/subordination, documentation and personnel should be kept in a secure location that can be physical, virtual or cloud based. This information should also be provided to key personnel who will be responsible for coordinating continuity during and after the incident. Operational information will help those who are directly committed to maintaining/restoring functionality. Individuals who are most familiar with the application may not respond. The documentation will help others perform the required tasks. The emergency template for all functions included in the plan should include a summary of business impact analysis data, resources (hardware, software, data) required to run the application, dependencies on other applications and resources, supplier contact information, and the person being informed is in a recovery state, a list of key people and how to contact them.

8. Train, maintain, test and re-assign the business continuity plan;

One of the major strengths during the plan exercise is the possibility for the participants to find the gaps in resources, plan and communication. This step might require revising the initial plan using the simulation model. In this stage it is also easier to recognize the limitations and to become aware of the communication issues that may occur under these kinds of extreme situations (Ozgur, Jehn and Iant, 2012).

Given the latest circumstances it is a common practice lately among universities to have a dedicated webpage on their official website with an official communication, suggestions and recommendations for further procedure and processes for academic continuity. Although, this is more common in Western European and North American Universities, through a screening of universities websites this aspect was easily noticeable. These universities had better-structured plans (or at least they did make them public) with better defined guidelines for planning, exercising and determining vulnerabilities, in order to solve them prior to an unfortunate event. While there does not exist a secret recipe an effective and successful academic continuity, this topic is certainly highly related to an institution information technology strategy.

2.2. IT Business Continuity in HE

The learning space nowadays is expanding by creating new learning environments. Students are no longer limited to classroom teaching, because learning has gone beyond information and communication technologies (ICT). The ICT evolution has begun to have a comprehensive impact on the student's learning experience, challenging them and teachers to reassess and realign their perceptions about learning and learning instruction.

Although no one expects higher education to predict the future in a crystal ball and, IT and executive leaders must be prepared for the worst-case scenario. Unfortunately, the COVID-19 pandemic shows that although many universities have developed some IT business continuity plans, the formality and maturity of these plans are still prohibitive. In an analysis of higher education readiness after COVID-19, Susan Grajek, Vice President of Community and Research at EDUCAUSE and D. Christopher Brooks, Research Director of the Analysis and Research Center at EDUCAUSE, found that only 42% of organizations have formal plans for IT business continuity. The plans include the necessary strategies, resources, and procedures to enable the continued or rapid recovery of important technical infrastructure and systems and normal business operations after a natural or man-made disaster (Ribeiro, 2020).

Regardless of the nature of the disruptive event, if students are absent from class this is a risk of falling behind, of being possibly unsuccessful or even abandoning their studies in a crisis situation. Luckily, there are proactive strategies and tools for accommodating students, which cannot physically be present for a successive number of classes (Bates, 2013). These activities are designed to keep students active and successful in courses during either short or long-term institutional disruptions.

When an institution is considering or has migrated to the online environment on a large scale, there are a set of factors that ensure the success of the transition. No matter, where the university is situated in the continuity of online learning the preparation of this movement should go on. When an institution is closed due to a local or global epidemic, interrupting the class comes with really big consequences, such as: huge economic losses to the institution and an unknown negative impact on students who are forced to suspend education. Prompt actions to implement the continuity plan and communicating it to students, faculty, and staff, keeps the growing anxiety under control and takes the campus community from panic mode to the problem-solving mode (Greeno, 2020).

Below are some proposed recommendations in building the IT BC plan:

1. Don't let technology hinder learning.

When eagerness to transfer the course content online occurs, professors may tend to use any technology platform they like most. In a crisis situation, this kind of action may cause a lot of trouble, including quality control issues, future scalability issues, and ultimately confuse students. Regardless of which learning module system or technology an institution decides to use it is very important to keep the course structure consistent.

2. Standardization, template, and systematization.

There is still a long way to go to ensure that the class runs on the same schedule and centralizes the location of all virtual learning content. For sure there should be created a “template course” that all faculty and staff will use to build their online courses. Then all the course outlines, course materials and links

required by the students should be easily found in the same and logically organized location within the course materials/outline. Although I support the blending of innovation within the learning theory, in the case of large-scale transition of it into online, standardization might be the key for both students and teachers.

3. Before crisis hits, it should have been a designated institutional task.

In disaster preparedness mode and in crisis, leadership must be more instructive than they are used to in order to establish a university-wide adoption plan. University staff is often reluctant to be told what to do, but in strategic continuity plans this is made for the sake of educations that could be disrupted. These requirements are meant to help students to get guidance and find the content they need in their first online learning experience, not to deprive teachers of academic freedom (University of British Columbia, 2010).

4. For professors who have never lectured online, special assistance may be required.

The first online teaching might be intimidating, especially when there is not enough time to prepare. The idea that mass production of asynchronous materials will quickly be available is unrealistic. Real-time video conferencing is the most natural starting point because they create proxies for the classroom environment. As faculty members become more comfortable in the digital environment, they will gradually realize that integrating other online teaching tools like chat forums, polls, desktop videos, and other asynchronous content will bring students more powerful experience.

5. Consider long-term digital learning strategies.

Institutions that have digitized learning content and technology have huge advantages nowadays. They can easily transfer students on campus to equivalent online courses that provide the same quality learning experience (Schweber, 2008). They may have a strong online instructional design team, working exclusively with teachers. Finally, these institutions may also have external partners that can help them quickly build any other digital content they need.

The potential global pandemic forces higher education institutions to consider moving online because of necessity. Whether this will have harsher impact on campuses is yet to be determined. However, this recent pandemic outbreak should be a warning sign to everyone.

Educational continuity planning through the use of online technology assets is an important tool for preparation. If done well, the result will not only be preparation for still unseen things, but also greater acceptance of online learning. Smart leaders will establish a continuity plan for the short term, with a view to realizing the future vision of a more resilient and technically leveraged campus.

3. THE ROLE OF CHANGE MANAGEMENT IN BUSINESS CONTINUITY

Many things may put your business at risk, including changes in organization, people or technology. If not managed properly, these risks may have a significant impact on your ability to carry out activities or business functions.

Change management can help you avoid making unnecessary or hasty changes to your business without thorough planning and analysis, thereby avoiding negative results, such as business interruptions, loss of productivity and profits, or even closure (NI Business Info, 2020). When establishing and implementing a business continuity management system (BCMS), serious management challenges arise: the BCMS must be maintained and placed in a continuous improvement process.

Universities are prone to almost constant change at a certain level, for example:

- Changes in staff;
- Relocations/restructuring of departments;
- New buildings;
- New research contracts;
- New suppliers/collaborations;
- New courses or course designs;
- New IT systems.

These changes have a specific potential to impact the business continuity arrangements and also these can come along caused by a crisis situation. Therefore, business continuity plans must be regularly updated. This means that if an institution relies only on periodic reviews to its academic continuity plan, they will be out of date almost all the time. To make sure that business continuity strategies are always valid, it is required a more proactive approach to managing change.

4. CONCLUSION

The growing demand and expectation that distance learning will become a continuing component of institutions and academic continuity provides unique opportunities to enhance distance learning. In many institutions, distance and online learning is a supplementary activity. However, as more and more institutions require distance learning to become a permanent part of the teacher's role, a symbiotic relationship is taking shape.

Once moving forward in demanding continuity capabilities as part of their mission and goals, the teacher's role requirements will also include online instruction delivery capabilities. The symbiotic relationship between institutional and academic continuity and online learning will ensure that competencies in this emerging pedagogy will be combined with teaching services to become an essential part of the role of higher education in the 21st century.

Basically, academic continuity will certainly become at some point in time an important aspect for institutions alongside with mission, vision and goals. Universities need to develop academic continuity plans for protecting their ability to operate in an uncertain environment. Basically, in the academic context, distance learning strategies and information technology has become important element parts of the BCM armory.

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THE IMPACT OF DISPERSED KNOWLEDGE ON ENTREPRENEURSHIP

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Abstract

The specificity of the entrepreneurial activity is defined by a combination of factors that constitute the basis for profit-making. Of said factors, a particular importance is assigned to the knowledge held by the leading market actor, namely the entrepreneur. The impossibility of achieving entrepreneurship without an informational base seems obvious from our perspective. Under these circumstances, we advocate for assuming the entrepreneurial act in close connection with the possession of specific knowledge that is both dispersed and, at the same time, individualized. On this basis, the entrepreneur makes a number of decisions he deems meaningful in obtaining the entrepreneurial profit.

The aim of this article is to identify the effects of the dispersed nature of information on the individual activity level, by using qualitative synthesis methods.

By accepting the principles of the Austrian School of Economics, we completely agree with the specificity and subjectivity of individual knowledge. In addition, we acknowledge that even in the hypothetical (and utopian) situation in which all individuals have the same undifferentiated knowledge, the decisions would be different and this can be justified by human nature itself. The degree of risk-taking and uncertainty is different, and individual decisions trigger a domino effect on decisions made by others. The opportunities are never the same.

Keywords: *entrepreneurship; entrepreneurial activity; dispersed knowledge; specialization.*

JEL Classification: L25, L26, D81

1. INTRODUCTION

Subjectivism hall-marks the entire activity of market actors. Each individual stands out from the others, even though there certainly are similar elements to them. By accepting this premise and granting normative value to it in this research, we set out based on principles that were less often adopted and approached by the current economic literature. Situating ourselves between the aforementioned markers, we aim to ascertain how the subjective dimension (that is found within

every actor) can influence the activity on the marketplace, via an exclusive analysis of the driving force of the market: *the entrepreneur*.

Individuals' dispersed knowledge determines the heterogeneity of decisions made by entrepreneurs. The distinctive manner of perceiving information and, implicitly, how it must be transformed in order to be placed on the market, goes toward growing and developing the competitive process. The existing competition on a market stimulates entrepreneurs to create or discover new opportunities to be harnessed, and this mechanism is based on everyone's imperfect knowledge.

This research endeavour particularly focuses on identifying the impact of dispersed knowledge on the entrepreneurial activity; in this context, we resorted to making an integrative review of the specialty literature on the researched topic. The following phase comprised an extrapolation of the existing views in order to identify the subjective limits of knowledge and their effect on entrepreneurship.

2. LITERATURE REVIEW

Individuals base their entire activity on the knowledge they possess, which determines a unique behaviour that is almost impossible for someone else to faithfully replicate. In reality, the same can also be said about the same individual acting at different times. The economic literature provides significant contributions that refer to *knowledge*, in the context of the activity conducted by entrepreneurs. In our opinion, the impossibility of entrepreneurial activity without a prior informational basis is patent and it is furthermore supported by reality and found therein.

There is no such thing as perfection, and outlining a scenario based on perfect knowledge does not provide any room for manoeuvre for any independent activity, and even less so for entrepreneurial activity. This can be justified in a straightforward and concise manner: if there are no *surprises* and all the variables are predetermined, then there is no mission incumbent on the entrepreneur, particularly if this would entail changing/altering a scenario that has been perfectly directed previously. The limits of human reason have been and are generally accepted, and in such a scenario it is impossible to omit the inherent bias of the knowledge possessed by individuals. No individual can have perfect knowledge (Mises, 2018 [1949], p. 25). Providing information to the other members of society entails a broadcasting process that is associated with the subjectivity of assimilating and perceiving new knowledge. Regarding the foregoing, Frank Fetter states that the entrepreneurial action is conducted to the best of the abilities and the subjective information possessed by each and every individual (Fetter, 1928 [1915], p. 424).

The knowledge dilemma created major problems in states that have negated or omitted its partiality, of which we mention the case of socialist command economies, where the planner embodied total and perfect knowledge. Friedrich von Hayek draws attention to the inconceivability of societies guided by

centralization by assuming and promoting the absolute knowledge of a single individual with supreme decision-making power on any activity. The assumption that a single person can incorporate absolute knowledge blatantly omits the reality on the market (Hayek, 2014 [1945], p. 93). The superiority of any individual, both in relation to the other individuals and within the competitive market process, is conferred by the possession and harnessing of unique information for the purpose of making a profit (Hayek, 2014 [1945], p. 84).

Limited, imperfect knowledge feeds into the existence of uncertainty, which is essential for conducting the entrepreneurial activity (Mises, 2018 [1949], p. 16). The decisions made based on specific, partial and individual knowledge are central elements in differentiating entrepreneur actors from the other participants in the market process.

Whether created or discovered, entrepreneurial opportunities require previous knowledge. An individual's incapacity to create or discover profit-generating opportunities resides in a lack of specific knowledge. Frank Knight highlights this aspect when referring to the actions of individuals that cannot be explained by ignorance or complete knowledge, but by partial knowledge (Knight, 1921, p. 199). The transformation of uncertainty into entrepreneurial advantages is achieved via *a superior knowledge and superior insight* (Fetter, 1977, p. 244).

Market dynamics causes economic actors with entrepreneurial skills to act in perpetually uncertain conditions, as there is ongoing transformation, and knowledge cannot entirely cover the discrepancies between time t_0 and time t_1 . The Hayekian entrepreneur is identifiable by means of *competition* and *knowledge* (Hayek, 2014 [1945]). The two variables provide it with an advantage on the market compared to other individuals. Thus, (entrepreneurial) knowledge is subjective and this leads to a series of consequences that can be easily anticipated: the impossibility of quantification, the differences in applying specific knowledge within the market, etc.

The literature includes a particular case of an entrepreneur conducting his activity solely based on the knowledge he possesses. Kirzner puts together the portrait of an actor whose knowledge makes up for his lack of capital, thus creating an individual whose essential trait is *alertness*. Referring to the Kirznerian entrepreneur, Vlad Topan notes that in this specific case information appears to satisfy Kirzner's immateriality requirements (Topan, 2013, p. 113). The entrepreneurial individuals' capacity to adapt stems from the information accumulated from experience (Kirzner, 1973, p. 13), and the pricing system partially tones down the issue of incomplete information (Kirzner, 2009). It is worth mentioning that the entrepreneur's place cannot be in a utopic world of perfect competition where individuals have all the information.

Rothbard explains the existence of market uncertainty by means of an insufficient knowledge of this phenomenon and the incapacity to entirely foresee the choices of individuals. In fact, the forecasting error is also justified by the

limited knowledge of individuals, derived from the subjective vision that takes the form of different interpretations. In a context dominated by change there is neither a certain knowledge of the future, nor a permanent anticipation of decisions made by consumers. The ubiquity of uncertainty and limited information (by means of human nature itself) determines errors in action (Rothbard, 2001, p. 7).

Partial knowledge defines human nature. Starting from the aforementioned opinions on *dispersed knowledge*, we admit a series of effects on the entrepreneurial activity that we believe we need to highlight.

3. METHODOLOGY

The goal of this article is to identify the influences of *dispersed knowledge* in the entrepreneurial process existing on the free market. In order to achieve the aforementioned goal, we decided to synthesize the relevant opinions from the specialty literature on partial/dispersed knowledge in the context of the activity of individuals, and subsequently to draw some directions to help identify its effects on the entrepreneurial activity. To this end, our endeavour entailed using an integrative approach (*integrative review*) and *qualitative synthesis methods* as research tools.

Conducting an integrative review facilitates the understanding of important perspectives in the specialty literature on the topic of dispersed knowledge. To this end, the collection and selection of necessary information for the literature review process was carried out starting from the methodological individualism found prevalently in writings by the followers of the Austrian School of Economics.

The next phase means taking the obtained information and extrapolating same to the market process in order to ascertain the impact of dispersed knowledge on the entrepreneur's activity. In this endeavour we used logic and deductive reasoning.

4. RESULTS AND DISCUSSIONS

Following the synthesis of opinions regarding *dispersed knowledge*, we identified a series of effects that it has on the entrepreneurial activity. Of these, we admit a few necessary mentions, grouped into three primary directions to be developed herein below: (1) creating or ascertaining entrepreneurial opportunities, (2) the presence of uncertainty and competition, and (3) division of labour and international specialization.

4.1. Creating or ascertaining entrepreneurial opportunities

Irrespective of the acceptance adopted in reference to the manner in which the entrepreneur manages to access a market (whether by creating or by ascertaining opportunities), we admit the imperativeness of dispersed knowledge at an individual level. For clarification, we will develop both directions in order

to illustrate the impact of subjective, dispersed and partial knowledge on the entrepreneurial activity.

On the one hand, in order to create entrepreneurial opportunities, the entrepreneur needs to possess certain specific knowledge. The identification of a niche for which it can create a new product or service on a certain market is based on *information*. The lack of specific knowledge cannot provide the entrepreneur with the opportunity *to create something* that will generate profit, and this type of behaviour restricts his chance to be an active part within the market process. The information possessed or obtained by entrepreneurs is filtered at a subjective level and then translated into products designed for consumers. In this context, we find it necessary to mention as follows: the same information possessed by several individuals can be transformed in different manners, resulting into distinctive products designed for consumers. This type of behaviour is justified by the deeply subjective dimension of entrepreneurial decisions, which are impossible to standardize and replicate. Moreover, there are situations where although individuals have the same piece of information, they act differently: some may choose to access a certain market, others believe the opportunity is not necessarily able to generate profits, etc.

On the other hand, following the direction proposed by Israel Kirzner, we would like to highlight the impact of dispersed knowledge on the identification of entrepreneurial opportunities. In Kirzner's vision, the entrepreneur does not require any capital to conduct the entrepreneurial activity (Kirzner, 1973). In order to counterbalance this deficiency (although the author does not necessarily consider it an issue), the proposed individual has a series of skills, the most important of which is *alertness*. The Kirznerian alertness is determined by certain prior knowledge that helps in ascertaining the opportunities that already exist on a random market. In fact, the Kirznerian entrepreneur is a *discoverer* guided by *alertness* and *knowledge* (Kirzner, 1979). The decisions made by the entrepreneur are based on imperfect knowledge in the market context. However, it is necessary to highlight an important aspect that sets the Kirznerian entrepreneur apart from the other individuals: the entrepreneur possesses *superior knowledge* that allows him to identify a source of information that can be used in order to achieve profits on a certain market (Kirzner, 1973, p. 67; Kirzner, 1999).

Under these circumstances, we would like to emphasize once again the heterogeneity of opportunities that are available to entrepreneurs, based on partial, incomplete knowledge. However, these may be labelled (whether these opportunities are created or discovered), we would like to reaffirm the importance of specific, partial and subjective knowledge in the entrepreneurial activity.

4.2. The presence of uncertainty and competition

Building a rationale based on perfect knowledge is a serious error and furthermore an unacceptable omission of the limitations of human reason.

Individuals have limited, partial knowledge, and this translates into admitting the error, irrespective of the dimension used for carrying out the analysis (market, behaviour in society, etc.). On the market, partial knowledge generates uncertainty, and entrepreneurial actors must assume the incapacity to forecast and anticipate everything. Risk and uncertainty make the entrepreneurial activity possible because, under the conditions of total, hypothetical (and unrealistic) knowledge, entrepreneurs would no longer be able to reap benefits from the *unforeseen* and thus would not be motivated to make any effort. In fact, in a world of absolute knowledge, all variables are already given and change does not exist. In effect, things are nowhere near that; all on the contrary. Uncertainty does not limit the activity of the driving force of the market – i.e. the entrepreneur – for an equally simple reason: the higher the uncertainty, the larger the potential profits in terms of rewarding the entrepreneur’s audacity.

Uncertainty and the possibility of turning a profit from *incomplete/imperfect* circumstances stimulate the entrepreneur to act on the market in order to make a profit. The problem the entrepreneur is faced with relates to the existence of other individuals on the market who, in their turn, also have a series of dispersed knowledge that is adapted and filtered via subjectivism. Thus comes the competition. The competitiveness of the entrepreneurial activity resides in the partial knowledge of each individual. As we mentioned in reference to entrepreneurial opportunities, subjectivism influences how entrepreneurs perceive and transform information into products/services designed for the market. Going forth in this direction, we accept dispersed knowledge as the primary determining factor of the existing competition within a free market. If individuals did not differentiate themselves via the knowledge they possess, there would be no competition, and this would engender catastrophic implications if we are to look at the models of states where competition was replaced by a single decision-making factor, namely the planner (see the failure of states with a centralized economy, that are not guided by competitive principles).

The impossibility to quantify dispersed and subjective knowledge can be seen as an incentive to act within the market process, given that every individual is unique and has a different perception of the totality of transactions occurring at a given time (Boettke, 2002). Dispersed knowledge, competition and uncertainty ultimately determine the individual to (re)focus on a certain area and, in such a context, we accept the division of labour.

4.3. The division of labour and international specialization

Dispersed knowledge at an individual level is harnessed in order to obtain certain advantages, irrespective of the field of action. Starting from this premise, we accept that every individual will try to become specialized, as Adam Smith noted, in the field in which they are knowledgeable and skilled. We can state that

the division of labour is one of the factors contributing to the progress of societies, as well as to the disparities that occur in terms of development.

Building a system based on the division of labour helps obtain advantages at an individual level, as well as across the society or the nation. Consistent with Smith's view, we recognize the advantages of the division of labour: (1) enhancing the skills of each and every individual, (2) saving work time as a result of specialization, and (3) the invention and use of machines that facilitate and streamline the manufacturing process (Smith, 1992 [1776], p. 9).

The free market process is the only one capable to stimulate the activity of entrepreneurs and ultimately lead to progress. *The market is not a place, a thing or a collective entity. The market is a process, actuated by the interplay of the actions of the various individuals cooperating under the division of labour* (Mises, 2018, pp. 261-262). International specialization and the division of labour are the keystones that validate the argument for the advantage of international commercial exchanges. Ultimately, the main goal for the division of labour and voluntary social cooperation is the achievement of certain individual goals. Moreover, in the decision-making process of allotting resources to individuals, the direction for action is guided by wishes. Resorting to trade provides advantages to all participants. In the context of individual selfishness geared towards personal gain and the satisfaction of needs or wishes, market actors have the option of international commercial exchange.

Based on partial information and dispersed knowledge, individuals choose to pursue their competitive advantage and to specialize accordingly. Building on the *division of labour*, we can deduce that the actual mission of the entrepreneur is to decide and to take the risks concerning the domain in which he decides to specialize, based on the knowledge it possesses, and on the capital or resources he has available.

The international specialization and division of labour have laid the basis of a new vision on the conduct of trades between nations, as well as the benefits it can entail. By means of the subjective knowledge he holds, the entrepreneur manages to focus the activity toward a specific market segment that provides the possibility of making a profit. The more specific such partial information is, the more the entrepreneur can address (at least in theory) the consumers' needs and wishes. He becomes specialized and, depending on the knowledge and his subjective perception of the reality, he creates or chooses a niche for him to subsequently exploit. However, one noteworthy aspect is connected to the imperativeness of having dispersed and specific knowledge. Without such knowledge, a random individual or an entrepreneur will not be capable to create or identify an opportunity for the exploitation of which and turning a profit therefrom they would have to resort to the division of labour and to become specialized. Once this criterion is met, the voluntary (and mutually advantageous) exchange provides benefits for the involved parties.

Finally, we believe that having specific knowledge is necessary in order to carry out entrepreneurial activities. The impact thereof is, in our opinion, clearly emphasized, and this should draw attention to the importance of accumulating knowledge. The entrepreneur acts based on the subjective and partial knowledge he possesses, in a competitive context and for the purpose of achieving entrepreneurial profits.

5. CONCLUSIONS

Admitting that the entire activity conducted by entrepreneurs is based on specific knowledge, its impact cannot be disregarded. Entrepreneurial decisions are built on subjectivism, and this has major implications on partial knowledge. Individuals devise their premises for accessing a specific market on subjective bases and, at the same time, on partial knowledge. Uncertainty and competition both stem from the same limited knowledge, and entrepreneurs are constantly faced with decisions influenced by subjectivism. Perceptions on market changes can be flawed, and this causes the least competitive players to be eliminated from the market. The division of labour and international specialization are component parts of the specificity and partiality of knowledge.

Dispersed knowledge exercises a series of influences on individuals and the market, influences that can be anticipated to a higher or lesser extent. Basing our analysis on methodological individualism, we once again reaffirm the importance of the individual *per se*. The matters we emphasized throughout this research allow us to argue that the entrepreneurial act would be rendered impossible without specific knowledge. Moreover, the economic performances of individuals and, by way of extrapolation, of their home states, have the same source (dispersed knowledge). To complete the picture, we would like to note that the division of labour is also based on specific and subjective knowledge.

In conclusion, dispersed and specific knowledge can be seen (alongside the entrepreneur) as *the driving force of the market process*. Its subjective nature amplifies the impact it has on entrepreneurship and, implicitly, on economic growth and development.

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SOME THEORETICAL AND PRACTICAL CONSIDERATIONS ON THE ROMANIAN LEGAL REGULATION OF INTEREST FOR MONEY OBLIGATIONS

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Abstract

Government Ordinance no. 13/2011 defines the legal notion of interest on money as the amounts in cash (possibly other benefits, under any title or denomination) to which the debtor agrees as the equivalent of the use of capital; the parties are free to set, in conventions, the interest rate both for the repayment of a loan of a sum of money and for the delay in the payment of a monetary obligation. Furthermore, remunerative interest has been settled as the interest due by the debtor of the obligation to issue a sum of money at a certain time, calculated for the period before the maturity date of the obligation and penalty interest has been settled as the interest due by the debtor of the monetary obligation for the non-fulfilment of the respective obligation at maturity. This article intends to analyse the evolution of the legal regulation of interest for money obligations in modern Romania, the practical consequences and the problems that the doctrine and the case law have so far pointed out in order to propose a number of solutions.

Keywords: *interest for money obligations; meanings of the concept of interest; modalities of expression of interest; levels of interest; flow rate; the principle of nominalism.*

JEL Classification: K12, K22, K35, G21

1. GENERAL THEORY OF THE LOAN AGREEMENT WITH INTEREST

The consumer loan agreement is, in its legal nature, a gratuitous convention; however, by way of exception, this can be concluded gratuitously, thus gaining new particular aspects, common to the loan agreement with interest (Dincă, 2013). This latter convention is regulated, equally by the consumer agreement norms, as well as by other normative acts. In fact, we can define de loan agreement with interest as that particular gratuitous consumer loan which has as its object a sum of money and which generates two major obligations for the borrower (Ciucă, 2000): that of repayment of the capital (pecuniary services) and payment of debt (sums of money, other movable assets, positive or negative services).

For a more in depth understanding of the subject dealt with in this chapter, one needs a succinct chronological presentation of the main national norms regarding the legal interest.

Article 1.589 from the old regulation, established the legal interest at 5% in civil matters and 6% in commercial matters (Alexandrescu, 1910). This text was annulled by art. 49 from the 19th of May 1925 Law which legislates a new calculation system of the legal interest: in civil matters 4% over the discount rate of the National Bank, and in commercial matters 6% over this rate (Hamangiu, Rosetti-Bălănescu and Băicoianu, 1997).

During the communist era, the provisions of the legal interest developed in the Decree no. 311/1954, its quantum being of 6% per year. The decree firmly forbade establishing in contracts a larger interest than that already passed by law, under the sanction of that clause becoming void and of the transfer in the state's property of the sums of money received by the creditors as interest, a measure which did not exclude the application of penal sanctions provided that all requirements are fulfilled. In addition, the anticipated cashing in of interest was forbidden, as well as the compound interest (Urs, 2005). Nevertheless, the text of the decree included some exceptions in favour of financial institutions.

By relating to the specifics of market economy, after 1990, the Decree no. 311/1954 was no longer used, and it was abolished by Law no. 71/1998. However, the newly normative act, maintained the same percent of the legal interest (Deak, 2007). This legal vacuum was rectified by O.G. no. 9/2000 regarding the level of the legal interest for money obligations which stipulated that in civil agreements, the legal interest is established at the level of the interest assessed by the National Bank of Romania (BNR) diminished by 20%. In the commercial area, when the debtor held the status of trader, the legal interest was calculated in accordance with the official rate of the discount rate determined by BNR. In the external trade agreements or other economic relations established at an international level, when the national regulations were applied and the payment in foreign currency was arranged, the level of the legal interest was of 6% per year (a percent available today). In respect to the early payment of interest, the O.G. stipulated a threshold of 6 months, a limit which could not be surpassed, and the interest thus acquired by the lender was his irrespective of the ulterior economic fluctuations. The compound interest was still forbidden, remaining only the possibility of signing special conventions in this regard. According to these regulations, the interests could produce other interests (capitalization of interest), but only after the initial ones were due and only for interests owed for a period of at least a year (Nour, 2009).

At present, article 2176 from the new Civil Code shows that: "the provisions regarding the loan with interest are applicable, correspondingly, on the grounds of a contract, whenever, a payment obligation with a deadline arises, of a sum of money or other similar goods, as long as there are not any particular regulations regarding the validity and execution of this obligation". Interpreting these provisions, as mentioned in the introductory paragraph, it is shown that the loan

with interest has a double object, respectively the obligation of repaying the money borrowed and payment of interest (Baiaş *et al.*, 2014).

In addition, in analysing the dispositions of the following article from the contemporary civil regulation, one concludes that the interest can be established by the parties “as sums of money or other services under any title to which the borrower complies in order to use the capital”. Thus, the interest resides in a sum of money or other movable assets – particular to the consumer loan agreement – presented as possibilities (Popa, 2016).

Which are the subjects of law which can grant money loans with interest? The answer to this question was offered by the authors specialized in this field who admitted that is a prerogative of both natural and legal persons (Cărpenaru, Stănculescu and Nemeş 2009). Granting loans by natural persons as lender is legal in light of the provisions of the new Civil Code, but this aptitude should be regarded restrictively, on the grounds of not carrying out an unauthorized professional activity of lending with interest (Prescure and Spîrchez, 2017). In respect to legal persons, art. 3 of Government Emergency Ordinance no. 99/2006 stipulates the fact that: “credit institutions, Romanian legal persons, can organize and function in one of the following categories: banks, corporate organizations, saving and lending bank for residences, mortgage banks”.

In order to avoid confusion, it is necessary one makes several statements on the variety of acceptations under which the term “interest” is used in the legal literature and practice. Covering as a whole and thoroughly interpreting the provisions of the new Civil Code, the specialized authors present two significations of this concept: the quantum paid on the grounds of using the capital (right to use), but also the damages-interest owed by the borrower (moratorium interest) in case of a delay in repaying the lender (Dumitru, 2010).

Considering another perspective, the doctrine considered that the term of “interest” can have three meanings, respectively: “natural fruits, representing a remuneration of the capital, of the moratorium damages-interests and in the sense of unrealized benefit to the sum of money of which one was deprived of” (Diaconescu, 2000).

As far as we are concerned, we agree with the first opinion presented and we propose as an infallible argument art. 1 from the Government Ordinance no. 13/2011 regarding the remunerative and penalizing legal interest for money obligations, as well as for the regulation of several financial-fiscal measures in the banking field, a normative act which is constituted as a legal framework on this subject: “The parties are free to agree in contracts, upon the interest rate for the restitution of a money loan, as well as the delay in money payment” (n.n. moratorium interests – “The rule after which the moratorium interest is calculated from the date of the action is applied only in case of non-performance of the contractual money obligations; in the case of civil offenses which have as material object an amount of money, the interest is calculated from the date of committing

the deed; and if the object of the crime is not a sum of money, at the compensations established as the equivalent of the damage, the interests are due from the definitive ruling until the complete payment of the amount of money producing legal interest” – Supreme Court of Romania, Dec. 3/1972).

In order to convey a clear image of the interest loan, it is important to emphasize that this should not be confounded with usury, a criminal offence mentioned in art. 351 from the Penal Code: “Lending money with interest by an unauthorized person is punishable by prison from 6 months to 5 years”. In order to constitute a fact stipulated by the criminal law, two requirements must be met: the active subject of the crime should be represented by an unauthorized person in giving money with interest, and the actual action should have a repetitive character, so as to turn into a habit, a duty of the accused.

The interest may be determined by the parties by conventional means or may be expressly provided by law (Dogaru, Olteanu and Săuleanu, 2009). In this respect, the legislator mentions in the article 1489: “The interest is the one agreed by the parties or, in the absence, the one established by the law”. Following the same rationale, the normative act issued by the Government in 2011 stipulates in article 2 that “If, according to the legal provisions or the contractual provisions, the obligation is bearing remunerative and/ or penalizing interests and in the absence of the express stipulation of their level by the parties the legal interest related to each of them will be paid”. By jointly studying these rules and examining them in essence, we can say that it was desired to protect the borrower from committing abuses by the lender by applying excessive interest rates. However, we emphasize that this protection only concerns the interest as a benefit for the use of the capital, not the damages moratorium interest that does not bear any limit (Muscalu, 2016).

Investigating in detail the Government Ordinance no. 13/2011 regarding the remunerative and penalizing legal interest for the money obligations, as well as for the regulation of financial-fiscal measures in the banking field, therefore, there are two types of legal interest, respectively the remunerative and penalizing ones. As their different legal regime demands an inclination to identify the similarities and differences between them, we will subject each type to a careful study within separate sections.

2. THE LEGAL REGIME OF THE REMUNERATION INTEREST

In most cases, the loan contract for a sum of money is drawn up with the stipulation of a certain amount of interest, which leads to the idea of a presumption of concluding these conventions gratuitously (Boroi and Angheliescu, 2012). Starting from this presumption we can affirm that the signing of such a contract implies implicitly and the establishment of an interest (understood) as an equivalent of the use of capital. Therefore, the remuneration interest, as defined in art. 1, para. 2 of the Government Ordinance no. 13/2011 regarding the remunerative and

penalizing legal interest for money obligations, as well as for the regulation of financial-fiscal measures in the banking field, consists in the amount of money or the benefit to which the debtor is obliged for the duration between the end of the consumer loan and the date of the deadline refund.

The objective law establishes the starting point of the interest rate term, from the day the amount was given to the borrower. If an advance payment of the interest is desired, in accordance with the prescriptions in force, this “can only be made for a maximum of 6 months” – in the case of a fixed rate. In the presence of a determinable quota according to certain factors that arise during the course of the contract, the rules of the new Civil Code continue to refer to the possible surpluses or losses that “are subject to compensation from one rate to another, for the entire duration of the loan, except for the last instalment that always remains earned entirely by the lender”.

How to calculate, more precisely, the amount of the remuneration interest? Respecting the general norms of the present matter, the interest is established by multiplying between: the interest rate, the initial capital offered to the borrower and the period for which the loan was granted (Ciobanu, 2001). The interest rate represents a coefficient, usually as a percentage, per unit of time (Dincă, 2013). For example, if a person borrows for a period of 4 years an amount of five thousand lei with an interest rate of 5%, the interest is determined by making the following calculation: $5/100 \times 5000 \times 4 = 1000$ lei.

The interest level is decided by the agreement of the parties, and in the absence of a decision on the capital, the interest provided by the law will apply. Article 6 of Government Ordinance no. 13/2011 refers to the legal form of the document containing information about interest, namely the written form. Failure to fulfil this obligation will result in the absolute nullity of the clause regarding the extension of the interest rate or the amount of the interest. The lack of such a document materialized in written form does not lead to the non-existence of the obligation to pay the interest, but it subsists, but the legal rate that replaces the fixing of an interest by conventional means will apply.

The legal interest institution is shaped by the establishment of art. 3 of Government Ordinance no. 13/2011 which mentions that “the rate of the legal remuneration interest is set at the reference rate of the National Bank of Romania, which is the interest rate of monetary policy established by decision of the Board of the National Bank of Romania”. For the permanent assurance of the opposability, the interest rate level of the NBR will be published in the Official Gazette of Romania, Part I whenever a change in the level of the monetary policy interest rate occurs.

Although the rule in this area is the voluntary determination of the interest rate, however O.G. no. 13/2011 prohibits the crossing of certain imperative thresholds. Thus, according to art. 5, para. 1 of Government Ordinance no. 13/2011 “in the legal reports that do not arise from the operation of a for-profit

enterprise, the interest (conventional – n.n.) may not exceed the legal interest by more than 50% per year”. In order to operate this exception, it is necessary that neither of the contracting parties have the status of trader, or, although one or both parties hold the status of professional, the company in which they operate does not have a profit. The non-observance of this regulation is sanctioned with the nullity of law of the illicit clause, and the creditor is deprived of the right to claim the interest, in accordance with article 5, paragraph 2 of the Government Ordinance no. 13/2011. By applying this drastic sanction, the legislature has sought to protect the borrower from committing abuses by the lender, but going into the depth of the provisions cited above, we believe that the effects of this nullity are to the detriment of the borrower. We hold this view that the lender could claim that interest payment was the determining cause of the loan agreement and, consequently, the invalidity of the interest clause will attract the nullity of the entire agreement – a fact that prejudices the borrower.

Relative to legal relationships that do not result from operating a for-profit enterprise, the legal interest is calculated according to the rules described above, to which a 20% reduction is applied.

Customarily, the remunerative legal interest is due for the amount of money (capital) given to the borrower at the time of signing the convention. However, with derogatory title, art. 8, para. 2 of Government Ordinance no. 13/2011 emphasizes that: “the interests can be capitalized and they can produce interests according to a special convention concluded in this respect, after their maturity, but only for the interests owed for at least one year”. Therefore, in order for the anatocism to produce its effects it is necessary to cumulatively fulfil the following conditions:

- the drawing up and signing of a special agreement by the contracting parties that will accurately provide for the operation of the mechanism that consists in the capitalization of interests;
- the subsequent interest production will take place after the due date of the initially established interest;
- the interest rates must be due by the borrower for a period of at least one year.

Unlike the national regulations, the renowned jurist Pothier emphasizes in his work the existence of the deduction institution (*Fescompte*) which in French law is instituted in favour of the borrower (Pothier, 1847). Thus, if the debtor returns the capital and the interest related to it before the due date, then the part of the interest specific to the period between the date of payment and the time of maturity will no longer fall to the borrower, as he has no obligation to pay it.

3. THE LEGAL REGIME OF THE PENALIZING INTEREST

Unlike the remunerative interest that is due for the period prior to the term of the return of the capital, the penalty is calculated taking into account the

subsequent duration of the due date (Stoica, 2010). Consequently, the penalizing interest has the legal nature of sanction applicable to the borrower for the delayed execution of the pecuniary obligation and implicitly for the damage caused to the lender (moratorium damages-interest).

Similar to the interest rates, in Government Ordinance no. 13/2011 specifies the task of the parties to conclude in writing the convention that establishes their agreement of will, a condition stipulated *ad validitatem*.

Analysing the particularities of the penalizing interest, in the doctrinal point of view it appears as a penal clause with a determining role in the anticipated mutual establishment of the damage produced to the lender by the delayed execution of the monetary benefit. Therefore, in the following lines we will make reference to the articles of the new Civil Code, which contribute greatly to the formation of the legal regime of the criminal clause. The lack of such an agreement between the contracting parties attracts the application of the penalizing interest to the level or the amount stipulated by the law.

In the court practice prior to the adoption of the new Civil Code, the question was raised whether it is possible and at the same time admitted the criminal clause introduced in the text of a consumer loan contract, which stipulates both the obligation to repay the main debt and the payment of delayed penalties, together with the conventional interest established by law.

This issue that determined the formation of a non-unitary practice at the country level aroused great interest for the Supreme Court, the problem finding its solution by pronouncing an appeal in the interest of the law, valid to the present day. On 24.10.2005 the United Sections of the High Court of Cassation and Justice pronounced the decision no. XI stating that: “a criminal clause establishing the obligation to repay at maturity the amount borrowed under the penalty of late penalties, in addition to the contractual interest agreed on, or the legal interest contravenes the provisions of the law”. One of the considerations included in the decision refers to art. 1 of Government Ordinance no. 9/2000 (currently art. 1 of the Government Ordinance no. 13/2011) showing that it is not allowed to practice, in the civil reports, other interests than those stipulated mutually in the convention, the amount of which can not be higher than the legal interest increased by 50%.

According to art. 3, para. 2 of Government Ordinance no. 13/2011: “the legal interest rate is set at the reference rate plus 4 percentage points”. By Law no. 72/2013 the text of this article has been supplemented with a new paragraph referring to the following: “in the relations between professionals and the contracting authorities, the penal legal interest is established at the reference rate plus 8 percentage points”. That is, a new category of penal legal interest is introduced, without intervening on the old regulation (Veress, 2015).

Looking again from a comparative perspective at the two types of interests, it is noticeable that in the situation of the penalizing interest, the anatocism can not operate, idea reinforced by the government ordinance that regulates this

subject. According to article 1.535 of the new Civil Code, the moratorium damages are due “from the due date until the time of payment”. Art. 1,088 of the Civil Code of 1864 admitted that the interest is due to the creditor from the date of the filing of the request for trial („The provisions of art. 1.088 C. civ. on the basis of which the interest flows from the date of the request for legal proceedings, it must be understood that it is granted from the date when it was actually applied for by a request for legal action, and not from the date when it was claimed, through justice, the provision of the initial object of the obligation” Bucharest Court, Dec. no. 593/1986). If the borrower owes both types of interest to the other party, then the penalty will also apply to the remunerative interests starting on their due date. The civil law in force also provides that the borrower has the obligation to pay the moratorium damages in the amount established by a common agreement or in the stipulated one by the law without having the possibility to prove that the damage suffered by the lender would be inferior (“Since the legal interest is not a compensation that compensates for the non-performance of the obligation to pay the amount of money, but constitutes the equivalent of the damage resulting from the late payment, the creditor does not have to prove that it caused a loss, but only that the debtor was not paid the amount of money within the term established by the convention. The interest is due, but only to the creditor, since the debtor is delayed, which is realized in one way, namely by suing in court” Supreme Court, Dec. no. 1618/1976).

Following the same article in the new Civil Code, two other circumstances are outlined that could arise in practice. Thus, if prior to the repayment deadline the borrower owed the lender a higher interest than the one outlined by the law, then the moratorium damages are due at the same level. If the debtor has the obligation to pay penalties that do not exceed the legal rate, the lender has the right to claim, in addition to the legal interest, other moratorium damages so that the principle of full compensation of the damage is fully respected.

These operations do not represent an equivalent of the financial mechanism in question (anatocism), but only a way of achieving the “gain” that the lender would have obtained by making available to the borrower the amounts he could have had if the repayment had been made on maturity (Chirică, 1997).

In connection with the proof of the payment of interest, we point out that the proof is made in accordance with the common law in this matter. Proof of payment of the interest can be made by a release receipt, to which the payer is entitled. If the creditor refuses to issue the receipt, the debtor has the possibility of suspending the payment (Peptan, 2015). Article 1.501 of the new Civil Code establishes a relative presumption that, when the lender issues to the borrower a receipt that establishes the fulfilment of the obligation to repay the amount of money without any mention regarding the payment of the interests; it is considered that the accessories of the main benefit were paid. Being relative, this presumption can at any time be overturned by the administration of the contrary evidence. The

assumption noted finds its applicability on interest and in case of a partial refund of the amount of money. If the partial payment of the debt, which includes the capital and interest, is mentioned in the receipt, the amount paid will be charged with priority on the interests (Gheorghe, 2011).

Government Ordinance no. 13/2011 also provides that the interest received or paid by B.N.R., by the credit institutions, by the financial – non-banking ones, as well as by the Ministry of Public Finance, as well as the method of calculating them are regulated by normative acts of special character.

In the absence of a voluntary payment from the borrower (capital and related interest), the lender has the right to bring a personal action, in return, in order to fully satisfy his claim. Regarding the restitution of the amount of money that represents the capital, the limitation period of the action is 3 years and runs from the day following the due date. On the other hand, art. 2.526 of the new Civil Code emphasizes that: "the right to action in respect of each of these benefits is extinguished by a different prescription", the term knowing as a starting point the date of the demand of each successive benefit. Thus, if the parties have stipulated that the conventional interest is paid annually, the prescription must be calculated separately for each annual rate (Maurie, Aynes and Gautier, 2007).

Generally, the interests are characterized by a relative autonomy to the primary obligation. However, the extinction of the right to action in respect of the principal claim implicitly leads to the loss of the right to action in respect of interest, in full accordance with *accessorium sequitur principale*. Naturally, the subjective rights belonging to the lender continue to exist with regard to both the principal claim and the accessory claim, having as correspondent an imperfect civil obligation given to the borrower.

As we stated at the beginning of this section, we will make some references to the institution of the criminal clause, the legislator intervening to create a more flexible and predictable legal regime.

Thus, the legislation in force summarizes the fact that the debtor, in this case the borrower, cannot be released from his duties by offering only the default compensation entered by the parties in the content of the loan contract and which constitutes a criminal clause with the role of "sanction" for the debtor (Bunescu, 2005). Also, the repercussions that intervene in the case of the nullity of the main obligation are exposed, namely the fact that this circumstance also attracts the invalidity of the criminal clause. Conversely, it produces its effects a partial nullity, meaning the invalidity of the criminal clause does not determine the nullity of the obligation to return the capital.

One remedy stipulated for the protection of the borrower is to reduce the amount of the criminal clause by the court. According to art. 1.541 of the new Civil Code, this prerogative granted to the judge can be manifested in the following cases:

- when it considers that the penalty is visibly excessive compared to the damage that could be anticipated by the parties at the date of signing the contract. Therefore, this rule recognizes the admissibility of an action in the reduction of obviously abusive interest;
- if the main obligation has been partially fulfilled by the borrower, this will benefit the lender.

In the specialized doctrine, a third situation has been drawn up, which justifies the court to censure the criminal clause, namely when it is excessive in relation to the demands of good morals and of a lawful and moral cause of the convention.

In the case of the remunerative interest as well as in the interest of the penalty interest, there is nothing in Government Ordinance no. 13/2011 to express limitations regarding the legal relationships that have as basis the exploitation of some for-profit enterprises, fully operating the principle of contractual freedom. Consequently, in 2013 the Law no. 72 appeared, regarding the measures to combat the delay in the execution of the payment obligations of certain amounts of money resulting from contracts, a normative act that harmonizes the national legislation with the European legislation regarding penalizing interests.

At the level of the European Union, with the main purpose of fluidizing, improving and increasing celerity in commercial transactions, the Directive no. 2011/7/EU on combating late payment in commercial transactions was issued. There have been numerous considerations underlying this directive, of which we mention by way of example:

- multiple delays of payments that often cause negative consequences on the liquidity of companies, implicitly affecting their financial situation;
- delays that lead to the decrease of the competitiveness between companies since, in such a way, the creditor is urged to contract financing from external sources.

In the view of the European legislator, this conduct of bad credit debtors is a clear breach of the loan agreement, and very small (sometimes even non-existent) interest in sanctioning late payments marks the beginning of a trend among borrowers.

The recommendations addressed to the Member States through this directive have led to the implementation of a new law in the national legal sphere with the objective of discouraging the deliberate delays and contributing to the creation of a culture for the quick payment of debts.

In the area of the targeted recipients there are also public authorities, because these too, by the advantages they have (long payment terms) or by the frequent delays produce unjustifiably considerable costs to the enterprises.

The prevention or avoidance of such disadvantages can be achieved in compliance with the provisions of Law no. 72/2013 that generates an innovative

legal regime related to the conventions concluded between professionals and those signed between professionals and public authorities.

The notion of professional is defined in various normative acts, including Law no. 71/2011 for the implementation of the new Civil Code which states that: “the notion of professional will include the categories of trader, entrepreneur, economic operator, as well as any other persons authorized to carry out economic or professional activities” (art. 8, alin. 1).

In articles 3-5 of the above-mentioned normative act, there are payment terms and interest rates established. For example, in the case of contracts signed between professionals, if a payment term is not provided in the content of the convention, then the dates from which the penalty interest begins are:

- after 30 days from the date of receiving by the debtor of the invoice or any other such equivalent payment request;
- if the date of receipt of the invoice or an equivalent request for payment is uncertain or prior to the receipt of the goods or the provision of services;
- if the law or the contract establishes a procedure of reception or verification, allowing the certification of the conformity of the goods or services, and the debtor received the invoice or the equivalent request for payment on the date of reception or verification or before this date, after 30 days from that date (art. 3 alin. 3).

In the text of the law, a maximum payment term is inserted, applicable in relations between professionals, respectively 60 calendar days. As an exception, this term can be exceeded provided that the established duration is not abusive in relation to the specific circumstances of the case.

Also, the law allows the parties to agree by mutual agreement to make the payment in instalments; in this case, the penalty interest, as well as the other types of damages included, will be calculated in proportion to the remaining amount due.

The following three articles complement the legal core of the regulations by establishing similar terms in the case of contracts between public and professional authorities.

Another way of protecting the professionals is indicated in art. 12 of Law no. 72/2013 which outlines the meaning of the phrase “abusive clause” according to the logic addressed by this normative act. Therefore, practices against good manners or clauses that have as objective the establishment of disadvantageous limits to the creditor related to payment terms, the level of the penal interest or various additional damages constitute abusive clauses.

There is a widening of the intrinsic content of the phrase “abusive clause”, exceeding the restricted scope of the law branch of consumption. In order to qualify as excessive a provision of a contract, the court must take into account certain criteria of individualization, such as: breach of the principles of good faith

or diligence in strictly fulfilling the obligations; serious breach of the practices established between the contracting parties; the rank of the co-contractor in respect to a small or medium-sized enterprise, etc.

Despite these prescriptions, Law no. 72/2013 intervenes firmly through art. 14 attributing the abusive character to some limiting hypotheses. Thus, an absolute presumption regarding clauses operates as follows:

- eliminates the possibility of establishing penalizing interests or of some lower than the legally determined interest level;
- conditions the flow of interest from the delaying of the debtor;
- sets a term other than the legal one, if such an event delays the moment of the interest flow;
- provide for a payment term higher than the legal one, duration integrated in the contracts concluded between professionals and public authorities;
- it removes the opportunity to introduce additional damages;
- introduce a deadline for sending or receiving the invoice.

These exceptions confer on the protection granted to the creditor a public interest character. Therefore, failure to comply with these last provisions entails the application of absolute nullity.

4. CONCLUSIONS

In the process of better understanding the practical side of interest we have conceived a table (see Table 1) taking into consideration the following synopsis:

- interest = amounts counted in money under this title; possible other benefits, under any title or name, to which the debtor commits itself as an equivalent of the use of capital; the parties are free to set, in the conventions, the interest rate both for the repayment of a loan of a sum of money and for the delay in paying money obligation;
- remunerative interest = the interest due by the debtor of the obligation to give a sum of money within a certain term, calculated for the period before the due date of the obligation term;
- penalty interest = the interest due by the debtor of the money obligation for not fulfilling the respective obligation at maturity; Both the remuneration and the penalty interest have a legal value (due under the parties' agreement or the law, but in the absence of an express stipulation of its level by the parties) and a conventional value (due under the parties' agreement or the law to the value of the stipulation expressions of its level by the parties). The level of the legal interest is established according to the reference interest rate of the NBR that is published in the OM when it is modified and can be consulted on the institution's website;
- NBR reference interest rate (RIR) = 1,75% per year (all values below are calculated per year).

Table 1. Interest Synopsis

Legal nature of the relations between the parties	REMUNERATIVE INTEREST	PENALTY INTEREST
In the legal reports arising from the operation of a for-profit enterprise	REMUNERATIVE INTEREST = RIR = 1,75%	PENALTY INTEREST = RIR + 4 % = 1,75+4 = 5,75%
	Conventional REMUNERATIVE INTEREST: unlimited	Conventional PENALTY INTEREST = unlimited
In the relationships between professionals and between them and the contracting authorities, less the interest received or paid by the National Bank of Romania, by the credit institutions, by the non-banking financial institutions and by the Ministry of Public Finance, which are established by specific regulations	REMUNERATIVE INTEREST = RIR = 1,75%	PENALTY INTEREST = RIR + 8 % = 1,75+8 = 9,75%
	Conventional REMUNERATIVE INTEREST: unlimited	Conventional PENALTY INTEREST = unlimited
In the legal reports that do not arise from the exploitation of a for-profit enterprise * * any clause violating these provisions is null and void; In this case, the creditor is deprived of the right to claim legal interest	REMUNERATIVE INTEREST = RIR – 20% = 1,75 – 20%= 1.40%	PENALTY INTEREST = (RIR + 4 %) – 20% = (1,75 +4) – 20% = 5,75 - 20% = 4.60%
	Maximum Conventional REMUNERATIVE INTEREST = REMUNERATIVE INTEREST + 50% = 1.40 + 50% = 2.10%	Maximum Conventional PENALTY INTEREST = PENALTY Conventional INTEREST + 50% = 4.60 +50% = 6,90%
In legal relationships with an element of foreignness when the Romanian law is applicable and when the payment in foreign currency has been stipulated	REMUNERATIVE INTEREST = 6%	PENALTY INTEREST = 6%
	Conventional REMUNERATIVE INTEREST: unlimited	Conventional PENALTY INTEREST = unlimited

Source: the author

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THE LEGAL REGIME OF CIVIL SANCTIONS IN THE STATE OF EMERGENCY MATTER

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Abstract

The state of emergency is one of the exceptional measures that the President of Romania can institute under the conditions of S.93 of the Constitution and of the provisions of the Government Emergency Ordinance no. 1/1999 on the state of siege and the state of emergency. The measures specific to the state of emergency are of political, economic and public order nature and can be applied at the level of the whole country or only of certain administrative-territorial units. For the implementation of the decree of the President of Romania by which the state of emergency is instituted, they issue administrative deeds by which certain obligations are established for natural and legal persons. Failure to comply with these measures will result in disciplinary, civil, administrative or criminal liability. Government Emergency Ordinance no. 1/1999 provided for a civil liability in case of non-compliance with the measures ordered based on the emergency ordinance and the normative acts issued under the system of exceptional conditions. After the state of emergency has been declared, the civil system provided by the Government Emergency Ordinance no. 1/1999 was amended and supplemented by severe civil sanctions and rules derogating from the general system of civil liability. By the Decision of the Constitutional Court no. 152 of May 6, 2020, the exception claimed by the Ombudsman was admitted, the court finding that all the provisions regarding the civil liability from GEO no. 1/1999 are unconstitutional.

The article analyses the legal system of civil offenses in the state of emergency matter with the highlighting of the derogating elements and of the theoretical and practical implications brought by the decision of the constitutional administrative court.

Keywords: *state of emergency; civil liability; civil sanctions; confiscated assets; complaint.*

JEL Classification: K4

1. INTRODUCTION

The Romanian Constitution from 1991, revised in 2003, provides in S.93, entitled *Exceptional measures*, that “The President of Romania establishes, according to the law, the state of siege or the state of emergency in the whole country or in some administrative-territorial units and requests the Parliament to approve the adopted measure, within 5 days from its adoption”.

Although this provision is found, in a slightly amended form, since the moment of adoption of the current Constitution, the Romanian legislation had no

normative act on these exceptional conditions until the beginning of 1999. At that time, in an extremely tense social context, determined by a violent march of the miners to Bucharest, the Government Emergency Ordinance (hereinafter G.E.O.) no. 1/1999 on the state of siege and the state of emergency, published in the "Official Gazette of Romania", Part I, no. 22 of January 21, 1999 was adopted. By Act no. 453/2004 (published in the "Official Gazette of Romania", Part I, no. 1052 of November 12, 2004) this normative act was approved by the Parliament with numerous additions and amendments that significantly changed its content. The latest amendments to G.E.O. no. 1/1999 took place by means of two emergency ordinances adopted in March and April 2020 (G.E.O. no. 34/2020 and G.E.O. no. 48/2020) in the context of certain normative measures determined by the spread of SARS-CoV2 coronavirus.

The state of emergency and the state of siege can be established in situations of crises determined by the occurrence of serious dangers, current or imminent, regarding the characteristics of the Romanian state (sovereignty, independence, unity and territorial integrity), national security, the functioning of constitutional democracy, or by the imminence of the occurrence or by the occurrence of certain calamities.

The scope of the exceptional measures is wider in case of the state of siege, including those of a military nature determined by the imperative to strengthen the country's defence capacity. In the event of a state of emergency, all specific measures shall be limited to political, economic and public policy measures. The public authority competent to coordinate the application of the measures ordered by the decree of establishment is the Ministry of National Defence in case of the state of siege and, respectively, the Ministry of Home Affairs in case of the state of emergency. When the establishment of the state of emergency is made under the conditions of imminent calamities that make the prevention, limitation or elimination of the consequences of a disaster necessary, as the case may be, the management of the ordered measures rest with the National Emergency Management System, under the direct leadership of the Minister of Home Affairs and under the coordination of the Prime Minister.

2. THE EVOLUTION OF THE REGULATION OF THE CIVIL LIABILITY IN THE STATE OF EMERGENCY SYSTEM

In accordance with S.3 of G.E.O. no. 1/1999 the state of emergency represents "the set of exceptional measures of a political, economic and public order nature applicable throughout the country or in some administrative-territorial units that are established in the following situations: a) the existence of current or imminent serious dangers with regard to national security or the functioning of constitutional democracy; b) the imminence of the occurrence or the occurrence of calamities that make the prevention, limitation or elimination of the consequences of a disaster necessary". This exceptional measure is established

by the decree of the President of Romania, with the approval of the Parliament, for a maximum period of 30 days. At the end of this period, the measure may be extended based on the same procedure as no limited number of extensions is regulated. This situation is correct because crisis situations that require exceptional measures are never identical as there is a multitude of specific factors (military, economic, political, social, health).

During the state of emergency, the civil authorities provided for in the decree establishing this measure may issue administrative acts. These are called military ordinances or orders, the former being normative, and the latter both normative and individual. Government Emergency Ordinance no. 1/1999 dedicates an entire chapter (Chapter IV) to these administrative acts, mentioning the issuing authorities and the general content. During the state of emergency, the military ordinance is issued by the Minister of Home Affairs, when the measure was established within the entire country, or by the officers empowered by him, when the measure was established in certain administrative-territorial units. The leaders of the other civil authorities may issue orders. We emphasize that, despite their name, military ordinances are not military acts of command because these do not cumulatively meet the specific conditions of this category of acts: a) the public authority which issues the act has to be a military commandment; b) the act must have a military content; c) the act should be based on the idea of order and military discipline (Măță, 2019a). In accordance with S.24 (e) of G.E.O. no. 1/1999 military ordinances and orders must contain “the rules and special measures ordered in the area where the state of siege or state of emergency has been established, as well as the sanctions applicable in case of non-compliance”.

The breach of the provisions of G.E.O. no. 1/1999 as well as of the administrative acts issued under this emergency ordinance attracts legal liability, including in the form of civil liability. At the time of adopting it G.E.O. no. 1/1999 provided in S.28 a mild sanctioning system in the form of applying to the natural or legal person a civil fine between 2,000,000 lei and 5,000,000 lei. Subsequently, by the provisions of Law no. 453/2004, approving G.E.O. no. 1/1999, S.28 has been amended in order to differentiate the minimum and maximum limits for natural and legal persons. More exactly, non-compliance with the legal system specific to the state of emergency was sanctioned by a fine between 1,000,000 lei and 50,000,000 lei for individuals and between 10,000,000 lei and 700,000,000 lei for legal entities.

The amendment and supplementing of G.E.O no. 1/1999 by Law no. 164/2019 (published in the “Official Gazette of Romania”, Part I, no. 811 of October 7, 2019) only aimed in the case of S.28 at the correlation of the amounts due to the denomination of the national currency. In this way, the limits of the fines applied became 100 lei and 5,000 lei for individuals and 1,000 and 70,000 lei for legal entities.

The civil sanctioning system provided by the G.E.O no. 1/1999 was radically amended during the state of emergency declared by the President of Romania by Decree no. 195/2020 (published in the “Official Gazette of Romania”, Part I, no. 212 of March 16, 2020).

First, by Government Emergency Ordinance no. 34/2020 (published in the “Official Gazette of Romania”, Part I, no. 268 of March 31, 2020) the limits of the civil fines that can be applied to individuals have been increased to a range between 2,000 lei and 20,000 lei. At the same time, it was provided that “depending on the nature and seriousness of the deed” one or more complementary civil sanctions shall be applied. The same normative act introduced provisions regarding the allocation and transport of confiscated goods as well as raw materials, materials and products that can be used to obtain certain products necessary for public authorities and institutions (S.28 – art. 28), provisions regarding the non-suspensive effect of enforcement of the civil complaint in case of complementary sanctions (S. 28) and provisions regarding the purpose of the amounts resulting from the fines applied (S.29).

Subsequently, by the Government Emergency Ordinance no. 48/2020 on some financial-fiscal measures (published in the “Official Gazette of Romania”, Part I, no. 319 of April 16, 2020) a new article was introduced (art. 28) on the procedure of capitalization of ethyl alcohol, alcoholic beverages and energy products that were confiscated, permanently requisitioned or subject to enforcement proceedings.

3. RULES DEROGATING FROM THE GENERAL SYSTEM OF CIVIL LIABILITY

The civil system provided by the G.E.O. no. 1/1999 shall be supplemented by the general norms of the civil liability. At the time the emergency ordinance was adopted, these norms were provided in Act no. 32/1968 on the establishment and sanctioning of civil sanctions (published in the “Official Bulletin of the Socialist Republic of Romania”, Part I, no. 148 of November 14, 1968). Currently, the general norms regarding the civil liability are provided in Government Ordinance no. 2/2001 on the legal regime of civil offences (published in the “Official Gazette of Romania”, Part I, no. 410 of July 25, 2001).

In the evolution of the regulation of the content of S.30 of G.E.O. no. 1/1999, however, an interesting aspect can be observed. Initially, this article provided that “the provisions of G.O. no. 2/2001 regarding the legal system of civil sanctions, approved as amended and supplemented by Act no. 180/2002, as subsequently amended shall be applied to the civil offences provided in S.28”. Subsequently, after the entry into force of the G.E.O. no. 34/2020, the text of S.30 became as follows: “Insofar as this emergency ordinance does not provide otherwise, the provisions of G.O. no. 2/2001 on the legal system of civil offences, approved as

amended and supplemented by Act no. 180/2002, as subsequently amended shall be applied to the civil offences provided in S.28”.

The phrase "insofar as this emergency ordinance does not provide otherwise" allows the establishment of rules derogating from the general system of civil liability. The main derogating rules refer to the abandonment of the suspensive nature of enforcement of the complaint made against the minutes of finding of the civil offence and the application of the complementary sanctions and, respectively, the purpose of the amounts representing the civil fines.

In the procedure of administrative-civil liability, the finding and sanctioning of the civil offence is made through an official document, drawn up by an official examiner, as a representative of a public authority. Usually, the minutes of finding of the civil offence represent standardized documents established in normative acts depending on the specificity of the sanctioned civil offence (Măță, 2019b). Among the obligatory elements of the minutes of finding of the civil offence S.16 (1) of G.O. no. 2/2001 also stipulates “the term for exercising the appeal and the court before which the complaint is submitted”.

The classification of the civil complaint as a “remedy” has been criticized in the research literature because it does not aim at amending or dissolving a court decision. In reality, this complaint is “a true legal action requiring the court to analyse the existence of the conditions of civil liability, which must meet the general conditions for exercising a legal action” (Ursuța, 2010).

The civil complaint shall be submitted within 15 days from the date of handing over or communicating the minutes to the district court in the territorial jurisdiction of which the offence was committed. The above-mentioned term is a limitation period the expiration of which results in the rejection of the complaint as being late (Podaru, Chiriță and Păsculeț, 2017).

In accordance with S.32 (3) of G.O. no. 2/2001, “the complaint suspends the enforcement”. The suspension of enforcement takes place as of right, under the law, so that any enforcement procedure previously initiated will have to be interrupted (Mihăilescu, 2013).

Regarding the suspensive nature of the complaint, the normative text does not make any difference between the enforcement of main civil sanctions and the complementary ones. When the perpetrator of the complaint is the offender, the suspension will refer to all sanctions applied through the minutes or only to those that have been challenged by the offender (Vedinaș, 2018). The doctrine proposed for *lex ferenda* the express mentioning of the condition that the complaint be filed in time in order to avoid the danger of repeated suspension of the enforcement of civil sanctions by making successive complaints against the same minutes (Podaru, Chiriță and Păsculeț, 2017).

In the Romanian normative system there are also situations, expressly determined, when “certain complementary measures will not be suspended as of right through the exercise of the right of filing a civil complaint” (Dinescu, 2016).

One such case is G.E.O. no. 1/1999 which provides in S. 28 (1) that “the complaint formulated against the report of finding the civil offence and of applying the sanctions provided in S.28 does not suspend the enforcement of the complementary civil sanctions applied”. In accordance with S.28 (2) of the G.E.O. no. 1/1999, the complementary civil sanctions that can be applied in addition to the sanction of the fine, depending on the nature and seriousness of the deed, are as follows: “a) confiscation of goods intended, used or resulting from civil offences; b) prohibition of access by the application of a seal by the competent bodies; c) the abolition of some works; d) restoration of some fit-out works”.

In order to suspend the enforcement of these complementary civil sanctions until the settlement of the civil complaint, we consider that a request for a presidential ordinance is admissible, under the conditions of common law (Dinescu, 2016).

Another derogating provision regarding the civil liability regulated in G.E.O. no. 1/1999 is the one referring to the purpose of the amounts resulting from the civil fines. Usually, in the general legal system of civil offences, the amounts resulting from the fines applied to individuals are turned to income of the local budget of the administrative-territorial unit where the offender resides, and those resulting from the fines applied to legal entities to the state budget. Exceptionally, S.8 of G.O. no. 2/2001 stipulates that the amounts coming from the fines of natural persons without a residence in Romania are turned into income to the state budget, and those resulting from the fines applied to legal persons are turned into income to the local budget when these are applied by the local public administration authorities or for breaching the road laws.

Unlike this general legal system, S.291 (2) of G.E.O. no. 1/1999 stipulates that the amounts resulting from the applied fines are turned into full income to the state budget, without any distinction regarding the status of the person sanctioned by a civil sanction.

4. THE CONSEQUENCES OF THE DECISION OF THE CONSTITUTIONAL COURT NO. 152/ 05.06.2020

The normative texts regarding the civil liability in the state of emergency system, S.28 of G.E.O. no.1/1999 and G.E.O. no. 34/2020, were the object of an exception of unconstitutionality drawn up directly by the Ombudsman. Within this exception, the Ombudsman criticized the lack of the provision of certain civil deeds that could be sanctioned, the legislator limiting itself to generic formulations. In this way, the requirement of accessibility of the text of law is not ensured because both the official examiner and the person sanctioned for a civil offence cannot objectively assess to what extent a certain conduct corresponds to a civil deed.

In the recitals of Decision no. 152/06.05.2020 (published in the “Official Gazette of Romania”, Part I, no. 387 of May 13, 2020) the Constitutional Court

recalled its constant case law on the principles applicable in the matter of civil sanctions (the principle of lawfulness of the civil sanctions, the principle of the proportionality of the civil sanctions and the principle of the uniqueness of the application of the civil sanctions) and the principle of quality of the law (accessibility, clarity, precision and predictability). From this perspective, the technique of regulating the civil liability in the G.E.O. no. 1/1999 is considered deficient because “the provisions of S.28 (1) corroborated with S.9 (1) of the Government Emergency Ordinance no. 1/1999 fail to clearly and unequivocally indicate, within the legal norm, the acts, deeds or omissions that represent civil offences nor do they allow their easy identification, by referring to the normative acts to which the incriminating text is connected” [paragraph 128].

With respect to G.E.O. no. 34/2020 the Court found that this normative act is unconstitutional as a whole “since it was adopted in breach of the constitutional provisions contained in S.115 (6) which establish the limits of the Government's jurisdiction to issue emergency ordinances” [paragraph 120].

Admitting the exception of unconstitutionality drawn up by the Ombudsman, the Constitutional Court found that the provisions of S.28 of G.E.O. no. 1/1999 and of G.E.O. no. 34/2020, in its entirety, are unconstitutional. This decision immediately raised in the legal environment and in public debates the issue of its effects on the over 300,000 civil fines applied pursuant to S.28 of G.E.O. no. 1/1999.

In accordance with 147 (4) of the Romanian Constitution from the date of publication in the Official Gazette, the decisions of the Constitutional Court are “generally binding and have power only for the future”. In case of the legal system of civil offences, however, the principle of retroactivity of the more favourable civil law provided both in S.15. (2) of the Constitution as well as in S.12 (1) of G.O. no. 2/2001 shall be applied. Considering these provisions as well as the provisions of the Criminal Code, which materially supplement the legal system of civil sanctions, we agree to the opinion according to which, from the date of publication the Decision of the Constitutional Court no. 152/06.05.2020 has “the effect of a law removing the civil status of the civil offences in relation to the state of emergency system” was expressed. Consequently, the civil offenses can no longer be sanctioned and the sanctions applied can no longer be enforced.

5. CONCLUSIONS

The establishment of the state of emergency on the entire territory of Romania in the middle of March 2020 placed the Romanian society before a legal reality unknown in the current constitutional system. In a short period of time, normative measures that severely restricted certain fundamental rights and freedoms were adopted. In order to ensure an effective framework for compliance with these measures, the Government amended the civil offence system of the state of emergency. The changes were made in inadequate conditions, which

resulted in a decision of the Constitutional Court that paralyzed the entire civil offence matter of the state of emergency. This situation shows the need for a deep reform of the Romanian legislation regarding the exceptional situations in accordance with other European normative solutions and with constitutional case law.

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NORMATIVE AND JURISPRUDENCE REFLECTIONS CONCERNING LITIGATIONS IN CONSUMER CREDITS

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Abstract

Judicial practice in litigations concerning consumer credits, as well as other disputes with consumer participation, has been consolidated over the last few years by uniforming it, largely due to the aspirations of European integration and the signing of the Association Agreement between the Republic of Moldova and the European Union.

As a result of these important processes and ascertaining that the consumer protection in the Republic of Moldova was developed below the European standards and that the necessary and essential regulations for balancing the relations in the consumer credits were lacking, there were made efforts to improve the essential national legislation through a comprehensive process of harmonizing it with EU law.

An important achievement in the field of consumer credit regulation is the adoption of a special law, namely Law no. 202 of 12 July 2013 on consumer credit agreements, which creates the legal framework required for the application of the provisions of Directive 2008/48/EC of the European Parliament and of the EU Council of 23 April 2008 on credit agreements for consumers and repealing Council Directive 87/102/EEC, published in the Official Journal of the European Union no. L 133/66 of 22 May 2008.

Also, the adoption of the Law no. 133 of 15 November 2018 on the modernization of the Civil Code and the amendment of some legislative acts, which entered into force on 1 March 2019, also had an essential role regarding the birth, development and termination of legal relations on consumer credits.

The purpose of the study is to analyze national regulations in the light of changes in national law as a result of harmonization with Community regulations, judicial practice in consumer credit disputes and jurisprudence trends at national level.

Keywords: *consumer; jurisprudence; litigation; consumer credit.*

JEL Classification: L84, P37, P48

1. INTRODUCTION

Judicial practice in consumer credit disputes, in fact other consumer-related litigation, has undergone many changes in recent years, as well as essential improvements with the implementation of changes in national legislation.

At the same time, the right of consumer law, compared to other areas of private law, is a new branch, which in recent years has succeeded in structuring itself more clearly and imposing itself as a branch of law.

It is well known that the consumer movement in both the United States and the countries of the European continent has a history of hundreds of years and began its rise, especially after the founding of the first consumer organization in the United States in 1899 The National Consumers League from New York, which is the pioneer of such organizations.

The example of this organization was taken by most developed countries, including Romania with the establishment of the Consumers' League in Bucharest in 1919, which was joined by professional unions and various associations, as well as a large number of citizens.

For Moldova, the development of consumer law has been delayed, and over the last 30 years it has had a rising dynamics with the modification and improvement of the normative framework, which obviously led to the improvement of judicial practice in the field.

An opinion on the hypothesis of the delayed development of the implementation of national standards in the field of consumer law would be that after the declaration of the independence of the Republic of Moldova on 27 August 1991, for almost 11 years, the repeal of the Civil Code adopted in 1964 and the adoption of a new Civil Code in 2002 (Civil Code of the Republic of Moldova no. 1107-XV of 06.06.2002).

2. EUROPEAN NORMATIVE REFLECTIONS AND IMPLEMENTATION IN THE NATIONAL LAW OF THE REPUBLIC OF MOLDOVA

Achieving the objectives of the European Economic Community and then the Single Internal Market has led to the emergence of common policies alongside the common market. Of the horizontal policies introduced with the Single European Act, consumer protection policy can also be highlighted.

Following the establishment of the European Economic Community – EEC, which also aimed at creating a common market, a consumer protection policy was gradually developed, with the adoption of the Single European Act and having as main tools both the strategic framework and the secondary adopted legislation, rules, standards and introduced norms, set up associations and committees, as well as other common policies, such as competition. From the point of view of the Community institutions, the responsibility in this area lies with the European Commission, the European Parliament and the Council of Ministers.

The mainstay for the transposition of European Union legislation into the legislation of the Republic of Moldova was the signing of the Partnership and Cooperation Agreement on 28 November 1994 (CPA), which entered into force on 1 July 1998 for an initial period of 10 years with the possibility of tacit extension.

The document regulated the legal framework of bilateral relations between Moldova and the European Union in the political, trade, economic, legal, cultural-scientific field and aimed at supporting Moldova to: strengthen democracy and the rule of law with respect for human and minority rights by ensuring the appropriate framework of political dialogue; sustainable development of the economy and completion of the process of transition to a market economy by promoting trade, investment and harmonious economic relations.

The next step closer to the Republic of Moldova with the European Union was the Action Plan Republic of Moldova – European Union, developed within the European Neighborhood Policy and adopted at the Cooperation Council on 22 February 2005 (The Action Plan Republic of Moldova – European Union, p. 401).

The Republic of Moldova – European Union Action Plan was replaced in 2014 by the Association Agenda, agreed on the basis of the Association Agreement between the Republic of Moldova, on the one hand, and the European Union and the European Atomic Energy Community and their Member States, on the other. another part, from June 27, 2014, and ratified by Law no. 112 of July 2, 2014.

Analyzing the legislation of the European Union, there is an increased concern since 1987 to improve the European regulatory framework in order to standardize the national regulations of the member countries in the field of consumer law.

In this regard, on 22 December 1986 was adopted Council Directive 87/102/EEC on the harmonization of the laws, regulations and administrative provisions of the Member States relating to consumer credit. Subsequently was adopted the Directive 98/7/EC amending Directive 87/102/EEC on the approximation of the laws, regulations and administrative provisions of the Member States relating to consumer credit.

In the following years, several directives have been adopted by the European Parliament and the Council in order to improve the European regulatory framework and the need to standardize the regulations of the Member States in the field of consumer law.

Among the documents that need to be inserted are Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices the internal market for consumers and amending Council Directives 84/450/EEC, Directives 97/7/EC, 98/27/EC and 2002/65/EC of the European Parliament and of the Council and Regulation (EC)/2004 of the European Parliament and of the Council, published in the

Official Journal of the European Union (JO) no. L 149/22 of 11 June 2005, and Directive 1999/44/EC of the European Parliament and of the Council of 25 May 1999 on certain aspects of the sale of consumer goods and associated guarantees.

By highlighting Community acts on consumer credit, we will insert the importance of Directive 2008/48/EC of the European Parliament and of the Council of 23 April 2008 on credit agreements for consumers and repealing Council Directive 87/102/EEC.

Here it is necessary to point out that Directive 2008/48/EC was adopted due to the fact that there were several directives on the same subject and which led to a different transposition of Directive 87/102/EEC into national law, which could have the effect of limiting or hindering cross-border activity.

Thus, the main objectives of Directive 2008/48/EC were the integration of Community markets, and most importantly the raising of the level of consumer protection, including by increasing transparency. In this respect, Directive 2008/48/EC requires standardized pre-contractual information to be provided to consumers for a reasonable period of time before a consumer concludes a credit agreement or accepts an offer.

An important aspect reflected in Directive 2008/48/EC is the consumer's right to withdraw from the credit agreement within 14 days of its conclusion, the right to early repayment, with indication and information on the right of the creditor to compensation and how this compensation will be determined.

Thus, according to art.3 letter c of the Directive no. 2008/48/EC – “Credit agreement is a contract whereby a creditor grants or promises to give a consumer credit in the form of payment deferrals, loans or other similar financial facilities, with the exception of contracts for the provision of services on an ongoing basis, or for the supply of goods of the same kind, when the consumer pays for them in installments during their supply”.

Thus, in the Republic of Moldova, when adopting the Civil Code of June 6, 2002, the European normative framework was taken into account, and exhaustive regulations appeared regarding consumer credits in art. 591, standard clauses art. 719, interpretation of the contract in favor of the consumer art. 732, the right of revocation in the contracts with consumers art. 749, the sale-purchase of consumer goods art. 803, the liability for the defective products art. 1617, and other norms that regulate in an exhaustive way the legal relations appeared within the relations between professional and consumer.

Subsequently, in order to establish the legal basis for the protection of persons by the state as consumers and to transpose European regulations, several important normative acts were adopted and amended.

It is necessary to mention that in the national legislation the notion of the credit contract received several definitions, including those found in the Civil Code, amended by Law no. 133/2018 on the modernization of the Civil Code and amending some legislative acts, with the entry into effective March 1, 2019.

Thus, according to Article 1763 paragraph (1) of the Civil Code, through the credit agreement, a bank or a non-bank lending organization (creditor) undertakes to make available to another person (debtor) a sum of money as a loan, provided that it is repaid, the payment of interest and other related payments, or it undertakes any other commitment to purchase a claim or to make a payment, to extend the term of repayment of the debt or to issue any guarantees.

And paragraph (3) of the same article expressly regulates that the provisions regarding the loan agreement apply to the credit agreement insofar as the rules of this chapter do not provide otherwise or the essence of the credit agreement does not show otherwise.

An important aspect reflected in paragraph (4) of art. 1763 of the Civil Code, after the adoption of Law no. 133/2018 on the modernization of the Civil Code and the amendment of some legislative acts, with the entry into force on March 1, 2019, is that, that the provisions of the credit section apply to loans granted by banks or non-bank lending organizations, as well as other organizations granting loans under the law.

As regards consumer credit, it is necessary to insert Law no. 202 adopted on 12.07.2013 on credit agreements for consumers, which regulates the legal status of credit agreements for consumers, transposing the Community legislation at that time and containing provisions on to its scope.

In this respect it is necessary to mention that the Law contains express rules regarding the types of contracts exempted from its application. It also includes rules on effective annual interest, obligations of creditors and credit intermediaries in the pre-contract phase and on the conclusion of the credit agreement, early repayment of credit, etc. Also, there are listed requirements for contractual clauses, obligations and requirements for some depending on the subject of some types of contracts, the formula for calculating effective annual interest

Thus, according to Article 3 of Law no. 202/2013, the credit/ united credit contract – a credit agreement that objectively constitutes a commercial/ economic unit and serves exclusively to finance a contract having as its object the supply of goods or providing a service.

At the same time, art. 3 of Law no. 202/2017 on the activity of banks defines the credit as any commitment to grant money as a loan, provided they are repaid, the interest payment and other related payments; any prolongation of the repayment term of the debt; any warranty issued and any commitment to acquire a claim or other payment entitlement.

It is necessary to mention that the Law no. 202/2017 on the activity of banks does not define consumer credit, but in art. 14 paragraph (1) letter b) refers to what banks may carry out, within the limits of the granted license, credit granting activities, among others: consumer loans, credit agreements related to real estate, factoring with or without recourse, the financing of commercial transactions (including lump sums).

Thus, the consumer credit being identified and listed as a variety of credit within the meaning of Law no. 202 of October 6, 2017 on the activity of banks.

Regarding the notions of consumer and creditor in consumer credit agreements, we find them regulated in the Law on consumer credit agreements.

According to Article 3 of the Law on Consumer Credit Agreements, the consumer is a individual who intends to order or procure or who orders, procures or uses products and services for needs unrelated to the activity of entrepreneur or professional, and the creditor is a individual or legal entity that grants or undertakes to grant credits or loans being in the exercise of its commercial or professional activity.

An important aspect is that European law shows that only legal persons can grant consumer loans, while an individual cannot have the quality of "lender" even if the granting of loans would be made in the course of his commercial or professional activity.

The following categories of creditors may grant consumer loans on a professional basis: commercial banks and branches of foreign credit institutions operating in Moldova provided by Law no. 202 of 06.10.2017 on the activity of banks and non-bank lending organizations under Law no. 1 of 16.03.2018 on non-bank lending organizations.

At European level, the notion of consumer has been defined in several Directives in the field of contract law, non-contractual obligations, liability for defective products in Directive 85/374/EEC and procedural rules. These definitions are not identical, but in general the consumer is defined as an individual who concludes a contract for purposes that are outside his trade or business.

At national level, by the Law for amending and supplementing some legislative acts no. 200 of July 28, 2016 in force March 30, 2017 was introduced art. 21 paragraph (1) Civil Code which provides that any individual, within a civil legal relationship, acts predominantly for purposes not related to entrepreneurial or professional activity.

The individual does not have the quality of consumer if the other part of the civil legal relationship does not have the quality of professional. Paragraph (2) stipulates that any individual or legal person of public or private law who, within a civil legal relationship, acts for purposes related to the activity of entrepreneur or professional, even if the person does not aim to make a profit from this activity.

Thus, that concept was restricted, meaning that only individuals could benefit from the protection provisions as consumers. Unlike legal entities, the individual is in a special situation because of the lack of knowledge about the complex aspects of credit mechanisms and, for this reason, requires special protection. In contrast, the French literature suggests that the will to protect consumers against professionals goes beyond the simple framework of consumer-trader relations

today so that the protection of any individual who contracts with a professional can be applied.

By contrast with the professional, the consumer acts for his personal or family use. Thus, the notion of consumer is also conditioned by the subject of the contract he concludes with the professional – the provision of a financial service such as the credit. This limitation is justified by the purpose of granting credit: meeting the personal or family needs of the individual, or acquiring goods, and not business or professional needs.

Also, in article 1 of the Consumer Protection Law no. 105/2003, the consumer has been defined as any individual intending to order or to purchase or to order, procure or use products, services for non-related needs entrepreneurial or professional activity.

It should be emphasized that the individual, part of the consumer credit contract, has a dual quality, “consumer” in the contract for the sale or supply of the purchased credit or goods, and "borrowed" in the consumer credit contract. The consumer's name is due to the purpose of granting credit “consumption” although it does not consume what it borrows but borrows to consume for non-business or professional needs.

Not only the individual but also the groups of individuals formed in associations fall under the definition of consumer. But it is not just any group of individuals, but only consumer associations, which are able to support the interests of their members much better than they could do on their own.

According to art. (1) of the Law no. 105/2003 on consumer protection, the public consumer association was defined as a public association whose sole purpose is to protect consumers' legitimate rights and interests, without pursuing profit for its members.

The notion of consumer involves two defining elements: the consumer may be only an individual and the provision of a financial service is made for the purpose of satisfying the personal or family needs of the individual or for the purchase of goods.

At the same time, in European law, the main framework for regulating credit agreements concluded with consumers is conferred by Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts, Directive 2008/48/EC on consumer credit agreements and repealing Council Directive 87/102/EEC, which provide that Member States may not maintain or introduce in their national law provisions different from those laid down in the Directive in the areas which they harmonize.

In national law, Directive 93/13/EEC of 5 April 1993 was transposed into national law by Law no. 256 of 09.12.2011 on abusive clauses in contracts concluded with consumers.

It is necessary to mention that with the adoption of Law no. 133/2018 on the modernization of the Civil Code and the amendment of some legislative acts, with

the entry into force on 1 March 2019, the Law no. 256 of 09.12.2011 on the clauses abusive contracts concluded with consumers.

We will specify that by adopting the same Law no. 133 of November 15, 2018 on the modernization of the Civil Code and amending some legislative acts, a new chapter V “Abusive clauses” was introduced in Title II of the Civil Code, which at art. 1069 par. paragraphs (1)-(3) provide that the clause proposed by one of the parties is not negotiated individually if the other party has not been able to influence its content, in particular because it was drafted in advance, regardless of whether it is part of standard clauses or not. If one party proposes to the other party to select from several clauses, the clause is not considered to be individually negotiated just because the other party has selected from the proposed clauses. If a clause has been proposed as part of standard clauses, it is presumed that it has not been individually negotiated.

In the same vein, Directive 2008/48/EC of 23 April 2008 on credit agreements for consumers has been transposed by Law no. 202 of 12.07.2013 on credit agreements for consumers.

3. JURISPRUDENTIAL REFLECTIONS CONCERNING LITIGATIONS IN CONSUMER CREDITS

Given that the goal of establishing consumer protection rules results from the superiority of professionals in relation to consumers, this difference sometimes creating a contractual imbalance, the rules of protection are intended to restore balance. In the absence of this position of superiority, there can be no question of protecting the consumer.

Consumers can exercise their right to be protected through the institutions empowered to protect consumers' rights or by direct action in court. It is necessary to note the obligation to exercise the positive burden of the state in determining the free access to justice of consumers by exemption from the payment of state tax, but also by the non-obligation to comply with the prior procedure.

Thus, referring to the free access to justice in the Republic of Moldova in terms of payments for state tax, it is attested that according to Article 6 letter (a) of Law no. 105 of 13 March 2003 on consumer protection, any consumer has the right to the protection of his rights by the state, which implies, including through the courts. In this context, art. 31 paragraph (1) of Law no. 105 of 13 March 2003 on consumer protection provides that actions on consumer protection may be filed in court by consumers themselves or their representatives, by public administration authorities' ability or by public consumer associations.

With regard to consumer credit disputes, it should be noted that in resolving this category of disputes, will highlight the principle that purchasers of goods and services should be protected against the abuse of power by the supplier, in particular against unilateral standard contracts and against unfairly excluding essential rights from the contracts.

Thus, one of the most common practices leading to infringements of consumer rights is the inclusion in abusive legal acts signed with consumers, which are void, and the courts must verify *ex officio* whether or not the terms of the contract in question have been negotiated, or if by itself it creates a significant imbalance between the rights and obligations of the parties and if the imbalance created is to the detriment of the consumer, the requirement of good faith not being respected.

Or, an express regulation is contained in art. 11 of the Civil Code, which defines good faith as a standard of conduct of a party, characterized by fairness, honesty, openness and taking into account the interests of the other party to the legal relationship.

At the same time, with regard to good faith, account should be taken of the provisions of recital 16 of Directive 93/13/EEC, according to which, in assessing good faith, special attention must be paid to the authority of the parties' negotiating positions. has been influenced to agree to the condition in question and whether the goods or services have been sold or supplied, at the express request of the consumer; whereas the condition of good faith may be fulfilled by the seller or supplier, if he acts correctly and fairly towards the other party, whose legitimate interests must be taken into account.

Subsequently, in assessing good faith, the court must take into account, in particular, the essential aim pursued by the “commission, fees and any other costs that the consumer must bear”, which clearly constitutes an obligation essential for the consumer in return for making the loan available. The court will verify whether the loan agreement in question clearly indicates the reasons for the appropriate remuneration, provided that the creditor is required to provide a real consideration in order to obtain the said commission.

It is clear from the analysis of the national jurisprudence that, in the text of the loan/credit agreement, largely in those signed by microfinance organizations, various unjustified fees and charges are indicated. However, in most cases, the purpose of these clauses on these remunerations is unclear.

However, the content of consumer credit agreements must expressly and clearly contain arguments regarding the collection of these fees, taxes or their destination, to contain in a transparent manner the reasons justifying the remuneration corresponding to these fees, given that it is disputed that the creditor he is obliged to provide a real consideration in order to obtain the said commission.

From what is reported, it is highlighted that in the absence of clarifications of the reasons justifying the appropriate remuneration for these commissions, the courts are to assess, *ex officio*, the abusive nature of these clauses which are essentially abusive and contrary to the principle of good faith.

Among the first explanatory decisions of the Plenum of the Supreme Court of Justice was the Decision on the practice of the application of consumer protection law in the civil cases no. 7 of 9 October 2006.

Subsequent, as regards consumer credit disputes, it is necessary to note that the Plenum of the Supreme Court of Justice, with a view to uniformizing judicial practice, issued on December 6, 2016 Recommendation no. 95 on the application of the legal provisions aimed at the credit/ loan agreement concluded with microfinance organizations.

Referring to the practice of the Court of Justice of the European Union, we will highlight first of all the Decision on the case *Juzgado de Primera Barcelona against Spain*, adopted by the Court on 27.06.2000.

Thus, the Court of Justice of the European Union was asked to state whether the judge can ex-officio declare a clause contained in the contract between a professional and a consumer abusively. As a consequence, the Court held that *“The protection afforded by Directive 93/13/EEC of 5 April 1993 on unfair terms in contracts concluded with consumers indicates that the national judge may of its own motion assess the abusive nature of a clauses in the contract submitted to it when examining the admissibility of an application brought before the national courts”*.

The Court also noted that “the objective pursued by Article 6 of the Directive, which obliges Member States to provide that unfair terms do not bind contract customers, can not be achieved if the latter have the obligation to remove them the abusive nature of certain clauses themselves.” The practical consequence, in essence, is that since a clause is abusive, judges must declare it ex officio, even if the consumer has not made such a request.

In the case examined by the Court of Justice of the European Union no. C-484/08 – *Caja de Ahorros y Monte de Piedad de Madrid*, there are eloquent conclusions in point 44 which state that: “the provisions of Article 4 (2) of the Directive must be interpreted as not precluding a regulation ... which authorizes a judicial review of the abusive nature of the contractual clauses, defining the main object of the contract or the adequacy of the price, or remuneration, on the one hand, for the services or of the goods provided in exchange for them, and, on the other hand, even if these clauses are drafted in a clear and intelligible manner”.

Another case examined by the Court of Justice of the European Union is *Ilyés and Kiss v. OTP Bank and OTP Factoring*, in which the Court concluded that financial institutions are required to provide borrowers with sufficient information to enable them to make prudent and full decisions. knowledge of the cause. This implies that a foreign exchange risk clause must be understood by the consumer both formally and grammatically and in terms of its concrete effects. It follows that an average consumer, normally informed, sufficiently attentive and knowledgeable, must be able not only to know the possibility of the national currency depreciating against the foreign currency in which the loan was

expressed, but also to assess the potentially significant economic consequences of such a clause. on its financial obligations.

The Court also states that the clear and intelligible nature of the contractual clauses must be assessed in relation, at the time of the conclusion of the contract, to all the circumstances accompanying the conclusion of the contract, as well as to all the other clauses of the contract. clauses were declared or presumed abusive and were therefore subsequently annulled by the national legislature. Finally, the Court confirms that it is for the national court to raise of its own motion, instead of the consumer in his capacity as applicant, the possible abusive nature of contractual clauses other than that relating to foreign exchange risk, since he has the facts and necessary for this purpose.

It is also worth mentioning the judgment of the Court of Justice of the European Union of 30 May 2013 adopted in case no. C 488/11 between Asbeek Brusse and Man Garabito v. “Jahani BV”, which at paragraph 50 of the judgment concluded that: *“full protection of the protection required by the Directive requires the national court which has found of its own motion that a clause is abusive to be able to establish all the consequences of that finding, without waiting for the consumer, informed of his rights, to submit a statement requesting cancellation of that clause”*.

4. CONCLUSIONS

An analysis of the legislation and jurisprudence on consumer credit disputes can lead to the conclusion that the legislation of the Republic of Moldova in the area of consumer credit and consumer rights protection in this segment is largely harmonized with European Union law, and the measures taken recently bring relevant regulations to ensure consumers with effective regulatory protection.

National jurisprudence also aims to maintain the trends of fully ensuring consumers with the best practices of European jurisprudence in order to ensure the effective exercise of consumer rights in the courts. In this respect, the conclusions and reasoning of the Court of Justice of the European Union are important and relevant for national courts.

However, at the moment it is difficult to conclude unequivocally that in this category of disputes a uniform finding of national judicial practice has been reached, which at the moment is not yet able to offer sufficient guarantees to the full realization of consumer rights in the Republic of Moldova.

The conclusions set out above are also based on the study of national judicial practice, which does not in all cases determine whether it is an abusive clause, including in consumer credit disputes. However, national courts, having a rich jurisprudence of the Court of Justice of the European Union, must exercise the positive burden of the state, including finding and declaring ex officio as an abusive clause if this is attested, regardless of whether the consumer has invoked it or if he did not submit a request for a declaration of invalidity.

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CREATING A CONTENT STRATEGY BY UNDERSTANDING THE DREAM BUYER

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Abstract

An online presence doesn't make much sense without a valid strategy behind it. Nowadays, marketing requires a constant supply of mixed content such as video, blog posts, social media updates, whitepapers, eBooks, email and online classes. If implemented correctly, a strategy that uses the aforementioned pieces of content can enhance a brand's online footprint, which in turn improves search engine rankings, drives up traffic and helps with lead generation.

Starting from the idea of the dream buyer, the article explores how businesses should be looking at their target customers. This is important because, nowadays, tailoring the marketing message is essential for a company to stand out from the rest. The dream buyer is identified using the Pareto principle and then analyzed using the Halo strategy. These will improve a company's understanding of its customers and their needs.

Following the identification of the dream buyer, the article looks at how the content strategy must be laid out. In order to create this strategy, I propose three steps that should underlie every content creation effort: understanding the needs of the target audience; understanding how content must match buying cycles; creating a schedule for content publishing.

Keywords: *content marketing; content strategy; content creation.*

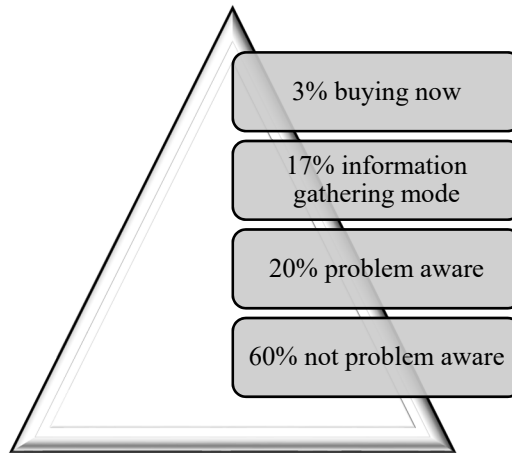
JEL Classification: M31

1. TARGETING THE CONTENT STRATEGY

Establishing an online presence for a company is easy these days thanks to all of the available options that range from websites, blogs, social media platforms and video sharing platforms. However, making this online presence stand out from an overly crowded internet implies more than getting increased traffic. As online competition keeps reaching new highs, companies without a solid online marketing strategy need to keep up with ever increasing costs per click on Google's and Facebook's ad platforms, spend more for SEO services and content creation. In addition, most companies make another mistake, and that is that their online strategies are specifically aimed at the people who are most likely to buy their services or products.

Narrowing down your marketing strategy so it only targets the people who are most likely to buy is a mistake. Instead, all efforts should be aimed at appealing

to a larger market, as it is described by the larger market formula (Figure 1). It establishes four key categories that can be used to show how the entire audience of buyers looks like.



Source: (Ivanovs, 2019)

Figure 1. The larger market formula

Why is this formula useful? Because it offers an overview of how every market looks at any given time. Starting from the top, we have 3% of people who are in the ‘buying now’ mode. These are the people who are most likely to buy a product if they see it advertised. For example, most ads that run on TV or in newspapers look something like: ‘We have the best prices and the largest range of products!’ and they are targeted at the 3%. To get an idea of how this conversation would look like, picture the following dialogue:

‘I’m thirsty.’

‘Would you like to have a glass of water?’

‘Yes, please.’

As you can expect, a high percentage of the 3% will purchase what is being offered. Some people might have some objections or extra requests like ‘Room temperature water isn’t good. I would like to have it chilled.’ However, these demands can easily be met.

The problem with targeting the ‘buying now’ crowd is that the same people are also targeted by competitors. Having to split up this group of people between companies that are offering the same product or service will lead to little sales for all.

The larger market formula proposes that a marketing strategy should be aimed the 37% of people who make up the gathering information – 17% – and the problem aware – 20% – groups. The rest of 60% should also not be ignored, but

educated instead. The goal of the marketing strategy should be to increase the speed with which the remaining 97% of potential customers move up the pyramid. The common mistake which most companies make is that they use the same marketing tactics for the 3% on the remaining 97% and the fact of the matter is that these potential customers are not ready to buy.

1.1. Approaching prospective buyers

The 97% should be approached as people who are not ready to buy, but they might do so at a later date. The main idea is that when people are not informed or lack knowledge regarding a subject, they are in a state of uncertainty. When this uncertainty is present, the odds of someone buying a product is quite low or even zero. However, as people become informed or educated about a subject, the likelihood of them buying increases.

The content strategy that a company uses must focus on educating the prospective buyer because, when he/she is ready to buy, he/she is more likely to buy the products or services of the respective company. Therefore, the content must carry a message that goes beyond simply promoting company products. Instead, the message should be education-based and insightful. As soon as this happens the dynamics of the relationship between customer and company are modified or even reversed. Normally, the company is chasing the customer's attention, but by educating the customer, he/she will request the company's attention. By employing this technique, the customers are the ones who are making calls or sending emails enquiring about the products and services that the business is offering.

In short, the main points of a content strategy should be to: attract, educate, nurture and get potential customers to act.

This strategy works wonders online as it makes sure that when prospects find their way onto a landing page that is designed to push them over the edge, they are already interested in what is being sold. As the prospect has already been educated on the matter by the content that has been published, he/she is predisposed to buying. For this to happen, the marketing has to:

- Educate prospects so they understand the process involved in solving the problem. This can be achieved using various tools and methods that provide value such as videos, free reports and templates, case studies.
- Include the most commonly asked questions into a sales pitch or making the answers readily available through the content that is being published.
- Position the product or service that offers the solution to the problem as the obvious choice.
- Make the offer that is presented to the prospect as irresistible as possible.

What this process is able to achieve is that it moves part of the 97% who are not buying at the moment or who perhaps are not even considering it up the pyramid described in the larger market formula. The obvious advantage is that

these prospective customers are addressed way before the competition is able to connect with them.

The best way in which prospects can be moved up the pyramid is through a sales funnel. This marketing technique manages to shift the consumer through every stage of the pyramid over a period of time. For example, setting up a sales funnel requires that an online user is first drawn into visiting a website. Then through the content that the website offers, he/she is transformed into a prospective buyer, and, in the end, through the value or the education that has already been offered he/she is convinced to become a customer. These customers will be happy to work with the company that has taken the time to understand their problem and provide a suitable solution. But how does a company get to understand its potential buyers? By employing the Halo strategy.

1.2. Halo strategy

The Halo strategy is based on a psychological concept known as the halo effect. This is defined as “the influence of a global evaluation on evaluations of individual attributes of a person (...). Global evaluations might color presumptions about specific traits or influence interpretation of the meaning or affective value of ambiguous trait information” (Nisbett and Wilson, 1977). It is the idea that if a person A likes an aspect of person B, they tend to be predisposed to thinking positively about other aspects associated with person B, even if these aspects are completely unrelated. As an example, think of how when you find someone intelligent, that person suddenly becomes more attractive physically. Another example is how a student who is good at sports is somehow considered to be the leader of a classroom. The opposite of the halo effect is the horns effect where, for example, the negative impression of the design of a can of soda might lead some people to believe the soda tastes bad.

In terms of marketing, the halo effect shows a consumer’s favoritism toward a line of products because of previous positive experiences with other products belonging to the same brand. This concept is also associated with brand loyalty and brand strength. Similarly, if a consumer has had a bad experience with a product of a certain brand, they correlate the negative experience with everything associated with that brand.

Companies strive to achieve the halo effect because it helps establish brand loyalty and it also makes customers buy the same product over and over. Another advantage to the halo effect is that companies who make it work are perceived as industry leaders. Creating the effect requires that all the marketing efforts are focused on the most successful products that a company offers, increasing their visibility and thus the brand’s equity.

When the consumer has a positive experience with the products of well marketed brands, he/she tends to form a brand loyalty bias in favor of the brands. This is how the consumer ends up believing that if a company is very good at

something, it will probably also be good at something else. The advantage in this case is that the brand can expand into a totally different field and its products will still be thought of as exceptional.

Establishing the halo effect cannot be done without intimately knowing the customer. Once this happens, the marketing message can be specifically tailored. Many companies assume that by simply gathering data like age, gender and location they know enough about the consumers and it is just a matter of flooding them with ads until they decide to buy. In this day and age the aforementioned data is no longer enough for a successful marketing campaign. That is why we must delve deeper into the customer's desires, dreams, hopes and even their fears. As marketers, we need to understand how people feel, how they think and how they react. That is what Robert Collier meant when he said that we should "Always enter the conversation already taking place in the customer's mind" (Collier, 2019).

2. THE DREAM BUYER

To identify the dream buyer, we need to apply Pareto's principle of the 80-20 rule. Vilfredo Fritz Pareto (1848-1923) is an Italian economist who discovered that income follows a Pareto distribution. He stumbled onto this idea as he observed that 80% of the wealth in Italy was held by 20% of the population. While he continued to study this idea, he found that this phenomenon can also be observed in other areas of life. The disproportionate relationship between cause and effect was applicable to growing crops, real estate and others:

- 20% of roads cause 80% of crashes;
- 20% of workers produce 80% of the result;
- 20% of the input creates 80% of the result;
- 20% of the customers are responsible for 80% of the revenue.

The thing is, in these 20% of customers, the 80/20 rule also applies. What this means is that 20% of the 20% of customers that bring in most of the sales are responsible for most of the generated income. Therefore, 4% of the customers make up 64% of sales. This is important because once the buyer persona that makes up the 4% has been identified, it should be easier to focus the marketing efforts on more people that fit the description of the 4%.

The buyer persona of the 4% implies getting to know the customer more intimately. The basic information should be location, education levels, age, the services or products they are interested in, how they found the company website. Having this will make finding similar customers easier. Now that we have the basic information, it is time to find out what are the hopes, dreams and fears of these customers. To do this, we need to identify the main search terms (keywords) that are being used to search for products or services in the company's field of activity.

The keywords around the industry should then be searched on Google, Bing, DuckDuckGo (most of the time they provide different results because of their algorithms). This will yield Reddit threads, Quora answers, forums, comments and posts on social media platforms such as Facebook or LinkedIn, Amazon reviews. These are the places where prospective buyers are hanging out. Going through all this information will bring out what the customer likes, what he doesn't like, what he feels, what his concerns are and what are the most frequently asked questions.

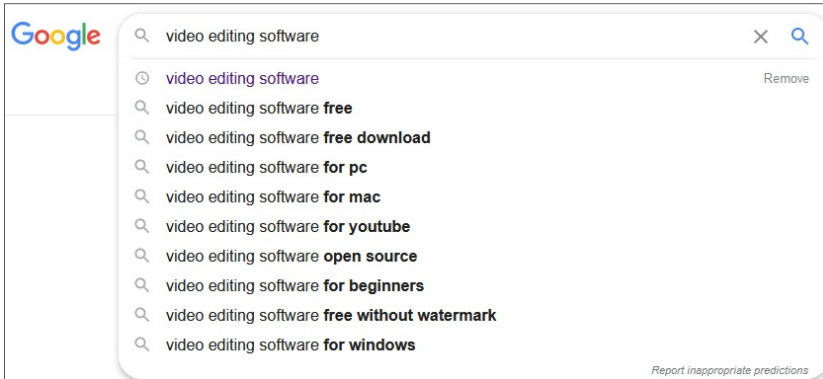
The results of this research then need to be organized into a tool that will provide excellent insights on what the marketing strategy should focus on. Here is how such a tool might look like:

Table 1. Customer research tool

What is the theme?	Most Common	2nd Most Common	3rd Most Frequent	Importance score (1 to 10)
Hopes and dreams				
Pains and fears				
Barriers and uncertainties				

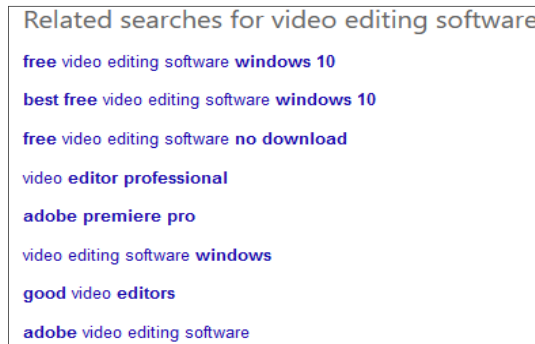
Source: (King Kong Digital Marketing Agency, 2020)

Once this tool has been used, you can get a better idea on what is the best type of content that is currently missing and that your marketing strategy needs to incorporate. For some added insight, the auto suggest feature (Figure 2) and the “Searches related to” feature (Figure 3) of search engines such as Google, Bing and DuckDuckGo can also provide a look at what questions the prospects are asking when they are in the research and buying cycle. In my example, I used the search term “video editing software” and got nine suggestions. For complete results you can also employ the alphabet method where you would type in the keyword followed by the letter “a”, then letter “b” and so on and see what the auto suggest has to offer. Doing this can also help with identifying the emotions and motivations that stand behind each search query.



Source: <https://www.google.com/search?client=firefox-b-d&q=video+editing+software>

Figure 2. Google Auto Suggest Feature

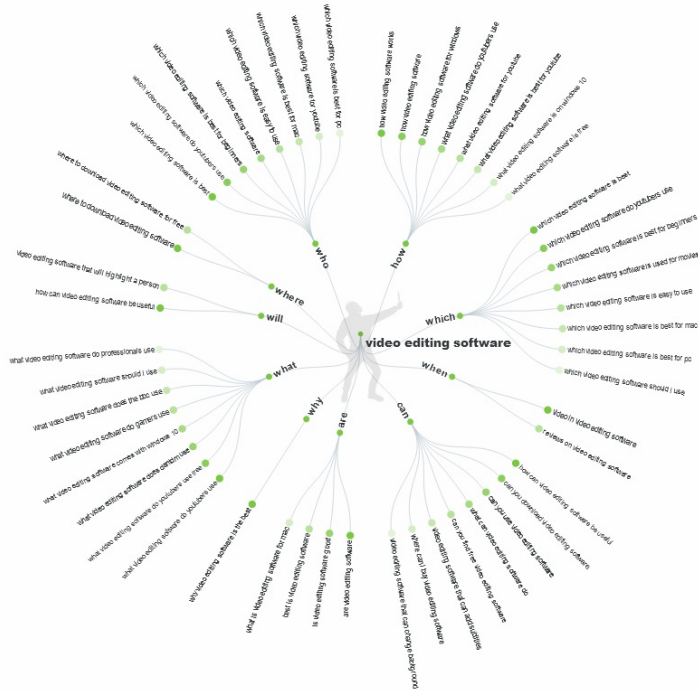


Source:

<https://www.bing.com/search?q=video+editing+software&q=EP&pq=video+editi&sc=8-11&cvid=DE772DD86EF24BF99678E7E4DCB0692C&FORM=QBLH&sp=1>

Figure 3. Bing Related Search Feature

Another useful tool that can generate content ideas is AnswerThePublic.com. This platform can provide excellent information regarding the questions the customer usually has. It works by taking the search term or phrase and then generating a diagram (Figure 4) or a spreadsheet (Figure 5) that encompasses all related searches. Having this information can help plan the type of content that needs to be created as it can address every concern that a prospective buyer might have and provide a solution if one is needed.



Source: (AnswerThePublic.com, 2020)

Figure 4. AnswerThePublic Tool – Questions

The screenshot shows the interface of the AnswerThePublic tool. At the top, it says "RESULTS FOR VIDEO EDITING SOFTWARE (TOP)". Below this are several tabs: "QUESTIONS", "PREPOSITIONS", "COMPARISONS", "ALPHABETICALS", and "RELATED". The main content area is divided into four sections labeled a, b, d, and e. Each section contains a list of related search terms. Section a lists terms like "video editing software adobe", "video editing software android", and "video editing software apple". Section b lists terms like "video editing software best", "video editing software blender", and "video editing software beginners". Section d lists terms like "video editing software download", "video editing software definition", and "video editing software davinci". Section e lists terms like "video editing software easy", "video editing software examples", and "video editing software ebay".

Source: (AnswerThePublic.com, 2020)

Figure 5. AnswerThePublic Tool – Related Search

In this example I used the same search query as before: “video editing software” and the tool shows a list of useful questions that could be used as a starting point for creating pieces of content that might draw in potential customers. Here are some which stand out:

- Can you download video editing software?
- Where can I buy video editing software?
- What video editing software do youtubers use?
- What video editing software do professionals use?
- Which video editing software is best for beginners?
- Which video editing software is best for PC?

These questions point out the problems that people are facing when they are looking to buy video editing software and a simple blog article can tackle most of them. Creating content that answers each question in detail should definitely be a priority for the marketing strategy.

2.1. Creating the dream buyer avatar

As soon as all the information about the dream buyer has been assembled, it is time to create the dream buyer avatar. This will allow the company to make changes to the service or product, the marketing strategy, the pricing policy, the type of content that is being produced and the channels that are used to promote the content. This process is especially important for small companies that are not ready to take on large and established competitors who already own significant parts of the market.

In the video editing software example, some business owners would simply say “We target anyone who is interested in buying video editing software”. I would argue that this is too broad of a target and it needs to be narrowed down. Narrowing down however, does not mean that you exclude part of the potential customers. It just implies that the marketing strategy and budget simply goes after the people who are most likely to purchase the product or service. Focusing all efforts on targeting the dream buyer means that the marketing message and the content that encompasses it become very effective in rising above the average publicity, thus achieving more sales.

Another advantage that comes from taking the time to perfect this buyer avatar is that the people who fit in this category are also the ones who are certain to benefit the most from acquiring the products the company is selling.

To help with defining the dream buyer, there are nine questions that can streamline the process:

1. Where does this person like to spend his/her time and where does he/she go to chat with likeminded people?
2. Where does the dream buyer go for gathering information?
3. What are the main challenges and frustrations that he/she is encountering?
4. What hopes, dreams and desires categorize the dream buyer?

5. What are the fears of the dream buyer?
6. How does the dream buyer prefer to communicate?
7. What are some of the defining characteristics of the language he/she uses?
8. How does an average day look like for the dream buyer?
9. What makes the dream buyer happy?

Here is how these questions would work in the video editing software example. If someone is interested in this kind of software, we can assume that he/she is looking to edit video files, either for personal reasons or for business reasons. Looking around the internet, we can find some of the places a person like this might visit: Facebook, blogs, magazines about video editing. This can be too general, and it is better to be a bit more specific. Let's say we can narrow it down to: this person is a part of the Freelance Video Editors Facebook group or similar, reads Videomaker magazine, reads the Shutterstock blog, goes to the beach every weekend to film the sunset and wildlife. Knowing all of this about your potential customers can offer lots of cues on where it would be best to advertise, what should be the message in your adverts, how the content should sound like.

The second question could be tied up in the first, however it is important to note that the more we can find out about where the buyer goes for information, the better we can understand what he is looking for. Is the research simply being done on Google, or does he use specialist blogs, does he have a subscription for a paper magazine that covers the subject, does he spend time on YouTube learning about video editing?

Understanding the challenges and frustrations of the dream buyer means that it is easier to design a product that addresses their problems directly, alleviating some of the pain points. Here are some examples of challenges that the customer might be encountering:

“I need a piece of software that is simple to use for promoting my business”.

“I need to lose five kilograms before my sister's wedding”.

“I wish someone could help me promote my company website”.

As these frustrations and challenges are identified and understood, they can help with tweaking the products and services you are trying to sell. These products must be able to solve the problem for the buyer to make the purchase. These statements also provide an insight regarding the emotions the dream buyer is experiencing, and these need to be considered when planning the tone and emotions conveyed by the content you publish.

Dreams, hopes and desires are important to understand because they will help in painting a picture of what life could look like after using your company's services and products. As long as these are effective in solving the problem, creating the content that explains this should be much easier. Here is how the ads should be structured in terms of highlighting desire:

Table 2. Writing ads that speak to desire

What the buyer desires	How the ad should look like
I need a piece of software that is simple to use for promoting my business.	Our video editor was specifically designed for beginners, allowing anyone to produce professional looking content.
I want to lose five kilograms before my sister’s wedding.	This exercise program will help you quickly cut 5-10 kgs in 60 days guaranteed!
I wish someone could help me promote my company website.	Guaranteed Google page 1 rank in 90 days or we work for free!

Source: author’s own experience from consulting clients

Addressing the dream buyer’s deepest fears is also an integral part of creating the customer avatar. The deepest fears are those that keep you up at night, the worries that you don’t tell others about. Taking these into account when creating content is key because it has been proven that people are motivated more by pain than they are by pleasure (Higgins, 2012). The desire to gain something is less important than the fear of losing something. This is something the insurance business is taking full advantage of. Just look at how they tackle the fear for your child’s future in some of their ads (Figure 6).



Source: (DesignCrowd, 2020)

Figure 6. Life insurance ad

Paying attention to the buyer’s preferred form of communication shows exactly where the content must be distributed. It is important to understand that

adapting your message to the preferences of the audience means a higher chance of engaging them. Some people like to talk to companies using email, others prefer texting or using Facebook Messenger and Twitter. Not using these to communicate with prospective buyers and sticking to the regular channels that your company has been using is a mistake.

The language people use to talk about their problems can give precious insights on the keywords that need to be targeted by the content efforts. This is especially clear when there are industry-specific terms that are used when describing an issue. The buyer needs to feel that the company is addressing him directly and this can be achieved through a common language.

Part of creating the customer avatar is analyzing and understanding how a typical day looks like for the buyer. How he starts his day, what he does at work, how he ends the day. The average human has different levels of attention throughout the day. Figuring this out means knowing exactly when it is the perfect time to call or to email potential clients.

Last but not least, we need to find out what makes the dream buyer happy. It has been shown that people like to interact with businesses that make them feel good about themselves. If an individual resonates with a company's goals and aspirations, he will get an added sense of satisfaction when purchasing their products. There are also other little touches that can make the transaction more exceptional such as hand-written thank you notes, gift baskets and birthday messages. Each of these can bring a smile to the buyer's face and create a deeper emotional connection to the brand.

2.2. Putting it all together

The answers to all the questions need to be refined into a paragraph that describes the dream buyer. It could look something like this:

“John is an entrepreneur and he is looking to start a YouTube channel for his surfing business. He starts his day early with a drive to his shop. On his way, he stops for coffee at a local establishment where he spends a few minutes browsing social media. As he arrives at work, he checks email and his calendar to see what urgent tasks need taking care of. At lunch he reads Videomaker magazine to find out about tips and tricks to filming the perfect 10-minute video. He then gets back to work until 5 and leaves for home. Here he spends time on the Freelance Video Editors Facebook group to see what video editing software most people are using. He plans to start working on his YouTube channel sometime in the next two months. His dream is to grow this channel until it provides enough income for him to be a full-time youtuber and travel the world in search of the best surfing beaches”.

Doing this exercise provides a complex understanding of how and where you can reach the dream buyer and what language you need to use when you approach

him. Defining the target audience accurately can propel a company way ahead of the competition and allow it to achieve the halo effect.

3. CREATING THE CONTENT STRATEGY IN THREE STEPS

Being in charge of creating a marketing strategy means planning a constant stream of content that is either usable for a number of channels or different pieces of content that is specifically tailored for each channel. Just a few years ago content was only required for special events like a new product being launched or the company announcing it was going into a whole new market sector. These days however, all businesses are required to pump out an assortment of content just to stay visible in an overcrowded internet space. The content can take the form of video, blog posts, social media updates, whitepapers, free eBooks, newsletters and online classes. Without these, a company's online presence suffers and eventually it starts to lose business. I am not advocating creating content just for the sake of having something to throw online, as putting out too much low-quality content can be just as harmful as not creating any. The key thing is to publish quality content at a steady pace. This can be achieved by following three steps: understanding the needs of the target audience, matching content to the buying cycles and creating a publishing schedule.

3.1. Understanding the needs of the target audience

As I explained in the previous sections, creating content without understanding who it is targeted at is a mistake. The best way of understanding the needs of the target audience is to create buyer profiles or buyer personas. Besides answering the nine questions that help with identifying the dream buyer, it is important to take a look at the company's existing customer base. This will include some frequent buyers of the company's products or services. It is highly likely that several buyer types will be identified.

Let's take the following example to illustrate the buyer types. A coffee shop situated near a university campus will certainly have most of its customers being either students or university staff. Just from this little distinction we can establish two customer types from which we can generate two buyer personas – student John and professor Brown. To fill out each persona we need to think about the details that define each individual such as how they work, where they live and their income. These details can then explain what challenges and worries the customers might have. To help with this process I propose three questions:

1. What problems are the customers trying to deal with?
2. What do they need most?
3. What information are they searching for?

With the help of current marketing tools we can find out what keywords or search phrases are bringing potential clients to the company website, how long the prospects spend on the landing page and whether they explore some other content,

what they actually read or what they watched on the site, where they clicked. Having this information at our disposal we can then tailor the website so it offers something for each buyer persona.

Getting back to the coffee shop example, student John mostly searches for coffee shops with extended hours or which are non-stop. On the shop's website John can find out the opening hours, coffee and snacks prices, and about the live music on every other night. Because the website can track this activity, the business can find out that the John persona needs a coffee shop with long hours, prices that a student can afford and entertainment options.

Busy professor Brown searches for coffee shops with quick service, short lines and in walking distance from the university. On the shop website he takes the time to read about the selection of premium coffee blends and pastries. Tracking this activity, the business can speculate that professor Brown can afford to spend more on exotic coffee blends and classy snacks, but he doesn't have much time to wait for the food and beverages to be served.

3.2. Matching the content to the buying cycles

Creating quality content that is relevant for the target audience is just as important when we are turning leads into customers as is when we are building up the brand's recognition. However, the content must be tailored so it matches each stage of the buying cycle. In addition, the strategy must determine which type of content is best suited for each of the four stages.

1. **Awareness:** the prospective customers notice that they have a need for a product or service that the company provides.

Best type of content: social media and blog posts.

2. **Research or Education:** now that the prospects are aware of their need or problem start looking for available solutions.

Best type of content: eBooks, webinars and white papers.

3. **Comparison or Confirmation:** the available solutions are compared and the ones that fall short are eliminated.

Best type of content: case studies, customer testimonials, video demonstrations of how the product works.

4. **Purchase:** the customer chooses which company to buy from.

Best type of content: detailed product information such as specifications, expert reports, free consultations.

3.3. Creating a publishing schedule

After identifying the target audience and what content needs producing, the next step is deciding where and when to publish the content. The most effective way of scheduling the release of content would be to spread it out over a period of three months, where the people tasked with producing the content know exactly

the subjects they need to cover, what buyer personas they are addressing and when each piece needs to be published or shared.

The schedule needs to be as detailed as possible, which means that for every piece of content there has to be a title, a subject and a persona. In addition, we need to know for which part of the buying cycle the content is being produced and what keywords or search terms need to be targeted.

Other parts of the publishing schedule that need to be considered are holidays and events. If the three-month period happens to include popular holidays, and the type of the business allows it, generating content that relates to how people spend their holidays is a good idea. For example, a bar might start advertising its Saint Patrick's Day party a month in advance using social media and creating a special landing page on its website that offers a free drink coupon for the first hundred visitors. Planning for events such as trade shows and conferences also makes sense, especially if the company intends to use these opportunities to launch new products or services. In this case, special blog posts and even white papers or eBooks can be used to better showcase the new additions.

4. CONCLUSIONS

As online marketing has evolved, it is now more important than ever to have a solid content strategy that can draw in the right customers. Such a strategy needs to understand exactly what the target audience is, how it can be reached. Finding the right customers or dream buyers can be achieved by employing a few tools like the larger market formula, the Pareto rule and creating a buyer avatar. These tools work by gathering information from all manner of resources such as search engines and social media because these are the most effective at showing how the prospective buyer behaves online, where he likes to do research and what language he is using.

Analyzing online behavior can yield valuable insight regarding the buyer's dreams, desires and hopes, his fears, challenges and frustrations. Knowing these will allow the content to be perfectly tailored to the audience as it will tackle the exact problems of the customer, using a language he can understand, in a format that he likes, using a channel that he prefers.

Understanding the needs of the target audience is just the first step in setting up a successful content strategy. The second step is to match the content to the buying cycles and this implies creating specific pieces of content that can help and guide the buyer as he becomes aware of his problem, as he starts to gather information and then goes on to choose the product or service that can meet his needs. The final step is determining how often to publish content, how much of it is needed and what are the best distribution channels.

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THE IMPACT OF ENTREPRENEURIAL ATTITUDES, ABILITIES
AND ASPIRATIONS ON ECONOMIC PERFORMANCE. A CASE
STUDY OF CEE COUNTRIES

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Abstract

The global economic crisis has increased attention on entrepreneurship, which is seen as a solution to unemployment. The paper aims analysing which of the entrepreneurial attitudes, abilities and aspirations have a significant impact on economic growth, using data from Central and Eastern European member states. Statistical analysis was performed using SPSS 20.0 software (IBM Corporation, Armonk, NY, USA). By applying ordinary least squares regression (OLS), our findings confirm the existence of a significant relationship between risk acceptance and internalization and the country's level of development.

Keywords: *entrepreneurship; economic performance; risk acceptance; internalization; development and social development.*

JEL Classification: L26, J24, J28

1. INTRODUCTION

The main objective of this paper is to analyze which of the entrepreneurial attitudes, abilities and aspirations have an impact on economic growth, using data from Central and Eastern European member states. Many authors underline the importance of entrepreneurship for a sustainable development, using data at micro and macro level. For instance, Carree and Thurik (2005) stated that entrepreneurial activity measured in terms of firm size and age is positively related to growth. Wennekers and Thurik (1999) suggest that entrepreneurship contributes to economic growth by introducing innovation, creating chance and competition and enhancing rivalry. The connection between entrepreneurship and performance has been extended beyond the firm level to include a geographic region. For example, Reynolds, Miller and Maki (1995) found that between the entrepreneurship and regional economic growth there is a positive relation. When it comes to linking entrepreneurship to growth at national level, the Global Entrepreneurship Index (GEI) represents an important tool for understanding the entrepreneurial strengths and weaknesses of a country. GEI helps us grasp the essence of the quality and quantity of the business formation process in 130 countries from all over the world. Calculated as the arithmetic sum of entrepreneurial attitudes, entrepreneurial activity and aspiration, the index is based on fourteen individual pillars. The pillars themselves are constructed through an interaction of individual level and institutional variables. This interaction can be explained as follows: how the entrepreneur acts at a given time and place heavily depends on the rules of the game – the reward structure in the economy – that happens to prevail (Baumol, 1990). In other words, what makes entrepreneurship an essential factor of economic progress is not only the capacity of innovation or the so-called entrepreneurial spirit, but also the institutional framework in which entrepreneurial activity is carried out. Otherwise, we cannot explain how this spirit could be brought to life when it does not act accordingly, in the sense of stimulating progress (Pagliacci, 2015). The importance of the institutional framework was also underlined by Mustra and Skrabic (2011). The authors analyzed the connection between institution and growth inequalities for 18 European countries and found that the most important processes are those that elevate the respect of citizens and the state.

The article is structured as follows. The subsequent section reviews the existing research on the topic. Next, we continue by presenting the data and the methods used, followed by the results interpretation and conclusions.

2. LITERATURE REVIEW

Entrepreneurship is the key of economic and social development, the increase of efficiency and productivity. Many studies in the field of entrepreneurship showed that the set-up of new companies is an important factor in the process of social-economic growth (Drucker, 1993; Watson, 1998; Timmons, 1999; Fayolle, 2003; OECD, 2009; Storey, 2016; Vodă and Florea, 2019; Vodă, Butnaru and Butnaru, 2020).

The entrepreneur is unanimously acknowledged as generator of prosperity in society and a determining element of economic growth and job creation (Vodă and Chiriac, 2012). The support of entrepreneurship has become a priority for the past years, being considered a solution to escape the crisis and cut the overwhelming unemployment rate (Barta *et al.*, 2012). The importance of entrepreneurship at European level is widely debated among scientists, practitioners and international organisms. According to Pana (2007) the level of entrepreneurship is influenced by the features of territories in which the entrepreneurs act. The economic system in modern and developed countries is founded on a dynamic “entrepreneurial system”, where innovation plays the role of main driver of economy and society. This tendency is confirmed by the following phenomena: the importance of knowledge is increasing in organizations in comparison with tangible assets and labour; individuals are the main actors in knowledge-based organizations; small and medium sized enterprises are increasing their role in translating innovative products and services on the market; central and territorial institutions understand that entrepreneurship is driven by individuals but it needs a wider economic and social context; political institutions pay attention to promote entrepreneurial innovation and to support high-potential start-ups (Pana, 2007; Acs, Szerb and Autio, 2015; Acs, Autio and Szerb, 2016).

Acs and Armington (2003) analysed the factors that influence economic growth and development on a sample of 394 regions. The authors’ main results indicate that the United States economic development depends on the entrepreneurial activity, agglomeration effects and human capital. Wong, Ho and Autio (2005) analyze entrepreneurship impact on growth, using two main variables: *the creation of new companies*, using TEA index and the *innovative capacity*, using the relation between the number of patents and the GDP values during 1997 and 2002. The economic growth was measured using the average GDP growth rate per capita. Also, two control variables were included in the model: the GDP per employee in the first year and the average capital increase per employee, five-year period. The results indicate that only high growth potential entrepreneurship is found to have a significant impact on economic growth. Benoit *et al.* (2006) also underlined the importance of the entrepreneurial activity on development. The author found that in some Central and Eastern European (CEE) countries there is an entrepreneurial potential, especially among the young, a potential that is to be harnessed. In a study applied to entrepreneurial communities in Romania and to NGOs concerned of the promotion of entrepreneurship, the main factors with the potential of influencing the situation of entrepreneurship were identified, namely: the entrepreneur’s skills and competencies, the access to financing sources, taxes and other administrative barriers, the existence of networks and connexions, entrepreneurial culture and capital, entrepreneurial education and public policies (Akcees, 2013). The results highlighted the fact that the improvement of entrepreneurial education in schools and universities may

contribute to the re-launch of the Romanian business environment (Boldureanu *et al.*, 2013; Boldureanu, 2013).

Others studies like Fritsch and Mueller (2004) and Baptista, Escaria and Madruga, (2007) using time-lagged indicators lead to clearer results about the role of entrepreneurship in the labour market dynamics. Similarly, Audretsch and Fritsch (1999) stated that for Germany, the relationship between entrepreneurship and growth shifted from negative in the 80's to a positive one, in the 90's.

Irrespective of the scientific or practical perspective approached by various specialists that deal with the entrepreneurial phenomenon, the decision to set up a company and start a business is influenced by: 1) the individual's personal features, his/ her skills; 2) environmental factors or socio-cultural ones, 3) personal characteristics of the businesses started by entrepreneurs and 4) contextual national factors.

3. RESEARCH METHODOLOGY

The necessary data to conduct our empirical research were collected from Global Entrepreneurship Development Institute reports and World Bank. The geographical area of interest for this paper involves ten European Members states from ECE countries: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

Data analysis was performed using SPSS 20.0 (IBM Corporation, Armonk, NY, USA). ANOVA is statistical method for analyzing the variation of a variable depending on one or more categorical variables. By applying ordinary least squares regression (OLS) we tested the correlation between different entrepreneurial attitudes, abilities and aspirations and development. A linear regression model has been formulated as follows:

$$Y_{it} = \beta_0 + \beta_1 \times \text{Opp_perc}_{it} + \beta_2 \times \text{Risk_acc}_{it} + \beta_3 \times \text{Tech_abb}_{it} + \beta_4 \times \text{Internaliz}_{it} + \beta_5 \times \text{control_1}_{it} + \beta_6 \times \text{control_2}_{it} + \varepsilon_{it} \quad (1)$$

Where:

Y_{it} , the level of development is measured using GDP per capita in PPS in year t in country i ;

Opp_perc_{it}- The potential opportunity perception of a population by considering the size of its country's domestic market and level of urbanization, in year t in country i ;

Risk_acc_{it} – Availability and reliability of corporate financial information, legal protection for creditors, and institutional support of inter-company transactions, in year t in country i ;

Tech_abb_{it}- Number of businesses that are in technology sector and the country's capacity for firm-level technology absorption, in year t in country i ;

Internaliz_{it}- The degree a country is open to international entrepreneurs, its potential of business and degree of globalization; in year t in country i .

Each of entrepreneurial activity contains an individual and an institutional variable that correspond to the micro- and the macro-level aspects of entrepreneurship in year t in country i . Also, two control variables were taken into consideration: the employment level (control_1) and credit country ranking (control_2). ε_{it} – represents the error term, in year t in country i .

4. RESULTS AND INTERPRETATIONS

The data from Table 1 presents the descriptive statistics for all dependent and independent variables included in the model. The data include ten member countries from Central and Eastern Europe. The dependent variable included in the model is the level of development that we measured through the GDP per capita (in PPS) of a country i . The independent variables are risk acceptance, technological absorption, internalisation, opportunity perception and two control variables.

Table 1. Descriptive statistics for the variables included in the model

Variable name	Mean	Std. Deviation	N
GDP (in PPS)	64.9	12.332	10
Opportunity perception	0.309	0.121	10
Risk Acceptance	0.517	0.100	10
Technological Absorption	0.569	0.178	10
Internalization	0.815	0.189	10
Employee_level	54851	7657.974	10
Credit_rank	63.020	12.332	10

Source: authors' calculation

The results reported in Table 2 indicate the values for Pearson Correlation Coefficient and the associated significant values. As the table shows, all independent variables are correlated with the development level (associated sig. is lower than 0.05).

Table 2. Correlation coefficient between GDP level and entrepreneurial attitudes, abilities and aspirations

Variable	Pearson Correlation Coefficient	Assoc. Sig.
Opportunity perception	0.687	0.028
Risk Acceptance	0.840	0.002
Technological Absorption	0.721	0.019
Internalization	0.657	0.039
Employee_level	0.957	0.000
Credit_rank	0.877	0.001

Source: authors' calculation

Table 3. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.065	6	0.011	28.389	0.010 ^b
	Residual	0.001	3	0.000		
	Total	0.066	9			
a. Dependent Variable: GDP per capita						
b. Predictors: (Constant), Opportunity perception, Risk Acceptance, Technological Absorption, Internalization, employee_level, credit rank						

Source: authors' calculation

Table ANOVA (Table 3) shows that all determination coefficients are significantly correlated for a Sig. value lower than 0.05.

The estimated value of the R correlation report is 0.983, which shows that there is a strong relation between the variables subjected to analysis (Table 4). The determinacy report is the square of the correlation one equal to 0.984. This value of the determinacy report shows us that the level of the independent variable used may explain 94.8% of the variation of the development level. The analysis conducted shows that risk acceptance and internalization are positively correlated with our dependent variable.

For the last two variables technological absorption and opportunity perception the significance level was greater than 0.05. Within the used variables only risk –acceptance and internalization, positively and significantly influence a country's development level.

Those two variables are explained in detailed below.

Table 4. Estimation of parameters for multiple regression models

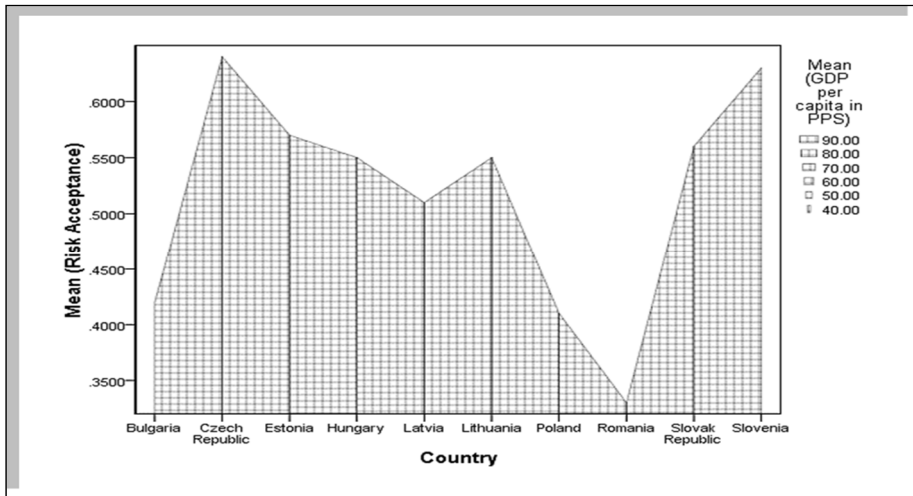
	Model 1
Dependent Variable	GDP per capita in PPS
Method	OLS Regression
Constant	-0.224** (2.115)
Risk Acceptance	0.314** (0.204)
Internalization	0.052** (0.072)
Technological Absorption	-0.039 (0.076)
Opportunity perception	0.104 (0.106)

EU ADMINISTRATIVE AREA

Employ_level	0.363** (0.472)
Credit_Rank	0.003** (0.01)
R	0.983
R square	0.948

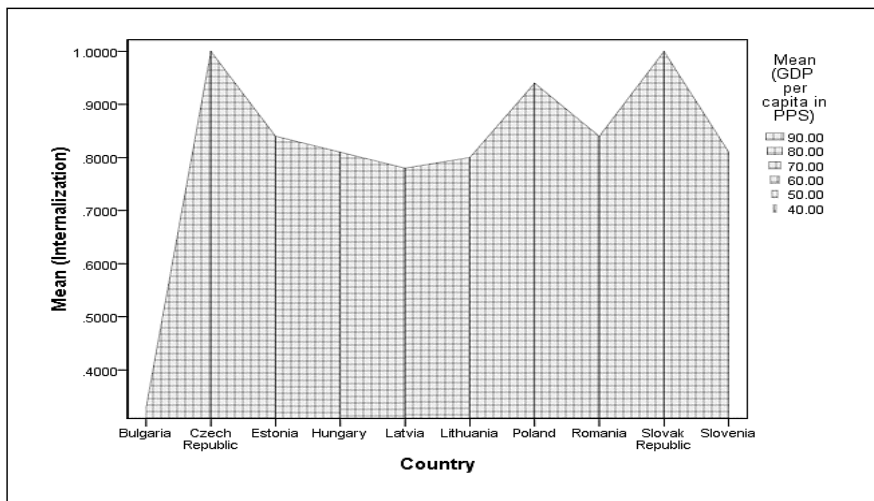
Note: *** 1%, ** 5% statistical significance; standard errors are specified in brackets.
Source: authors' calculation

Our analysis is in line with other studies, which reveal that the perception of risk may influence the intentions to become an entrepreneur (Hessels *et al.*, 2011; Shinnar, Giacomini and Janssen, 2012). For instance, Arenius and Minniti (2005) and Morales-Gualdron and Roig (2005) found that the fear of failure exerts a negative impact on the decision to become self-employed. In our analyses we used risk acceptance variable in order to measure the percentage of the population that does not believe the fear of failure would stop them from starting a business. In other words, it reflects the availability and reliability of corporate financial information, legal protection for creditors, and institutional support of inter-company transactions (Acs, Autio and Szerb, 2013). Even if risks vary from exchange rates to climate and political events, laws, international exchange rates and other unexpected factors, they need to be considered by entrepreneurs from the idea stage of the project. They are the ones that notice, exploit and then eliminate, thus paying attention to the changes on the market. Profit opportunities continuously occur as mistakes made by the actors on the market in world of change. There are also risks pertaining to logistics, financial and fiscal aspects, geopolitical contexts, institutional regulations of foreign markets, the stability of some governments or political parties, price control, protectionist measures, the socio-cultural factor, favouring local competitors or corporate actors, etc. (OECD, 2009). From the analysed countries the lowest risked acceptance is registered in Romania, Poland and Bulgaria. At the other end are situated countries like Estonia, Slovenia and Czech Republic (Figure 1).



Source: authors' representation

Figure 1. Risk Acceptance and GDP (per capita) in ECE countries



Source: authors' representation

Figure 2. Internalization and GDP (per capita) in ECE countries

The second variable positively and significantly correlated with the development level is internalisation (Figure 2). From a conceptual perspective, both globalisation and internalisation are multidimensional constructs, expressed in multiple forms at organisational level. Julien (1996) has noticed that 85% of the small enterprises operate a strategy that met the new conditions of market

globalisation. In this sense, the author gave examples from various studies that he carried out and which dealt with the acquisitions and sales of goods and services or in other foreign countries, investment in other countries, trans-border collaborations between organisations. Julien (1996) supported the idea according to which internalisation strategies of small and medium sized enterprises are the skeleton of the private sector at all levels in development countries. Currently, small and medium-sized companies have become a landmark in the analysis of international relations, the exigency of an international conduct deriving from the desire of survival itself or organisational progress. Versatile business contexts started to demand prompt adjusting measures to preserve competitiveness, lower costs and extend the specific market (Cannon and Perreault, 1999; Vatamanescu and Andrei, 2014). Internationalization refers to the degree a country is open to international entrepreneurs, its potential of business and degree of globalization. Internationalization or the act of businesses growing implication in international operations can take the form of licence/franchise, indirect export, direct export, overseas subsidiary, joint venture, and foreign direct investment (Li, Wang and Liu, 2013).

The recent literature in the area of international business has put forward several reasons that determine a company to internationalize, namely: a search for new markets, especially when domestic markets have been saturated (or close to that) or due to the relative attractiveness of foreign markets when compared with the domestic market; opportunities to exploit the advantages of a company in the production, marketing, knowledge, coordination of activities, reduction of labor costs or energy costs; or, an attempt at consolidation in other markets (Costa and Figueira, 2017). Internationalization is a major determinant of growth due to the provided access to consumer markets, lower labor and production costs, risk reduction, strategic and political objectives, the availability of raw materials or other kinds of resources, etc. In our analyses, we can see that Slovenia, the Czech Republic and Slovakia do not only have the biggest GDP values, but also the capabilities required to produce for domestic markets. The lowest value of a region was recorded in Bulgaria both at the levels of internalization and GDP value.

5. CONCLUSIONS

Globalisation, socio-economic and cultural patterns deeply influence the way in which entrepreneurs approach businesses. Economic resorts and the reason to obtain profit forced the company outside its domestic space and made it go global. We are living in a world of Robbinsonian maximisation and which allows entrepreneurs to seek arbitrage opportunities to balance the market. Such an entrepreneur should be alert so as to seize opportunities, but should also have the skill of anticipating future opportunities. The systemic tendency of the market is towards an environment of unexpected and inconsistent changes of individual

plans. Entrepreneurs are the ones that create their own history. They are the ones to discover new information and create favourable opportunities to reach their aim, they are *speculators*, but this entrepreneurial spirit can manifest itself only in an appropriate institutional framework, in agreement with the fundamentals of the Institutional School. Therefore, the research started from the premise that the different levels of development can be explained through the measurement of entrepreneurial activity.

Results show that two variables were significantly and positively correlated with economic development in ECE countries: risk –acceptance and internalization.

We used risk acceptance variable in order to measure the percentage of the population that does not believe the fear of failure would stop them from starting a business. From the analysed countries the lowest risked acceptance is registered in Romania, Poland and Bulgaria. At the other end are situated countries like Estonia, Slovenia and Czech Republic.

The second variable positively and significantly correlated with the development level was internalisation. Internationalization refers to the degree a country is open to international entrepreneurs, its potential of business and degree of globalization. Internationalization is a major determinant of growth due to the provided access to consumer markets, lower labour and production costs, risk reduction, strategic and political objectives, the availability of raw materials or other kinds of resources.

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Section III

EU ACCOUNTING AND TAXATION

THE DECLARATION OF THE STATE OF ALARM IN SPAIN AS A CONSEQUENCE OF COVID-19: ITS INCIDENCE ON TAX LIMITATION PERIODS

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Abstract

The exceptional measures adopted as a consequence of the health crisis that Spain suffers from the coronavirus epidemic, directly affect the calculation of the limitation periods, in general, and, therefore, also the limitation periods established in the General Law. Tax. The circumstances that have forced the adoption of such measures have also meant that different legal texts have been issued that affect this issue in a short time, generating numerous doubts about their interpretation, application, and effects on the terms of tax prescription.

Keywords: *tax law; tax prescription; state of alarm; tax procedures.*

JEL Classification: K34

1. THE LEGAL MEASURES ESTABLISHED IN SPAIN AS A CONSEQUENCE OF THE CORONAVIRUS EPIDEMIC: GENERAL CONSIDERATIONS

On March 14, 2020, the state of alarm was declared throughout the Spanish territory as a result of the coronavirus epidemic, which has generated a severe health crisis. Spain is not the only country afflicted by this unprecedented health crisis, which is global in scope and has forced the Governments of different States to adopt different extraordinary measures, such as the confinement of citizens in their homes.

Along with the severe effects on public health, this crisis, more than any other, extends its consequences far beyond the sphere of health. In this case, the seriousness of the situation and the measures adopted to alleviate it, cause its effects to be pervasive, affecting not only trade, financial markets, and thus the general functioning of the economy, but also to the legal operators and, in short, to the entire society that, to a greater or lesser extent, will see, and is seeing, their daily lives altered.

Mainly, in Spain, the measures adopted have been reflected in several legal texts, which obey the circumstances of "extraordinary and urgent need" that exist in our country. These measures aimed at achieving a general stoppage of the different branches of activity, except for those that are essential.

This new situation, the effects of which are unknown to date, will also have significant consequences for the calculation of prescription, both directly, through its suspension, and indirectly, through the incidence of the time limit. The maximum duration of tax enforcement procedures also has an impact on the maintenance or loss of their interruptive effect.

The multiple regulatory texts issued in the first week of the state of alarm and the numerous doubts raised by its provisions significantly affect this extinguishing mechanism of the tax debt. This situation increases the legal insecurity of the taxpayers, not only due to the difficulty of determining the applicable criteria in this exceptional situation but also because the basis of the tax prescription is the principle of legal certainty. With this, all modifications that alter its regime must be examined with the utmost caution, and always from legal certainty, a constitutional principle enshrined in article 9.3 of Spanish Constitution. This principle must be used as an element of judgment to resolve all those doubts raised by the application of this extraordinary and temporary regulation.

Consequently, in the following epigraphs, we will analyze all these questions, for which previously it is necessary to carry out a conceptual approach to the figure of suspension in the field of tax prescription and the influence of the duration of tax procedures in their computation.

2. TAX PRESCRIPTION IN SPANISH TAX LAW: GENERAL CONSIDERATIONS

The prescription is one of the forms provided in Article 59 of General Tax Law 58/2003, (after this, GTL) for the extinction of tax debts. Articles 66 to 70 of GTL, both inclusive, develop its legal regime.

Calvo Ortega and Calvo Vérguez (2019, p. 189) define the tax prescription as follows: “the prescription is an extinguishing figure of the obligations and, for what interests here, of the tax obligation. The lapse of a certain period and the lack of activity of the creditor's administrative office produce this extinction effect”. Eserverri (2012, p. 13), for its part, indicates that “it is the substantive part of the law that used to declare the rights acquired or extinguished by the passage of time”. Falcón Y Tella (1992, p. 67), in the same sense, points out that the prescription “consists of the late exercise of a right – that is, the exercise of the right when there has been a continuous silence of the legal relationship – and it works through attribution to the subject passive or to an interested third party of the faculty to stop, enervate or repel said late exercise, or, –in Public Law– by imposing on the creditor an obligation to abstain from exercising the powers and actions tending to the protection of his credit”.

As regards the content of Articles 66 et seq. of GTL, the first of these articles, Article 66, indicates that prescription is four years and that the rights that can be prescribed are four. Two of them correspond to the Administration and two to the

taxpayer. In this paper, we will deal with the rights that correspond to the Tax Administration, which are:

- The right to determine the tax debt;
- The right to collect the tax debt.

The establishment of different rights that can be prescribed is a particularity of the regulation of prescription in GTL. Consequently, throughout the articles that regulate this extinction mechanism, a differentiated regulation is established, particularly about the *dies a quo* and the interruptive causes of each of these rights.

Article 66 bis of GTL was introduced in 2015 and establishes that the right of the tax authorities to check and investigate is, as a general rule, *imprescriptible*. There is only one exception: for the verification of the bases or quotas compensated or pending compensation or deductions applied or pending application, the prescription is ten years.

Article 67 of GTL deals with the *dies a quo* or start of prescription. In the case of the right to determine the tax debt, article 67 establishes that the period will begin when the period for filing the tax return or self-assessment ends. In the case of the right to demand payment, prescription will begin when the voluntary payment period ends.

Article 68 sets out the grounds for interrupting the period for each of the rights. We shall return to this issue in the next section.

Article 69 of GTL establishes the effects and extension of prescription, the main one being the extinction of the tax debt.

Finally, Article 70 of GTL contains different provisions regarding the prescription of formal obligations.

3. THE SUSPENSION OF TAX LIMITATION PERIODS IN SPANISH LAW

3.1. Conceptual notes

Before explaining the problems that have arisen in the application of extraordinary measures adopted as a result of the declaration of the state of alert, it is necessary to make some notes on the differences between suspension of prescription and its interruption.

Suspension of time limit differs from interruption of prescription in its effects, which derive from the different type of activity that gives rise to each of these situations. As pointed out by Eserverri Martínez *et al.* (2019, p. 494), "if the institute of prescription is based on the prolonged silence of the legal relationship, it is logical to understand that when the silent attitude is broken, the calculation of prescription is interrupted with the immediate consequence that another limitation period of equal duration is generated".

Based on what these authors have said, it is clear that, in cases of interruption, the "silence of the legal relationship" is broken by the intentional action of one of

the parties involved. Therefore, only the parties involved in the legal relationship, the creditor and the debtor, can carry out actions that interrupt prescription. These actions that interrupt prescription in the field of taxation are set out in Article 68 of GTL, which establishes separate grounds for the interruption for each of the rights that may be subject to prescription.

In cases of suspension, however, there is no action on the part of those involved in the legal relationship which would justify restarting the calculation of the period, but rather an external action which would not, therefore, entail the breaking of the "silence of the legal relationship", which is the essential requirement for restarting the calculation of the period. In cases of suspension, there is no action by the creditor or the debtor, so that the time limit will resume when the cause for suspension ends for the time remaining at the time of suspension.

In short, this difference in the origin of the suspension and interruption is directly reflected in its effects; thus, while once the interruption has ended, the time limit will be resumed when the cause that generated the suspension disappears, since "the suspensive event does not render useless the period that has already elapsed" (Sainz de Bujanda, 1990, p. 290). In the same sense, Falcón Y Tella (1992, pp. 171-172), who also offered solid arguments for the establishment of suspension cases, also referred to Comparative Law. This author points out that the suspension of the prescription would be advisable in cases of crimes against the Treasury, in cases of litigation overacts or contracts relating to the taxable event in which the Administration suspends the liquidation and also in cases of the granting of tax benefits subject to a suspensive condition.

3.2. The failure to provide causes for suspension of prescription in General Tax Law

The 1963 GTL, before GTL in force, did not establish causes for suspension, which, in the opinion of authors such as Sainz De Bujanda (1990, p. 290), worked in favor of the Administration, "because the latter, through successive interruptions, can make the prescription institute practically inoperative". Precisely for this reason, the 2001 Report on the Reform of GTL refers to this issue, recommending the establishment of a mixed system that includes causes for interruption and causes for suspension. This report reflected on the criterion to be used to distinguish the causes of interruption and suspension (pp. 97 and 98). It points out that "this criterion could be connected to the subject's attitude towards his legal position in the obligation. Thus, for example, an action leading to liquidation or payment implies an acknowledgment of the debtor's position and, as such, interrupts prescription. In contrast, the filing of a contentious-administrative appeal implies a situation of pendency and has its effect on the suspension of the calculation. Another concurrent criterion is that of connecting

suspensive effects to cases in which administrative actions must necessarily be stopped (as in the case of the initiation of criminal proceedings)".

However, the legislator, in the 2003 GTL, only partially adopts these administrative and doctrinal recommendations, since it establishes in paragraph 7 of Article 68 different provisions in which it does not contemplate causes for suspension in pure form, but rather establishes cases of constant interruption of the term. This constant interruption is an exception to the general rule of instantaneous interruption set out in Article 68.6 of GTL (this provision states that "once the interruption has occurred, the calculation of prescription shall begin again, except as provided for in the following paragraph"). Mainly, Article 68.7 of GTL refers to interruption by the filing of an appeal with the Contentious-Administrative jurisdiction, by the exercise of civil or criminal actions, by the referral of the fault to the competent jurisdiction or the filing of a complaint with the Public Prosecutor's Office or by the receipt of a judicial communication of a stay of proceedings and to interruption by the declaration of bankruptcy by the debtor. In these cases, the calculation of prescription will start again, in full, when the circumstances, which gave rise to it, have been resolved.

4. THE MAXIMUM DURATION OF TAX PROCEEDINGS AND THEIR IMPACT ON THE PRESCRIPTION

The articles of GTL devoted to tax procedures refer on several occasions to the effects of the procedure on prescription. In particular, these references deal with interruption caused by the commencement of the procedure or the loss of effects in cases where its maximum duration exceeded.

The maximum duration of tax proceedings and the interruption of prescription are two circumstances in which there is a close link since the expiry of the maximum period of duration of the proceedings will generally result in the loss of the interruptive effect enjoyed by proceedings that do not end on time. Compliance with the maximum period for the duration of tax proceedings ties in directly with the administration's obligation to make a decision, with a visible impact on prescription. As Mata Sierra (2014, 14, p. 210) points out, "failure to comply with the obligation to resolve may become an indirect cause of limitation of rights, infringements, penalties, etc., in the sense that failure to resolve within the time limit, as we have already said, leads to the expiry of the file – a technique that we will analyze below – and with it, the disappearance of the interruptive cause that the opening of the file entails. The disappearance of the interruption cause means that the latter is considered not to have occurred, and the time limit restored as if it had never been stopped. In those cases in which the suspension takes place after the expiration of the limitation period, this cause for the extinction of the corresponding administrative law is activated".

Tax Administration uses the powers granted to the management, inspection, or collection bodies to exercise the powers that fall on the tax obligation and

prevent its prescription. It is these bodies that can initiate tax proceedings to interrupt prescription and prevent the loss of the entitlement due to the expiry of the time limit.

Under Article 66 of GTL, Administration has two rights that can prescribe: the right to determine the tax liability and the right to demand payment. The limitation period for each of these rights –four years – can be interrupted by a specific procedure. Notably, to determine the tax debt arising from the completion of the taxable event, the tax Administration has two procedures: a management procedure, which in turn comprises the procedures for checking data, checking values, and limited checks, and an inspection procedure. The remaining procedures that the Administration may initiate have different purposes, in some cases, ancillary to the determination of the tax debt arising from the occurrence of the taxable event.

The maximum duration of tax management, inspection and collection procedures, following the provisions of articles 103 and 104 of GTL, in Royal Decree 1065/2007, July 27, which approves the General Regulations on tax management and inspection actions and procedures and the development of the conventional rules on tax application procedures [after this RGIT], and in Royal Decree 939/2005, July 29, which approves the General Collection Regulations [after this RGR] is as follows:

1. Management procedures

Data verification procedure: Article 133.d) of GTL states that this procedure will end, “by expiry, once the period regulated in article 104 of this law has elapsed without notification of provisional settlement, without prejudice to the fact that the Administration may also initiate this procedure again within prescription”. The Article mentioned above 104.1, on the other hand, establishes that “the maximum period in which the resolution must be notified will be that established by the regulations governing the corresponding procedure, without it being able to exceed six months unless a rule establishes it with the rank of law or as provided for in European Community regulations. Where the rules governing the procedures do not set a maximum period, it shall be six months”. Since the regulation does not specify anything regarding the time limit, it will be six months.

Procedure for checking securities: Article 162.1 e) of the RGIT refers to Article 104.3 of GTL, indicating that the procedure will end "by expiry in the terms provided for in Article 104.3 of Law 58/2003 of 17 December, General Taxation". As for the term, in the absence of an express provision, the 6-month term established in Article 104 of GTL shall apply.

Limited verification procedure: Article 139.1 d) of GTL refers to the Article mentioned above 104 of GTL, so that the period shall be six months.

2. Inspection procedure

Article 150.1 of GTL indicates that the inspection procedure must be concluded within 18 months, in general, or 27 months, when any of the circumstances provided for in the Law occur in any of the tax obligations or periods subject to verification. In particular, the 27-month period will apply when any of the following circumstances occur:

- 1) The taxpayer's annual turnover is equal to or greater than that required to audit its accounts.
- 2) The taxpayer is part of a group subject to the consolidated tax regime or the special group regime of entities being audited.

3. Tax collection procedure

Tax collection procedure is a specialty since there is no maximum period; the only time limit is determined by the limitation period. In this sense, Article 104.1 of GTL, states that "the procedure of compulsory purchase is excluded from the provisions of this paragraph, whose actions may be extended until the limitation period of the right of recovery". The Supreme Court has indicated in this sense, among others, in the Rulings of 4 December 1998 and 3 December 2012 17, in which it denies that the recovery procedure is subject to any time limit, ratifying what indicated in the Article mentioned above 104.1 of GTL.

Although all the procedures have a limited time frame, not in all cases has such a term been considered of lapse. The management procedures, in particular those initiated by declaration and the data verification and limited verification procedures, are considered to "expire" due to the expiry of the maximum time limit for their implementation. Still, this effect is not foreseen in the case of the securities verification procedure. In the inspection procedure, for its part, the legislator expressly states that failure to comply with the time limit for the procedure will not determine the expiry of the procedure (art. 150.6 GTL), which does not prevent it from producing other effects¹⁸. The same situation arises in the case of the tax collection procedure, as indicated above.

The effect of the expiry of the time limit for the tax procedure without its conclusion will depend on the type of procedure. In the case of management procedures, which are subject to expiry, the effect of not completing them in time will be the disappearance of the interruptive effects of the limitation period. This is established in general terms in article 104.5 of GTL, when it states that the expiry "shall not, in itself, cause the rights of the Tax Administration to be time-barred, but the actions carried out in the expired procedures shall not interrupt prescription nor shall they be considered administrative requirements for the purposes set out in section 1 of article 27 of this law". In this sense, the Supreme Court has also been evident in reiterated case law, among others, in the Ruling of

9 April 2015 19 in which it states that "once prescription has expired, it has no other effect than not interrupting prescriptions". In order to be effective, lapse must be expressly declared, either ex officio or at the request of a party. It should be noted that Article 104.5 of GTL, *in fine*, establishes the principle of preservation of documents, which means that "actions are taken in the course of proceedings which have lapsed, as well as documents and other evidence obtained in such proceedings, shall retain their validity and effectiveness for evidential purposes in other proceedings which have been or may be instituted subsequently in respect of the same or another taxable person". It should be noted that Article 104.5 of GTL, *in fine*, establishes the principle of preservation of documents, which means that "actions are taken in the course of proceedings which have lapsed, as well as documents and other evidence obtained in such proceedings, shall retain their validity and effectiveness for evidential purposes in other proceedings which have been or may be instituted subsequently in respect of the same or another taxable person". Thus, even if the procedure expires, the actions of the Administration may be incorporated into a new subsequent procedure.

Therefore, that the procedure expires means that the actions carried out in that procedure will not interrupt prescription, but it will not extinguish, at least directly, the right of the Administration, which survives until the four-year period has elapsed (Guerra Reguera, 2013, p.165). What can happen is that the loss of the interruptive effect means that, if the interruption occurred less than six months after the end of prescription, prescription has expired. It should be noted that Article 104.5 of GTL, *in fine*, establishes the principle of preservation of documents, which means that "actions are taken in the course of proceedings which have lapsed, as well as documents and other evidence obtained in such proceedings, shall retain their validity and effectiveness for evidential purposes in other proceedings which have been or may be instituted subsequently in respect of the same or another taxable person". Thus, even if the procedure expires, the actions of the Administration may be incorporated into a new subsequent procedure.

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In the case of the inspection procedure, which is not subject to expiry, article 150.6 of GTL states that failure to comply with the 18-month or 27-month period, as appropriate, will not result in the expiry of the procedure, but the prescription will not be considered interrupted. However, the actions carried out after the expiry of the period do interrupt the prescription, although not any action will have interruptive effects, only those that imply "a determined administrative action to

carry out the task that was not initially carried out in the legally required time" (Supreme Court Ruling of March 23, 2018).

Finally, in the urgency procedure, as indicated in Article 104.1 of GTL, *in fine*, it states that this procedure has no maximum duration so that its actions can be extended until the right to demand payment is prescribed, therefore, for four years. Therefore, as no other time limit is foreseen, in these cases, the problems derived from the loss of the interruptive effect due to the expiry or the course of the maximum duration of the procedure will not arise, as was the case in the management and inspection procedures.

5. DECLARATION OF THE STATE OF ALARM AS AN EXCEPTIONAL MEASURE AND ITS TEMPORARY EXTENSION

Although the General Tax Law does not provide for the suspension of limitation periods, there may be certain circumstances of force majeure that require the suspension of such periods. This extraordinary suspension may occur in the case of the states of alarm, exception, and siege, provided for in Article 116 of the Constitution. This article only covers the essential aspects of these three extraordinary situations, mainly the body or bodies that must adopt them and their maximum duration. The provisions of this precept are developed in Organic Law 4/1981, June 1, on the states of alarm, exception, and siege, which, in its article 1.1, indicates that these three exceptional situations will only be declared "when extraordinary circumstances make it impossible to maintain normality through the ordinary powers of the competent authorities". paragraph 2 of that provision, as regards its temporal extension, which shall be strictly indispensable to ensure the restoration of normal conditions

Throughout Spain's recent history, and particularly since the entry into force of the 1978 Constitution, neither a state of emergency nor a state of siege has ever been declared, the state of emergency, which the Government is responsible for declaring, has, however, been declared twice, albeit under very different circumstances and with very different effects.

The first time a state of emergency was declared was on December 4, 2010, when the Government adopted Royal Decree 1673/2010, December 4, declaring a state of emergency for the normalization of the essential free air transport service. The cause of this exceptional measure was the air traffic controllers' strike that was taking place at that time. The state of alarm, which was initially scheduled to last 15 days, was extended for another 15 days. However, the specific circumstances that gave rise to its declaration and, consequently, the limited nature of the measures contained in the Royal Decree to ensure a return to normality, did not entail any restriction whatsoever on economic activity or, in this case, on administrative activity, and therefore no suspension of any period was envisaged.

The second time that a state of alarm has been declared in Spain was on March 14, 2020, due to the so-called "coronavirus" pandemic, which has forced various States to adopt extraordinary measures to limit the spread of the epidemic. Therefore, the Spanish Government, under the provisions of article 4.b of Organic Law 4/1981 regarding these health emergencies, issued Royal Decree 463/2020, March 14, declaring the state of alarm for the management of the health crisis caused by COVID-19. The measures included in this legal text aimed at minimizing economic and administrative activity, to guarantee compliance with the order for the confinement of the population in their homes, as decreed in the regulation. Severe circumstances in which this Royal Decree was issued and the general scope to the entire population, already allow progress that its effects will also be much higher than those derived from the state of alarm declared in 2011.

Royal Decree 463/2020 came into force on the same day as its publication in the BOE, March 14, 2020. The initial duration of the state of alarm provided for in this Royal Decree is 15 calendar days, although, according to the mandate of Article 116.2 of the Constitution, the Congress of Deputies may authorize the extension of this extraordinary situation, with no limit on the time that this extension can be granted. This extension was approved by the Lower House on March 26 and ratified by the Council of Ministers on March 27, allowing for the extension of the state of alarm until April 12, 2020, which means that the total extension, for the time being, reaches 30 calendar days.

In this case, as we indicated, it is foreseen that during the time that the state of alarm is in force, the administrative activity will be paralyzed in general. This standstill reflected in various provisions, which include the suspension of the activity and deadlines for the actions of the Administration, maintaining only certain essential services, such as legal services related to cases with prisoners or cases of flagrant crimes. With this, it is clear that the declaration of the state of alarm, in this case, will have significant effects on the calculation of administrative deadlines.

However, before we proceed to explain it, we must warn that in less than two weeks, this issue has undergone up to four changes. This regulatory chaos has forced legal operators in the tax field to demand greater certainty from the Administrations in their actions, since, even understanding the exceptional nature of the situation, they cannot be subject to such legal uncertainty.

To make it easier for the reader to understand what has happened, we will explain the different possibilities regarding the suspension of prescription and the tax procedures, due to the incidence of the latter in terms of the interruption of prescription, derived from the regulations approved as a result of the state of alarm, taking into account their chronological order, until we reach the solution which, at the date of writing this investigation and barring any future changes, is considered to be in force.

5.1. Royal Decree 463/2020, March 14

As indicated in the previous section, the text that declared the state of alarm was Royal Decree 463/2020, which ordered the confinement of the population to their homes, reduced the maintenance of administrative activity only to essential services and, consequently, provided for the closure to the public of the vast majority of administrations, including a general provision in its fourth additional provision. It points out this precept: “The prescription and expiry periods of any actions and rights shall be suspended during the period of validity of the state of alert and, where appropriate, of any extensions adopted”.

The absence of a specific regulation, and by its literal wording (any actions and rights), it deduced that suspension applied to prescription and expiry, without exception, regulated both by the rules of Public Law and by the rules of Private Law.

So far, there does not seem to be any difficulty. However, the question arises as to whether there is a fundamental problem with its application in the field of taxation, since the establishment and modification of prescription and lapse periods, as well as the establishment of interruptive causes, is subject to the law under Article 8 f. of GTL. The suspension does not establish or modify such periods but could be assimilated to interruptive causes, so that their establishment through a Royal Decree, which has regulatory status, would be invalid.

Three days after the declaration of the state of alarm, the executive issued another Royal Decree, in this case, Royal Decree 465/2020, March 17, amending Royal Decree 463/2020, March 14, which declared the state of alarm for the management of the health crisis caused by COVID-19.

The reasoning behind this regulation states that its purpose is “to introduce modifications aimed at strengthening the protection of public health and ensuring the operation of essential public services”. Curiously, with such a motivation, an amendment to the third additional provision of Royal Decree 465/2020 is introduced in its sole article, fourth section, which introduces the sixth section, with the following wording:

“The suspension of the terms and the interruption of the administrative periods referred to in paragraph 1 shall not apply to tax periods, which are subject to special regulations, nor shall it affect, in particular, the periods for the submission of tax returns and self-assessments”.

Curiously, we do not understand how this change relates to the objectives set out. Apart from that, this Royal Decree excludes the application of Royal Decree 463/2020 to tax deadlines.

In our opinion, the rule is evident in that it excludes the periods of the tax proceeds from the general suspension decreed on March 14. However, it is not at all clear about prescriptions, as it only reforms the third additional provision of Royal Decree 463/2020 and, as we have just indicated in the previous section, the

suspension of prescription and expiry periods established in the fourth additional provision, about which Royal Decree 465/2020 is silent. Is the suspension of prescriptions for tax purposes maintained, therefore? We understand that it is not. And not only because Royal Decree-law 8/2020, which we will discuss below, has established the applicable regime in matters of tax prescription, but also because the wording of the proposed amendment itself seems to point towards this interpretation by referring, in general, to “tax periods”. Moreover, in this case, the comma used is essential, since it is not the same to say “it will not apply to tax periods subject to special regulations”, or say “shall not apply to tax deadlines, which are subject to special rules”.

From the first expression, it seems inferred that only some periods are subject to special regulations and, therefore, only concerning them will the exclusion apply. The following expression, which is that contained in the Law, makes it clear that all tax periods are subject to special regulations, a conclusion that is further supported by Law 39/2015, which in its first additional provision states that the actions and procedures for the application of taxes in tax and customs matters, as well as their review through administrative channels, shall be governed by its specific regulations and, only in a supplementary manner, by the provisions of Law 39/2015 of October 1.

Although we understand that this is the interpretation that should be given to the precept, it would undoubtedly have been more appropriate also to modify the fourth additional provision of Royal Decree 463/2020.

After the declaration of Royal Decree 465/2020, it seems that a situation opened up in which tax procedures remained outside the general paralysis of state activity.

5.2. Royal Decree-law 8/2020, March 17

On the same day that Royal Decree 465/2020 was published, Royal Decree-law 8/2020, March 17, on urgent extraordinary measures to deal with the economic and social impact of the COVID-19 was also published, which establishes various specific measures in the tax, social and labor and commercial fields. This Royal Decree-law, in its reasoning, states about the measures adopted in the tax sphere that “because of the difficulties that the exceptional situation generated by the COVID-19, may entail for taxpayers in order to comply with certain tax obligations and formalities in tax procedures, fundamentally to attend to requirements and formulate arguments in time in procedures for the application of taxes, It is advisable to make the periods available to the taxpayer more flexible in order to favor its right to claim and prove and to facilitate compliance with the duty to collaborate with the State Tax Administration and to provide the documents, data, and information of tax significance in question. To this end, the provisions on the suspension of administrative deadlines for the procedures of public sector entities referred to in the third additional provision of Royal Decree

463/2020, March 20, on the declaration of the state of alarm for the management of the health crisis caused by the COVID-19, have been taken into account, although with a proper and more specific scope, that of certain tax procedures, and with a time horizon in favor of the taxpayer that may exceed the initial validity of the state of alarm. For this same reason, in order to facilitate the payment of tax debts, the deadlines for payment are made more flexible, both in the voluntary period and in the executive period, as well as the payment derived from the agreements of deferment and fractioning”.

The first difference that can be observed with the two legal texts referred to in the previous sections is that their rank is different, since this rule does have legal rank, and therefore does not present the problems of the reservation of law applicable to the periods of prescription and expiration by article 8.f. of GTL.

Article 33 of the Royal Decree-law 8/ 2020 deals with the establishment of various measures in the tax field, which is called “suspension of time limits in the tax field”. The various sections of the law contain various provisions aimed at extending or relaxing the time limits for compliance with specific tax obligations. Specifically, paragraphs 5, 6, and 7 of that provision dealing with the calculation of limitation periods and the duration of proceedings:

“5. The period from the entry into force of this Royal Decree-law until April 30, 2020, shall not count for the maximum duration of the procedures for the application of taxes, penalties, and reviews processed by the State Tax Administration Agency. However, during the said period, the Administration may promote, order, and carry out the essential procedures.

6. The period referred to in the previous section shall not count for the periods established in article 66 of GTL nor for the expiry periods.

7. For the sole purposes of calculating the periods provided for in Article 66 of GTL in the appeal for reversal and the economic-administrative procedures, the resolutions that end them shall be deemed to have been notified when an attempt to notify the resolution accredited between the entry into force of this Royal Decree-law and April 30, 2020”.

The period for lodging economic-administrative appeals or claims against tax acts, as well as for appealing through official channels against the resolutions issued in economic-administrative proceedings, shall not commence until the end of said period, or until notification has been made under the terms of Section Three of Chapter Two of Title III of GTL, if this has taken place after that time.

Thus, this legal text establishes a particular regime for the calculation of tax periods, independent, therefore, of the general suspension established in Royal Decree 463/2020.

5.2.1. Effects of Royal Decree-law 8/2020 on limitation periods

As indicated in Article 33.6 of Royal Decree-law 8/2020, transcribed above, the time limit established in paragraph 5 of that provision shall not be counted for prescriptions regulated in Article 66. This time limit runs from the date of entry into force of Royal Decree-law 8/2020, which was March 18, 2020, until April 30, 2020, inclusive, therefore a total of 44 days.

During this period, the general limitation period of four years established in Article 66 for the various rights of the Administration and the taxpayer will be suspended until April 30, 2020. Thus, all limitation periods in progress on March 18, 2020, are suspended, and their calculation will be resumed for the period remaining until their conclusion on 1 May of the same year. For practical purposes, this will mean that the end date of the period will be shifted by as many days as the suspension lasts, thus 44 days.

However, this Royal Decree-law not only affects the periods already in progress but may also affect other periods of prescription and the interruption of those that are suspended. Applying the brief regulation contained in Article 33.5 of Royal Decree-law 8/2020, we consider that.

The beginning of prescriptions cannot take place while the suspension decreed in this legal text lasts, even though -as it has been done- the obligation for the taxpayers to present their liquidations and declarations on time is maintained. If during the period established in the Royal Decree-law, any of the circumstances set out in Article 67 of GTL, which give rise to the commencement of prescription, should occur, this commencement would not take place and would be transferred to the first day on which the state of alarm is not in force, the date from which the calculation of the period of four or ten years would begin, without adding any extraordinary period. Another possibility at this point would be to consider that the period starts and is immediately suspended, which would mean that, on the date when the alarm state ends, the days that have elapsed from that supposed start to the end of the alarm state would have to be added. However, we understand that this possibility is not viable, because if all prescriptions are suspended, it is not possible for them to be born, even for an instant, while such a suspension period lasts, in order to move immediately to a situation of lethargy.

About the possibility of carrying out interruptive acts, we understand that as long as the period of suspension lasts, the interruption cannot occur. This does not mean that acts cannot be carried out with interruptive effectiveness, for example, the presentation of a premature declaration through the electronic headquarters of the Tax Agency, but the moment of the interruption will not be the one when such action takes place but will be displaced to the first day when the suspension is no longer in force. In these cases, this interruption will mean that the calculation to be made will be of the period of four or ten years, in full, without adding the period of suspension, since it is before the date on which the interrupting cause is calculated.

On the other hand, it should be noted that we find a significant legal loophole in the regulation of the suspension of limitation periods established by this legal text. This legal gap arises because Article 33.6 of the Royal Decree-law refers only to prescriptions in Article 66, forgetting the ten years established in Article 66 bis.2. of GTL. This omission may have up to three explanations:

- The first, which is not insignificant, is that the rule was drafted in an omission.
- The second, which is not incompatible with the first, is that either intentionally or as a result of an error, the suspension does not apply to such a period.
- The third, which is more far-fetched, is that the writer of the Law shares the theory, -which we defend (González Aparicio, 2019, pp. 249-270), that the ten-year period established in article 66 bis. 2 of GTL is not of prescription, but of expiration, and finds its suspension included in article 33.6 when it expressly refers to expiration periods. Even though this interpretation would be the one that best fits in with the concept that we understand to apply to these ten years, the truth is that on the date of publication of Royal Decree-law 8/2020, article 66.bis.2 of GTL qualifies it as a limitation period, which is why its non-inclusion poses an apparent legal loophole in this Royal Decree-law.

5.2.2. Effects of Royal Decree-law 8/2020 on the maximum duration of management, inspection and recovery procedures

The third transitional provision of Royal Decree-law 8/2020 states “the provisions of Article 33 shall apply to proceedings initiated before the entry into force of this Royal Decree-law”. By the provisions of paragraphs 5 and 6 of Article 33, it can be deduced that in the period between March 18, 2020, and April 30, 2020, both inclusive, the tax proceedings in progress on March 18, 2020, are suspended, so that this period will not be included in their calculation, and will resume on May 1, 2020, except for subsequent extensions.

The first note that can be made to this regulation is that it presents a significant legal loophole, as it refers exclusively to procedures processed by the State Tax Administration Agency, as expressly stated in article 33.5, not being applicable to tax procedures developed by the Autonomous and Local Administrations (in Spain these Administrations also manage and collect their taxes).

As regards its effect on tax proceedings, this provision applies to proceedings in progress, since any proceedings that may be initiated during that time will also be postponed until May 1, 2020.

Furthermore, this text does not appreciate the difficulties arising from Royal Decree 463/2020, March 14, as regards its application to procedures for which no

time limit laid down, such as inspection or enforcement procedures, while Article 33.3 refers to all procedures for the application of taxes.

5.3. Royal Decree-law 11/2020, March 31

This legislative chaos, in which legal uncertainty prevails and subsequent legal texts are correcting the defects of the previous ones in an accelerated manner, continues with the issue of Royal Decree-law 11/2020, March 31, which adopts additional urgent measures in the social and economic field to deal with COVID-19. The ninth additional provision modifies some of the provisions of Royal Decree-law 8/2020. This new Royal Decree-law enters into force the day after its publication, therefore, on April 2, 2020.

The first three sections of the aforementioned Additional Provision Nine have some effect on the tax prescription regime established in Articles 66 and the following of GTL, and therefore we will analyze their content following the same order as they presented in the Royal Decree-law.

The first section states:

"The period from the entry into force of Royal Decree 463/2020, March 14, declaring the state of alarm for the management of the health crisis caused by the COVID-19, until April 30, 2020 will not be counted for the maximum duration of the period for execution of the resolutions of economic-administrative bodies".

The impact of this provision on tax prescription derives from the fact that the review procedure carried out before the Economic-Administrative Tribunals is not subject to the constant interruption provided for in article 68.7 of GTL since this precept is clear in stating that it will only apply to appeals based on contentious-administrative proceedings.

In this sense, the jurisprudence of the Supreme Court has been evident in determining that, in those cases in which a liquidation has been dictated that has not been annulled, but that has been challenged in the economic-administrative route, the right of the tax administration to liquidate will prescribe if such review route remains paralyzed for more than four years. The High Court has ruled in this way, among others, in the Judgment of June 18, 2012. Following these decisions, the expiry of prescription "deprives the administration of its right – if it considered that a limitation period has elapsed – or its power – if it considered that it has lapsed – to determine the tax debt, so that the expiry of the time indicated, with the inactivity of the competent administrative body, leads to the extinction of that debt in an automatic manner, appreciable ex officio, and this automatism cannot be enervated with any consideration other than that of the interruption or suspension, in the manner provided for in the Law, of the corresponding period (...) It is clear in the light of this doctrine that the passage of time indicated, with the inactivity of the competent administrative body, deprives the administration

of its right or power to set the tax debt, leading to the extinction of the tax debt settled automatically, and such automatism can only be avoided with the interruption or suspension of the corresponding period, in the manner provided for by law”.

In this way, although the interruptive effectiveness of the lodging of appeals through economic-administrative channels is undeniable, the effects of such interruption are not prolonged in time, but rather the interruption of the right is in this case immediate, with the period being resumed after the interruption. Therefore, and taking into account the general suspension that affects the operation of the Administrations, the first section of the ninth additional provision allows the exclusion of the period between the declaration of the state of alert – March 14, 2020 – and April 30, 2020, from the calculation of the four years.

The second paragraph provides:

"From the entry into force of Royal Decree 463/2020, March 14, which declares the state of alarm for the management of the health crisis caused by COVID-19, until April 30, 2020, the periods of prescription and expiry of any actions and rights provided for in the tax regulations are suspended”.

This precept includes several modifications. The first is the extension of the time limit for the suspension of prescription and expiry periods, modifying their start from the provisions of Royal Decree-law 8/2020. According to this legal text, the suspension will begin on March 18, 2020, while Royal Decree-law 11/2020, March 31, establishes that it will begin on the same day that the state of alert was declared. The end date remains April 30, so the total number of calendar days on which the suspension is in force, except for subsequent extensions, is 48, which in practice means that the end date of prescription will shift by 48 days.

This modification of the time limit of the suspension will also have an impact on prescriptions ending between March 14 and March 17. With the previous regulation, in these cases, the time limit would have been completed, and the rights affected by such periods would have become time-barred. However, with the regime derived from Royal Decree-law 11/2020, these periods have not been completed and will resume on May 1.

In addition to this temporary amendment, the provision also contains a real change in the rate. We pointed out in the previous section that Royal Decree 8/2020 had a legal loophole, as it only referred to the rights set out in Article 66, ignoring that of 66 bis. 2. We concluded that this loophole could only be justified by an oversight, an error, or a different conceptualization of the right to check and investigate than that carried out by GTL. Royal Decree-law 11/2020 clarifies our doubts, making it clear that this is an oversight on the part of the drafters of the law since this new provision indicates that the suspension of prescription and lapse periods will affect “any actions and rights contemplated in the tax legislation”, and therefore also the ten years established in Article 66 bis. 2 of GTL.

Finally, the third paragraph states:

“The provisions of the preceding paragraphs shall apply to the procedures, actions, and formalities governed by the provisions of GTL, and its implementing regulations and which are carried out and processed by the State Tax Administration Agency, of the Ministry of Finance, or by the tax administrations of the Autonomous Communities and Local Entities, as well as, in the case of the latter, those governed by the revised text of the Law Regulating Local Finance, approved by Royal Legislative Decree 2/2004, March 5”.

This provision resolves another of the legal loopholes created by Royal Decree-law 8/2020, since the suspension it decreed was only applicable to procedures carried out by the AEAT, with the consequent exclusion of procedures under the responsibility of the Autonomous and Local Administrations. This new precept establishes that the suspension shall also apply to tax procedures developed by the Autonomous Communities and Local Entities. Despite this, most of the Autonomous Communities had already issued different regulations that included in their articles the suspension of deadlines. We understand that such provisions, insofar as they are opposed to the State regulation, are tacitly repealed, as their rank is lower.

5.4. Royal Decree-law 15/2020, April 21

Finally (to date), Royal Decree-law 15/2020, April 21, on urgent complementary measures to support the economy and employment, extended the suspension established by Royal Decree-law 8/2020 (April 30), until May 30, therefore, for a further month. This period is more extended than the current state of emergency, which expected to last until May 10. According to this new regulation, the periods of tax prescription and duration of tax proceedings will not start until May 31. After this extension, the suspension will no longer be 44 days but 74 days.

This provision is the only that affects the calculation of prescription in this Royal Decree-law, and therefore everything stated up to this point is applicable, with the only variation in the extension of the suspension.

6. CONCLUSIONS

The main conclusion that can draw from the above is the legal uncertainty resulting from the issuance of a large number of legal texts in a short time. Furthermore, this legal uncertainty increased because many of the Royal Decrees issued correct aspects of previous texts.

Although it is undeniable that this hasty regulation is due to the extraordinary circumstances in which we find ourselves, it would be desirable for the legislator

to be more careful, especially when it comes to institutions as sensitive to legal certainty as tax prescription.

It is still too early to know all the legal problems that will arise from this confusing regulation, but we can already say that, as many legal operators have said, the application of the suspension of limitation periods will lead to a great deal of conflict, and we can only hope that the tax authorities will act correctly and uniformly.

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THE EFFECTS OF UPSTREAM PROVIDERS' FRAUDULENT BEHAVIOUR ON DEDUCTION OPTION: *DID THE TAXABLE PERSON KNOW OR SHOULD THEY HAVE KNOWN?*

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Abstract

Starting from the premise that the refusal of the right of VAT deduction constitutes an exception from the enforcement of the fundamental principle that this right represents – the one of tax neutrality -, national courts of law have faced on various occasions difficulties of interpreting situations when an economic operator could be reasonably requested to take a certain measure in order to ensure that the operation he/she carried out does not determine his/her participation to tax fraud. For this purpose, what criteria serve for the assessment of the measures that could be reasonably claimed by an economic operator? But what about the determination of the level of claimed diligence of the taxable person in question? How do the effects of the behaviours of upstream suppliers reflect on the right of deduction of the taxable person? What trial elements would justify the findings of tax authorities that the economic operator knew or should have known that the operation invoked for the purpose of justifying the right of deduction was involved in a VAT fraud? The answer to these questions had led to a long experience of the Court of Justice of the European Union in granting decisions that would clarify more and more these aspects.

Keywords: *value-added tax; deductibility; traceability.*

JEL Classification: K34, K4, K20

1. REQUIREMENTS REGARDING THE EVIDENCE ELEMENTS IN THE SUBJECT OF VAT DEDUCTION OPTION IN RELATION TO THE JURISPRUDENCE OF THE EU CJ

Nowadays VAT fraud represents a bill amounting to billions of euros every year for the European Union member states. The sheer size of the numbers can suggest the amplitude this phenomenon has had in the last years. As a result, it is clear that the main purpose of incriminating and sanctioning actions generically called “fraud” is to preserve the European Union and member states’ budgets.

It is certain that *neutrality* lies at the core of VAT functioning, being ensured by the deduction option, whose regime aims at fully relieving the entrepreneur of the paid or owed VAT resulting from all economic activities performed. But authorities also have the right to refuse the benefit of the VAT deduction option if

it is established, in the light of objective events, that this option is invoked in a fraudulent or abusive way.

In this context, establishing a solid regulatory and control framework in order to combat VAT fraud should be a priority of the fighting strategy against VAT fraud and it is necessary – as the recent resolutions of the European Parliament point out – that this strategy should evolve parallel to accelerating economic modernisation and digitalisation, while making the VAT system simpler for enterprises and citizens.

Taking into account the fact that refusing the deduction right is an exception to the application of the fundamental principle of this right, national courts of justice have often had difficulties in interpreting the situations in which an economic agent could be asked to take certain measures to ensure that the operation they perform does not cause their participation to fiscal fraud, which produced a the long experience of the European Union Court of Justice in pronouncing decisions to settle these aspects.

Thus, according to the jurisprudence of the level of diligence expected from a taxable person who wishes to exercise their VAT deduction option, the Court has stated that the economic agents that take all measures which can be reasonably expected to ensure their operations are not involved in a fraud, VAT related or otherwise, must be able to rely on the lawfulness of these operations without risking to lose their VAT deduction right for the VAT paid upstream (see Resolution Kittel and Recolta Recycling pronounced in the adjunct cases C-439/04 and C-440/04, point 51). However, it is not contrary to the Union's right to expect that an economic agent should take any measure which may be *reasonably* required of them in order to ensure that the operation they perform does not cause them to participate to a fiscal fraud (Decision Mahagében and Dávid, C 80/11 and C 142/11, point 54).

We believe that the evaluation of the measures which may be *reasonably* required of an economic agent in order to ensure that they do not participate to a VAT fraud must be appreciated in relation to the specific circumstances of each case, as the doctrines also states (Bufan *et al.*, 2019), a matter to be judged by the national courts of justice one case at a time.

The principle of the burden of proof was analysed by the European court of justice in case file C-324/11, Gábor Tóth, (points 55-57 and 62-65), where it was stated that it was the responsibility of the fiscal authorities to perform the necessary controls of taxable persons in order to detect wrongdoings and VAT fraud, as well as to apply sanctions on the taxable person who had committed the wrongdoings and fraud.

A reference decision in the field of the burden of proof in fiscal matters is the one pronounced in case file C 277/14, PPUH, where the Court clarifies the fact that it is the task of the fiscal administration that has ascertained the existence of fraud or irregularities committed by the person issuing the invoice to establish, in

relation to the objective elements and without requesting it from the addressee of the invoice, controls whose burden is not theirs, that this addressee knew or should have known that the operation invoked to justify the deduction right was involved in VAT fraud (point 50).

As Union law does not include norms regarding the way to produce evidence in cases of VAT fraud, these objective elements must be established by the fiscal administration in accordance with the evidence rules stipulated by national law. However, these rules must not be detrimental to the effectiveness of Union law and must observe the rights guaranteed by this option, especially the charter (see to this purpose the Resolution WebMindLicenses, C-419/14, points 65-67).

The contour of these principles has had the opportunity to be enlarged in EU CJ jurisprudence by two recent resolutions, namely Resolution SIA Altic pronounced on 3rd October 2019 in case file C-329/2018 and the Resolution Glencore Agriculture Hungary Kft. Pronounced on 16 October 2019 in case C-189/18, which will be detailed below.

2. WHAT IS THE LEVEL OF DILIGENCE EXPECTED OF A TAXABLE PERSON IN EXERCISING THEIR VAT DEDUCTION OPTION IN THE FIELD OF FOOD PRODUCTS REGULATED BY REGULATION (EC) NO 178/2002? RESOLUTION SIA ALTIC IN CASE FILE C-329/2018

In case file C-329/2018 SIA Altic, the mentioned company bought goods from SIA „Sakorex” and from SIA „Ulmar”, companies which later on proved to be fictitious, while the origin of the goods could not be established.

The Union legislation regulates the *traceability* of food products by Regulation (EC) no. 178/2002 regarding the establishment of the general principles and requirements of food legislation, the organisation of the European Authority for Food Safety and the establishment of procedures in the field of food products safety. Based on it, the operators in the food sector (...) must be able to identify any provider that provided them with certain food products (art. 18 paragraph 2 of the cited Regulations).

Fiscal authorities have determined that Altic did not check whether the contractual parties were registered with the Food and Veterinary Agency, which in the opinion of the fiscal administration, shows that this *company knew or should have known* that through that purchase it was getting involved into an abusive utilisation of the common VAT system. Thus, based on Altic not observing the obligations resulting of art.18 (2) of the Regulations, it was concluded by the fiscal authorities that the purchasing operations mentioned above did not actually take place, which caused Altic to be forced to pay the deducted VAT, as well a fine and delayed payment penalties.

The Court observes from the beginning of the presentation of arguments preceding the final resolution that the obligation of the *traceability* of the food

products stipulated in article 18 paragraph (2) of the aforementioned regulations has a different finality than that of detecting VAT fraud. Thus, articles 28 and 29 of the regulations show that the obligation to identify food products providers has the vocation of allowing very precise and purposeful orientations, as well as informing consumers or controlling officials in order to avoid useless major disturbances on the internal market. They also show that such an obligation cannot be considered a measure whose application by the taxable person may be claimed in order for the person to ensure that their actions are not involved in VAT fraud. As a result, the possible violation of this obligation cannot automatically justify, by itself, the refusal of the taxable person to deduct VAT.

At the same time, the European court has interpreted the provisions of art. 18 paragraph 2) of the Regulations in the sense that, as regards the necessary data for the identification of the providers, it is necessary to take into account that they need to allow for the imperative of *traceability* to be achieved in a way in which, in principle, the identification of the providers by their names and addresses should be enough. Thus, the argument invoked by the fiscal authorities according to which this regulation generally requires a profound check of the contractual party cannot be admitted.

An exception is identified by the Court if it could be thoroughly established that, because of some specific circumstances, the buyer of the respective food products should have had serious doubts regarding the real existence or real identity of the products provider, in relation to which Regulations no 178/2002 imposes the obligation of the buyer to identify them in such a way as to guarantee insurance of the identity. Only in such a situation, the absence of thorough checking of the provider with the competent authorities could be an indication that, among others, but in relation to and in accordance with these, the taxable person *knew or should have known* that they were taking part in a transaction involved in VAT fraud.

The European court concludes that the right to deduct VAT paid upstream cannot be refused to this taxable person for the only reason that they have not observed the obligations regarding the identification of their providers in order to trace food products, obligations which are their responsibility based on article 18 paragraph (2) of the Regulations no 178/2002. Non-observance of these obligations can be an element which, among others, but in relation to and in accordance with these, could indicate that the taxable person *knew or should have known* that they were taking part in a transaction involved in VAT fraud, an aspect whose evaluation falls into the competence of the court.

The Court's analysis further focuses on explaining the phrase "*knew or should have known* that they were taking part in a transaction involved in VAT fraud" by investigating whether the absence of checking by a taxable person involved in the food chain of the registration of their providers with the competent authorities in accordance with the applicable Union legislation is relevant in order

to establish if , the taxable person *knew or should have known* that they were taking part in a transaction involved in VAT fraud.

We must mention the Union legislation on this matter (article 6 paragraph (2) of the Regulation no. 852/2004 and article 31 paragraph (1) of the Regulation no. 882/2004) stipulates that any operator in the food sector must notify the competent authority regarding each of its units involved in the production, processing and distribution of food products in order for them to be registered, and the competent authorities, in their turn, must define the procedures economic operators must follow when they request the registration of their units, as well as to maintain a list of registered operators.

As a result, Regulations no. 852/2004 and 882/2004 do not contain any *obligation* for an operator in the food sector *to check whether their providers are registered* in accordance with the requirements of these regulations. One such obligation to check in order for VAT to be deducted does not result from Directive no. 2006/112 either.

As a consequence, in order to determine whether a taxable person taking part in the food chain *knew or should have known* that their providers were involved in VAT fraud, the fiscal authorities may not force this taxable person to check whether these providers observed their own obligations to register. Thus, the absence of checking of the providers' registration with the competent authorities does not represent pertinent proof in order to establish whether the taxable person knew or should have known that they took part in an operation involved in VAT fraud.

3. DOES THE DETERMINATION OF FRAUD COMMITTED BY THE PROVIDER GIVE THE FISCAL AUTHORITY THE RIGHT TO HOLD SELF-EVIDENTLY THAT THE CONTRACTUAL TAXABLE PERSON KNEW OR SHOULD HAVE KNOWN THEY WERE INVOLVED IN VAT FRAUD?

RESOLUTION GLENCORE IN CASE FILE C-189/18

The European court has had the opportunity to examine again the condition giving fiscal authorities the right to refuse the right of VAT deduction – namely that the person *knew or should have known* that they took part in an operation involved in VAT fraud – when they pronounced the resolution Glencore Agriculture Hungary Kft. in case file C-189/18 on 16th October 2019.

The facts of the case reveal that following the fiscal controls that the Glencore company and its providers underwent, Glencore was refused the right to exercise the VAT deduction option and was forced to give back the deducted VAT corresponding to the transactions with the respective providers. The fiscal administration based this refusal specifically on determinations made during other administrative procedures taken against these providers –in which Glencore was not therefore involved – which produced definitive decisions according to which

the mentioned providers had committed VAT fraud. The fiscal authority stated that Glencore has illegally deducted VAT in the sense that they *knew or should have known* that the operations performed with their providers were involved in VAT fraud.

Glencore challenged this decision, holding that fiscal authorities have violated their right to fair trial by particularly ignoring the principle of equality of arms, guaranteed by article 47 of the Charter, as Glencore, which was not part of the procedures taken against the providers, did not have the opportunity to challenge the elements ascertained during these fiscal procedures and did not have the opportunity to invoke any right, and in this way proof elements had been collected and used against them.

The fiscal administration replied that, although Glencore is not in a position to claim any of the rights corresponding to the position of a party in a fiscal procedure against another taxable person, still the right to have defence was not violated as Glencore had the opportunity to examine, during the fiscal procedure against them, all the documents and statements resulting from related procedures and contained in the file against them and to challenge their evidentiary value by exercising their right to attack.

At the same time, the fiscal authority holds that the fact that they had the actual determinations and the legal qualifications included in the decisions taken by the fiscal authorities that remained final to determine the existence of VAT fraud committed by the providers of Glencore company, exempts them from the obligation to present the fraud evidence again during the administrative-fiscal procedure against the taxable person Glencore.

The firm position of the European court regarding this last opinion of the fiscal authority is reflected by the answer according to which during a fiscal control procedure the principle of legal security cannot justify such a restriction of the right to defence, a restriction which represents, in relation to the expected purpose, a disproportionate and intolerable intervention that is detrimental to the very substance of these rights. Thus, such an exemption to present and discuss the evidence again deprives the taxable person against whom the fiscal authorities intend to refuse the right to deduct VAT of the possibility to make known their point of view regarding the elements the fiscal authorities intend to base their procedure on in an effective way during the administrative procedure and before adopting a decision unfavourable to its interests. This affects the possibility that the competent authority can take into account the assembly of relevant elements and the respective person to correct an error, as the case may be. Finally, this restriction deprives the authority of its obligation to grant all their attention to the observations presented by the respective person by carefully and impartially examining all the case elements and by motivating their decision in detail (paragraph 49).

Following the line of another category of rights to which the opinion of the fiscal administration may be detrimental, the Court focuses on the principles of the jurisdictional control effectiveness, guaranteed by article 47 of the European Union Charter of Fundamental Rights.

The Court argues that this principle imposes that the court in front of which an action against a decision of the fiscal administration rectifying VAT is presented should have the power to check during a debate the legal nature of the origin and use of the evidence collected during related administrative procedures initiated against other taxable persons, as well as the determinations contained by the adopted administrative decisions, which are decisive for the solution of the remedy at law.

Thus, equality of arms could be affected and the principle of contradiction would not be observed if the fiscal administration, invoking the reason that they are held by the adopted decisions in the case of other taxable persons which have become definitive, were not forced to present this evidence to the taxable person, if the taxable person were not able to know them, if the parties were not able to debate both on the respective evidence and on the respective determinations and if the court were not in the position to check all elements in fact and in law which are the basis for these decisions and which are decisive for the solution of the conflict brought before the court (paragraph 67).

If the above mentioned court does not have the power to perform this check and, as a consequence, the right to a jurisdictional remedy at law is not effective, the evidence collected during the related administrative procedures and the determinations of the administrative decisions adopted against other taxable persons based on these procedures must be overlooked and the decision based on this evidence and on these determinations must be attacked and annulled if, for this reason, it lacks argumentation (paragraph 68).

4. PUNCTUAL CONCLUSIONS

1. The obligation of the fiscal authorities to establish in accordance with the legal requirements the objective elements allowing the conclusion that the taxable person *knew or should have known* that the operation invoked as basis for the deduction option was involved in a fraud, and this obligation requires that the respective fiscal administration should provide evidence of the existence of the fraud during the procedure against the taxable person.

2. It is obvious that the fiscal administration is entitled to impose the taxable person exercising their right to deduct VAT paid upstream to adopt a measure stipulated by the law in its burden, but in the field of the *traceability* of food products (Regulation (EC) no. 178/2002), the non-observance of this measure cannot cause the refusal of the right to deduct VAT because of this very reason, but it can be an element which, among others and in accordance with these, tends

to indicate that the taxable person *knew or should have known* that they were taking part in a transaction involved in VAT fraud.

3. The fiscal authority cannot normally impose to the taxable person in-depth checks of their contractual providers as a condition to exercise the right to deduct VAT paid upstream. By exception, if the applicable legislation in a specific situation imposes to the taxable person the obligation to identify their provider in a way which can guarantee their real existence or identity, only in such a situation the absence to in-depth check of the provider can be an element which, among others and in accordance with these, tends to indicate that the taxable person *knew or should have known* that they were taking part in a transaction involved in VAT fraud.

4. Fiscal authorities are exempt from the obligation to present again the fraud during the administrative-fiscal procedure against a taxable person because it is contained by de facto determinations and legal qualifications part of distinct fiscal procedures, by final decisions to determine the existence of VAT fraud committed by the providers of the respective taxable persons. This exemption is qualified by the European Court as a restriction of the right to defence which represents, in relation with the objective, a disproportionate and intolerable intervention being detrimental to the very essence of this right.

5. The court referred to by a taxable person with an action against a decision of the fiscal authority performing VAT rectification has the legitimacy to check, during the respective conflict, the legality of obtaining and using the collected evidence during related administrative procedures initiated against another taxable person.

6. During such a verification of the right to deduct VAT exercised by a taxable person, the fiscal administration cannot justify whether the person *knew or should have known* that the providers' operations were involved in VAT fraud based only on the de facto determinations and on the legal qualifications already performed by the fiscal administration during related administrative procedures initiated against those providers of the taxable person and finalised with final decisions to determine the existence of VAT fraud committed by these providers if they do not present again evidence during the fiscal procedure against the taxable person, thus opening the respective de facto determinations and legal qualification for discussions.

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CONSIDERATIONS REGARDING COMPLIANCE WITH THE ARM'S LENGTH PRINCIPLE OF ROMANIAN LISTED RELATED PARTIES: THE TRANSACTION NET MARGIN METHOD

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Abstract

The arm's length principle (ALP) is the overriding condition in the valuation of related party transactions. For both tax administrations and companies involved in controlled transactions, the ALP must be the benchmark for the normal functioning of the market. Due to this, transfer prices used in accordance with this principle reflect in an objective way the economic reality of the transactions between related parties. At the same time, the choice of the appropriate method in transfer pricing contributes significantly in terms of setting the prices to ensure compliance with the ALP, respectively to reflect the fair value of the related party transactions' economic reality. The aim of this research is to evaluate the valences of the net margin method when testing ALP. It consists in the application of the net margin method for a sample of 26 affiliated companies (i.e. related parties) listed on the Bucharest Stock Exchange, NACE code manufacturing industry and identifying differences in compliance with the ALP depending on the profit margin. Relying on the financial reports accounting information of the sample, the following results were obtained: 76.64% of the companies comply with the ALP in 2012, this being the best result in relation to the period considered, due to the fact that most of the listed companies already applied IFRS at that time; for 38.89% of the 2017 companies it was found that, regardless of the profit margin model, in accordance with which the rationale is made, the compliance of transfer prices to the ALP is confirmed.

Keywords: *transfer pricing; affiliated companies; transfer pricing methods; profit margins; case study.*

JEL Classification: M41, M48

1. INTRODUCTION

The ALP is the overriding condition in the valuation of transactions between related parties. For both tax authorities and companies involved in controlled transactions, the ALP must be the benchmark for the normal functioning of the market. Due to this, transfer prices used in accordance with the ALP reflect in the

most objective way the economic reality of related party transactions. At the same time, the choice of the appropriate method in transfer pricing is the determining factor in terms of setting prices to ensure compliance with the ALP, respectively a fair reflection of the economic reality in which transactions between related parties take place. Related party transactions are considered to be controlled because prices and conditions are set primarily on the basis of group-level interests and then on market conditions. The prices that arise in such transactions, named transfer prices, must comply with the regulations imposed, i.e. in accordance with the ALP. If transfer prices do not satisfy the rules imposed by the government for related party transactions, then the tax authority is entitled to qualify them as non-compliant with the ALP and have to apply corrections and impose, if necessary, appropriate penalties.

The Organization for Economic Co-operation and Development (OECD) as the authority for transfer pricing regulation recommends the use of a set of transfer pricing methods in order to meet the ALP. Taxpayers carrying out controlled transactions are entitled to apply any of the traditional or profit methods stipulated in the OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations (OECD TPG) or other methods, through which the compliance with the ALP is satisfied. In order to apply traditional methods, comparable prices have to be reached for transactions carried out by independent companies. Profit methods are based on indicators related to the profitability of the companies, the identification of comparable prices not being necessary. Transaction Net Margin Method (TNMM) is one of the better ones for determining transfer prices (Martins, 2017; Miller and Oats, 2014; Mura, Emmanuel and Vallascas, 2013), in its application compares profit margins of companies involved in trading and not comparable prices, which often are not possible to be identified, especially for goods, services or customized values, such as intangible assets.

The research purpose is to evaluate the valences of the net margin method when testing ALP. Therefore, an objective of the study is the TNMM application and identifying the amplitude of the differences in the conformity of the transfer prices, thus determined, to the ALP according to the chosen profit margin. The study is developed on a sample of Romanian related parties from the manufacturing industry listed on the Bucharest Stock Exchange (BSE). Profitability margins are calculated for 2012-2018 financial years. The results showed that at the sample level the analysed companies comply to ALP in 2012 to the greatest extent. This is due to the application of IFRS by listed companies even before 2012, when there is a legal obligation to prepare financial reports according to these standards. It is also found that for almost 40% of the companies ALP was satisfied regardless the profit margins model. Despite our results, the literature documents the importance of the adequacy of the profit margins used in setting transfer prices to the specifics of each company activity (De Mooij and Liu, 2020; OECD, 2017).

The research outlines initially some conceptual elements regarding transfer pricing and develops the theoretical background. The research methodology presents the approach in the case study design whose actual findings are subsequently discussed. After all the conclusions and the limits of the research end the study.

2. THEORETICAL BACKGROUND AND BIBLIOGRAPHIC REVIEW

The term transfer pricing is known in the international literature as domestic prices or internal prices (fr. *prix de cession internes*). They were first used in the late nineteenth century in the United States, in context of domestic transactions by large American companies (Cox, Howe and Boyd, 1997). Due to this, regulations on transfer pricing were developed by the U.S. Congress in the 1920's (Durst and Cullbertson, 2003) and have changed over time in order to comply to economic reality. Initially, transfer prices were used within the divisional units of centralized companies. They did not have their own legal personality and total autonomy in making decisions. Such units were known in research literature as profit centers (Hirshleifer, 1956) and transfer prices related to transactions between them represented the value at which these transactions were assessed.

Given the evolution of capital markets, groups of decentralized enterprises emerged, which had related parties both in the country and abroad, transactions between them being more frequent and complex. In order to deal with this type of transaction, regulations on transfer pricing adapted to their specificity and aimed at clarifying many accounting and tax issues regarding transfer pricing were needed. Thus, at European level, in 1979 a draft of rules on transfer pricing was proposed by the OECD, similar to those developed by the Americans at that time. They were adopted in 1995, without change, through the OECD TPG. Transfer pricing is an accounting convention (Cravens, 1997) with a special role in the development of the global economy. According to OECD regulations, transfer prices represent the prices used related party transactions (OECD, 2017). Some authors consider that transfer prices are intermediate prices for products or services purchased from related parties, provided by the buyer, that is not considered the final consumer (Griffin and Pustay, 2010). At the same time, transfer prices are important tools for integration, differentiation and individual performance assessment of the subsidiary (Cools, Emmanuel and Jorissen, 2008). The definition given by the 2017 OECD TPG stipulates about transfer prices that occur in the transfer of intangible goods and assets or as a result of related party services. Therefore, they represent the measurement etalon of related party transactions. In Li (2005) 's view, transfer prices are used both in case of transfer of goods or services between subunits or profit centers within one and the same company, and in transactions between related parties, located either on the territory of a country or in various countries. Cooper (2000) considers transfer pricing to be a key tool in decision-making at the level of multinational companies,

in order to meet the goals of the core business and to move profits between units for acquiring tax benefits. Fraedrich and Bateman (1996) assert that the use of transfer pricing influences related parties' profit, when operating low corporate tax rates governments, thus contributing to the group's overall profit and share value increase.

2.1 Romanian transfer pricing and related party transactions rules

Transfer prices in Romania started to be used only after 1990, at that time, no specifically regulations were adopted regarding transactions between related parties. Although related parties are mentioned in Government Ordinance no. 70/1994 as associated enterprises, and ALP is set as the basic standard of related party transactions, its application methodology being developed since 2000 (Government Ordinance no. 217/1999). According to a study by Borkowski (1997) Romania was practicing advance price agreements (APA) at that time, as a mechanism for controlling transfer prices. Due to the lack of knowledge regarding the issue of transfer pricing, the state authorities were not able at that time to establish appropriate regulations for related party transactions.

Starting with 2012 Romanian companies trading on BSE have to comply with the international accounting standards (IAS/IFRS, International Accounting Standards/International Financial Reporting Standards). Companies that have affiliates and carry out transactions with them shall comply to IAS 24 Related Party Disclosures in setting up financial reports. This standard aims to improve the accounting information quality, as a result of relationships and transactions among affiliated companies. According to IAS 24, related parties are required to include in their financial reporting information that refers to the: relationships between related parties; remuneration of the company management; related party transactions; use of transfer pricing; accounting policies for transactions with affiliated companies.

Law no. 227/2015 on the Fiscal Code, as subsequently amended and supplemented, brings new regulations on transactions between affiliates, which largely comply with the conditions imposed by the OECD TPG. According to these regulations, the tax authorities are entitled to fix the transfer price transactions values, if their inconsistency with the ALP is detected, the adjustment procedures being presented in the Fiscal Procedure Code related to the Fiscal Code.

Order of the President of the National Agency for Fiscal Administration (OPANAF) no. 3735/2015 on the approval of the procedure of issuing and modifying an advance pricing agreement, as well as the contents of the application for issuing and modifying an advance pricing agreement represent the regulatory norms in case of advance price agreements between related parties. These regulations allowed taxpayers involved in related party transactions to use advance price agreements as a transfer pricing policy, thus releasing them from

the obligation to draw up transfer pricing file. Such agreements are concluded, especially in the case of related party transactions from abroad, when there are differences on application method when setting transfer prices (Catrina, 2006). The result of advance price agreements is the double taxation preventing, penalties imposition, in case of serious infringements or even audit of transfer pricing, when there are suspicions about the legality of the transfer pricing use.

In 2016, OPANAF no. 442/2016 on conditions surrounding the amounts of transactions, submission of the transfer pricing documentation file, content and conditions of requesting the preparation of the transfer pricing documentation file and application of transfer pricing adjustment/estimation procedure, published in the Official Gazette of Romania no. 742 of February 2, 2016, still valid today. According to this order have been developed rules regarding the transactions with transfer prices, which stipulates to prepare and present annually the file on transfer pricing transactions, by a series of taxpayers, who meet certain conditions. In order to identify situations in which the ALP is satisfied or violated, it is mandatory for tax authorities to implement a comparison of related party transactions with similar, carried out or achievable under the same conditions, between independent companies. Transfer pricing file is considered the appropriate report in this respect, as it presents all aspects on transactions that refer to the transfer pricing use.

2.2 Arm's length principle

In line with the OECD regulations transfer prices must comply to the ALP. It assumes that the prices used by the related parties in controlled transactions will be accepted by the tax authorities, when given companies will demonstrate that in case of transactions, carried out in similar conditions, by independent companies, the same prices are applied. Article 9 of the OECD Model Tax Convention sets out the requirements of the ALP. They suppose that the profits made by a company, under conditions, arising from the commercial or financial links between two companies, varying from the conditions that could occur among independent companies, be included in the results of that company and taxed adequately. The ALP compares the price used by the company in relation to its affiliates with the price that it would set under similar conditions in relation to an independent one (Wittendorff, 2010).

When independent companies carry out transactions, their commercial and financial contexts are determined by market mechanisms. In the case of related parties, their trade and financial connections are not directly and in the same way affected by market conditions as in the case of independent companies, as the former are tempted to control these conditions. The market in which transactions between related parties take place is an internal market, managers having the autonomy to create and manipulate its conditions, which is impossible in the case of independent transactions between companies, whose goods or values are traded

on an external market, free and relatively transparent. When testing compliance with the ALP is necessary to answer the question: What would be the price set by two companies, when they were independent? (Eden, 2009)

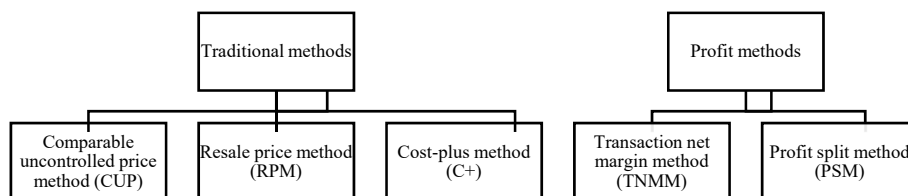
Practice has shown that transfer prices have been misused in related party transactions, which are manipulated in order to increase or decrease the companies' profit (Cristea and Nguyen, 2014). Consequently, the global income tax was reduced because to the use of transfer prices, respectively the revenues collected from the state budget being reduced. One of the essential purposes of transfer pricing regulations is to protect the taxable base, the ALP being one of the measures taken in this regard (OECD, 2017). Applying this principle, the market value of the controlled transaction is determined, accurately reflecting the company growth, by means of which an appropriate income tax is calculated (Pătroi, Cuciureanu and Radu, 2013).

The ALP regulates related party transactions, on the one hand to require them to set prices that do not exceed the limits of what is or is not independent (Dean, Feucht and Smith, 2008), and on the other hand serves as a tool by which the tax authorities establish the legality of controlled transactions. For the application of ALP, a comparison of the commercial and financial environment in which related party transactions take place, with those between independent companies has to be provided (Pătroi, Cuciureanu and Radu, 2013). Determining transfer pricing is a difficult issue facing related parties (Vidal and Goetschalckx, 2001). This consists in identifying the adequate transfer prices so as the global strategies of the entire group are implemented and the performance indicators are reliable for each component, be it a parent company or a subsidiary (Eccles, 1985). O'Connor (1997) considers that this problem is determined by the conflict between the general objectives of the parent company and the objectives at the level of each subsidiary or related party as well as by the constraints imposed by the tax and duty fiscal policy. Even if the ALP requires the determination of a single transfer price by companies involved in controlled transactions, due to the fact that transfer prices do not occur as an exact science (OECD, 2017), it could be established a series of reasonable prices, provided that they respect the given principle.

2.3 Transfer pricing methods in OECD perspective

How is recommended the ALP be applied and transfer prices determined in order to contribute to the transparency of related party transactions and their approval by the tax authorities? (United Nations, 2017) The first OECD regulations on transfer pricing proposed in 1979 refer to three transfer pricing calculation methods, which reflect a reasonable application of the ALP. These are: the comparable uncontrolled price method (CUP), which is based on market prices, the cost-plus method (C+), the profit margin being the comparison indicator in applying this method and the resale price method (RPM), which operates with the sales gross margin. Due to the difficulty of applying the three

methods, even though they were considered closest to the congruence with the ALP, the OECD accepted more methods, based on the comparison of profits, namely the net margin method and the profit split method. The OECD guidelines adopted in 2017 present two types of transfer pricing methods, based on their timing: traditional ones (comparable uncontrolled price method, resale price method and cost-plus method) and profit ones (profit split method and TNMM). A detailed scheme of transfer prices methods is presented in (Figure 1).



Source: own processing

Figure 1. OECD transfer pricing accepted methods

The efficiency of transfer pricing use is checked by tax authorities applying the ALP. It requires the use of comparable transactions, performed by independent companies, as a reference to establish how profits are distributed in the context of related party transactions. Although all comparability conditions have to be considered, the most important are the similarity of the goods or values traded, the contractual conditions, the economic and market background. However, in many cases the price of the traded goods and values cannot be directly observable. Therefore, the comparison can be more efficient using profit margins (Martins, 2017; Miller and Oates, 2014). As these indicators are derived from the financial information provided by the companies, the information's quality aspect reported by them and especially their comparability in space is particularly important. Numerous studies to date have focused on the quality of financial information (Kouki, 2018; Carp and Mironiuc, 2015; Ionaşcu *et al.*, 2014; Filip and Raffournier, 2010; Barth, Landsman and Lang, 2008). Applying IFRS globally is an effective solution when it comes financial information reporting. According to the records of some researchers, currently 98% of European countries have adopted IFRS as basic rules governing the companies' activity (Pacter, 2017). In order to measure the discrepancies between companies applying IFRS and those that practice national regulations, Gray, Linthicum and Street (2009) developed a comparability index. Later some authors have found that companies that apply IFRS provide information with increased comparability (Robu *et al.*, 2019; Barth *et al.*, 2012).

TNMM compares the profit margin resulting from related party transactions in relation to the profit margin obtained by independent companies. The method of applying this method is analogous as CUP and RPM method, i.e. the same profit margin is required for the comparison, both for related parties and for independent companies. In order to use TNMM, the following criteria are required: market competitiveness of similar or substitutable goods and services and companies with similar activity, efficiency and management strategy, market position, cost structure and market experience in which it operates (Pătroi, Cuciureanu and Radu, 2013). In the case of TNMM, access to the financial data of comparable companies is required, this being facilitated by international databases, such as ORBIS, AMADEUS or other similar. Obtaining an authorization license is quite expensive for the information access, many related parties, from the category of small and medium being unable to cope with such expenses. As a result, they have to externalize this activity to companies that provide transfer pricing file services or even calculate transfer pricing on their own, using less expensive information resources, the results being less relevant in some cases.

Careful selection of comparables is of vital importance in identifying differences between the tested company and comparable ones, in terms of the ALP (Mura, Emmanuel and Vallasca, 2013). This procedure presents particular issues, as transfer price is one of the company's profit components. At the same time, even if from a perspective it seems that the identified comparable company is suitable to test compliance with the ALP, managerial accounting data can prove otherwise, because different systems and cost structures can be used, companies can carry out activity in different geographical areas, market conditions being different and at the same time business experience and quality of management may differ from one company to another. These are just some of the aspects that can be mentioned, being a lot of factors that can influence the comparability of companies.

Studies focused on the investigation of transfer pricing methods have been conducted over the time. The cost-plus method has been found to be the most commonly used by related parties in the UK, USA and Europe (Elliott, 1998). Templar (2005) investigated the application of transfer pricing methods in highly developed countries, concluding that 57% of related parties consider cost-based methods, 30% prefer market-based methods, 7% use negotiated prices, and 6% applied other relevant calculation methods. Percevic and Hladika (2017) analyzed a sample of Croatian related parties, finding that their preferences to which they are evenly distributed in terms of choosing the method of setting transfer pricing. ITR (2011) survey reveals that transfer pricing methods used in transactions with intangible assets are transactional because of comparative advantages, especially when comparable prices cannot be identified or their choice can be challenged. Research has shown that TNMM is one of the most preferred by related parties around the world to set arm's length transfer prices for fiscal reasons (OECD, 2017; Durst, 2016) and to substantiate the transfer pricing strategy (Picciotto,

2016; Durst, 2016). Mura, Emmanuel and Vallascas (2013) found that the use of alternative profit indicators for profit margins calculation, together with the identification of precise comparables lead to more relevant results regarding the application of TNMM. Martins (2017) documents that profit margins used as indicators in determining transfer prices are of low quality, leading to increased uncertainty and cost convergence. In the case of TNMM, both internal and external companies are allowed as comparables (OECD, 2017). Internal comparables are independent companies that trade with the tested company, but do not have an affiliate relationship. External comparables are independent companies that do not trade with the company of interest to us, but perform similar transactions with other independent ones. Related parties in European Union member countries most often use external comparators when applying cost-plus and net margin methods (Deloitte, 2016).

The application of TNMM is based on profit compared to indicators that refer to costs (return on operating expenses or return on total costs), sales (return on goods sold or net operating margin) or assets (return on operational assets or return on capital employed) used in the companies' activity (Martins, 2017; OECD, 2017; Picciotto, 2016; United Nations, 2017; Miller and Oats, 2014; Cools, Emmanuel and Jorissen, 2008; Przysuski and Lalapet, 2005). These financial rates are considered proxies for the actual margins generated by a company's core business (Miller and Oats, 2014).

3. RESEARCH METHODOLOGY

According to TNMM, the comparability analysis uses territorial criteria and operates with a significant volume of data whose veracity is tested in advance. For the case study a sample of Romanian companies listed at BSE, Regulated Market, NACE code manufacturing industry was selected. The data was collected from the companies' annual financial reports, reported on the BSE website. The financial information presented in their annual financial reports is relevant to users, as it is considered to reflect the company's position and performance in accordance with IFRS and is subject to statutory audit at the same time, thus reflecting economic reality of transactions. The study refers to 2012-2018 financial years. From the companies listed on the BSE in this section, only that have related parties and carried out transactions with them during this period were selected. Companies whose activity was suspended from trading on BSE during the considered period and which recorded a loss in the financial year 2018 were excluded. The final sample consists of 26 companies.

Profit margins or return rates, as known in the financial analysis, express the company's ability to recoup the capital invested on the returns generated. In order to set transfer prices using profit margins, it is much more relevant to choose the operating profit, in relation to the net profit, because the former refers to the profit made by the company from the operating activity (United Nations, 2017). Because

the sampled companies refer to manufacturing industry and require various plant and equipment, software, stocks, etc., the assets are considered to have a considerable influence on their profit (OECD, 2017). Return on Assets (ROA) is an appropriate profit margin in this regard, because it is the expression of the company's ability to ensure efficient management in operating activity (Mironiuc, 2009). Some authors point out that the ROA estimates how efficiently the company uses its total assets to generate gains, highlighting the particular importance of this rate for manufacturing companies (Ban *et al.*, 2020; Yalcin, Bayrakdaroglu and Kahraman, 2012). At the same time, for companies which assets do not have a specific role in generating profit, performance indicators, such as operating expenses or sales would be more relevant in applying TNMM (United Nations, 2017). In this case study we aim to consider informational valences in assessing the amplitude of differences in testing ALP: return on Assets (ROA), return on Sales, ROS and return on operating costs (ROC), expressed as follows:

$$ROA = \text{Operating profit} / \text{Total assets} \quad (1)$$

$$ROS = \text{Operating profit} / \text{Net Sales} \quad (2)$$

$$ROC = \text{Operating profit} / \text{Operating expenses} \quad (3)$$

The next step after calculating the net margins for each company included in the sample consists on determining of the minimum and maximum values, the median, including the values for quartile 1 (Q1) and quartile 3 (Q3). For the interpretation of the results the extreme values are excluded. OPANAF no. 442/2016 impose that the transactions between the related parties are considered to be carried out according to the ALP if the profitability margin falls within the comparison interval, i.e. within the interquartile range Q1-Q3. Thus, for each company, the profit margin is compared with the related values in the interquartile range Q1-Q3. If they do not comply with these values, then the ALP is not satisfied.

4. RESULTS AND DISCUSSIONS

After collecting data from the financial reports, profitability margins were calculated. These are presented in detail in (Appendix 1). The second stage of data processing involved determining the interquartile ranges at the level of the entire sample, so that later it can be compared the values of profit margins of each of the 26 companies considered with the values included in the interquartile range. The results of this calculation can be found in (Table 1).

Table 1. Intercuartilic intervals for the analyzed sample

Year	Margin	Min	Q1	Median	Q3	Max
2018	ROA	0.0051	0.0185	0.0295	0.0554	0.3454
2017		0.0001	0.0185	0.0300	0.0736	0.2134
2016		0.0032	0.0171	0.0495	0.0824	0.2044

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Year	Margin	Min	Q1	Median	Q3	Max
2015		0.0021	0.0096	0.0385	0.0681	0.1628
2014		0.0020	0.0209	0.0537	0.0706	0.1656
2013		0.0043	0.0159	0.0330	0.0638	0.1405
2012		0.0120	0.0263	0.0500	0.0667	0.1567
2018	ROS	0.0079	0.0255	0.0597	0.1139	0.6725
2017		0.0002	0.0263	0.0428	0.0938	0.2314
2016		0.0148	0.0419	0.0665	0.1050	0.2473
2015		0.0152	0.0243	0.0649	0.0955	0.1776
2014		0.0022	0.0469	0.0655	0.0943	0.2118
2013		0.0090	0.0310	0.0442	0.0755	0.1742
2012		0.0269	0.0414	0.0632	0.0763	0.2781
2018		ROC	0.0077	0.0221	0.0629	0.2883
2017	0.0002		0.0262	0.0416	0.1003	0.2933
2016	0.0143		0.0376	0.0675	0.1132	0.2667
2015	0.0125		0.0236	0.0616	0.0883	0.2075
2014	0.0022		0.0482	0.0637	0.1015	0.2570
2013	0.0085		0.0315	0.0446	0.0749	0.2012
2012	0.0269		0.0471	0.0624	0.0758	0.3613

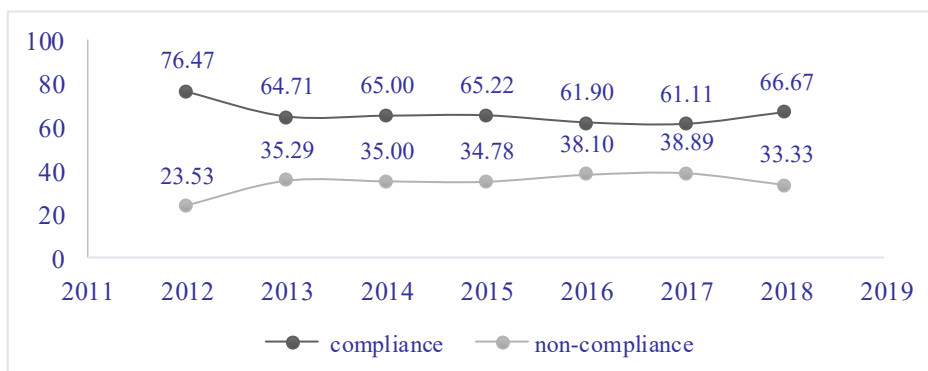
Min = lowest value in the comparison sample; Q1 = lower quartile, value below 25% of the sample; Med = median, the mean value or the mean of the two mean values of the sample set of numbers in ascending order; Q3 = upper quartile, the value above which 25% of the sample falls; Max = highest value in the comparison sample.

Source: own processing

As can be seen, substantial differences between the minimum and maximum values of margins analyzed, as well as differences from year to year in their evolution. In this context, it is necessary to discuss the informational value of the calculated profit margins. If we make a comparison with the value corresponding to the median, it is thus found that some of the companies have a disadvantageous situation in terms of the return on capital employed in the operating activity. This is confirmed by the minimum values of ROA. In other words, the assets they have are not managed efficiently so as to contribute to obtaining a reasonable profit (S.C. Teraplast S.A. in 2018, S.C. Prodplast S.A. in 2017, S.C. Mecanica Fină S.A. in 2015, respectively 2016, S.C. Alro S.A. in 2014, S.C. Mecanica Ceahlău in 2013 and S.C. Carbochim S.A. in 2012). Companies that have registered the maximum value of this indicator, show us that operational gains can be obtained as a result of an efficient management of assets (for example S.C. Zentiva S.A. in 2013, 2014, 2016, 2017, 2018; S.C. Aerostar S.A. in 2015 and S.C. Mecanica Ceahlău S.A. in 2012). At sample level, companies proved to be the most efficient,

in terms of the return on total assets, during the financial year 2014, recording in this period the highest value of the median (0.0537).

In Figure 2 is shown the percent of companies that respect the interquartile range Q1-Q3. It can therefore be stated, based on the results obtained, whether or not the companies comply with the ALP.



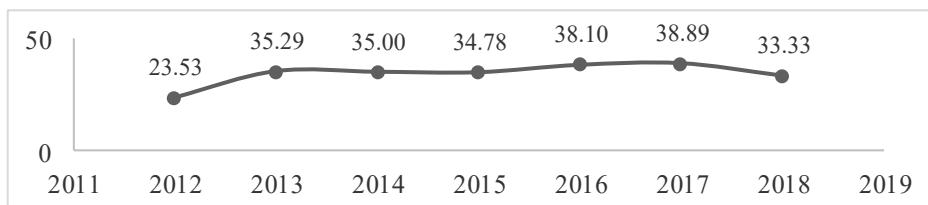
Source: own processing

Figure 2. Sample compliance with the ALP (%)

It is observed that at the sample level, in all 7 periods considered, the weight of companies that comply with the ALP is higher than those that do not meet its requirements. The best results are found in the financial year 2012, when it was found that 76.47% of the companies comply with the interquartile range Q1-Q3. We have to mention in this regard the first mandatory appliance of IFRS from 2012. In 2013, their weight was reduced by 11.76%, as a result of the companies' efficiency decreasing in terms of commercial and economic profitability. In 2014 and 2015, respectively, there is a slight increase in the percent of companies that satisfy the ALP in setting transfer prices (by 0.29% in 2014 compared to the previous year and by 0,22 in 2015 compared to 2014). In 2016 and 2017 it is again observed a decrease in the weight of companies considered to comply with ALP (by 3.32% and 0.79% compared to previous periods) and in 2018, their number will increase by 5.56% compared to 2017. The interquartile range Q1-Q3 is not satisfied in any of the exercises analyzed by a single company, S.C. Zentiva S.A., because it has higher values of the three profit margins. Thus, for this company, as well as for the others for which the interquartile range Q1-Q3 was not observed, at least for one of the profit margins an adjustment of the transfer prices is recommended, so that the compliance with the ALP will be accepted.

It should be noted that for some companies, the values of all three profit margins were in the interquartile range Q1-Q3 (Figure 3). The weight of companies that respect the ALP in the case of the three margins simultaneously registers an increasing trend, comparing with 2012 financial year. This is

advantageous for companies' performance, as the comparison of these values with those of the same industry characterizes them from a positive side of view. At the same time, it was found that the profit margin chosen for TNMM application does not matter for them, in order to set optimal transfer prices. Thus, any of the three margins chosen by these companies in TNMM will lead to propitious results in terms of compliance with the ALP.



Source: own processing

Figure 3. Companies with ROA, ROS and ROC in the interquartile range (%)

In order to identify the amplitude of the differences in the fairness of transfer prices, thus determined, to the ALP according to the chosen profit margin, in Table 2 the results obtained at the sample level for each financial year were centralized.

According to each profit margin calculated in 2018, 2017, 2015, 2014 and 2012, compliance with ALP is validated for the same number. However, the companies that make up this number differ from one margin to another and from one year to the next. This is found if the results are analysed in more detail for each company considered (Appendix 1). Similar results can be followed in 2016 for ROS and ROA, respectively in 2013 for ROA and ROC. Most companies identified as using the ALP in setting transfer prices according to ROA and ROS were found to be in the periods 2012 and 2013, i.e. 9 out of 17.

Tabel 2. Compliance with the ALP according to each profit margin

Year	Margin	Yes	No	Margin	Yes	No	Margin	Yes	No	Total
2018	ROA	11	10	ROS	11	10	ROC	11	10	21
2017		8	10		8	10		8	10	18
2016		11	10		11	10		10	11	21
2015		11	12		11	12		11	12	23
2014		10	10		10	10		10	10	20
2013		9	8		10	7		9	8	17
2012		9	8		9	8		9	8	17

Yes – number of companies that respect the ALP; No – number of companies that do not comply with the ALP.

Source: own processing

In 2013 we pursue the best result in ROS case. In this financial year, for 10 out of 17 companies, the compliance with ALP was validated. However, unfavourable results are also observed. For example, in 2017 and 2015, the number of companies whose margins are outside the interquartile range is higher than those whose results confirm that transfer prices satisfy ALP.

5. CONCLUSIONS

TNMM is one of the transfer pricing methods widely used by the related parties, especially given that no comparable prices can be identified. The profit margins used for this method offer an alternative in testing the compliance of transfer prices with the ALP. This study intended a comparative analysis of the differences resulting from the testing of the ALP by TNMM using three profit margins. The sample composed of 26-targeted related parties listed on BSE, Regulated Market, manufacturing industry NACE code, which performed related party transactions during 2012-2018. The results show that the percent of companies in which compliance with the ALP has been validated is higher than those that do not satisfy it. The best results in this respect were found to be in the financial year 2012, when 76.47% of the sample complies with the interquartile range Q1-Q3. The percent of companies that respect ALP in the case of the three margins simultaneously shows an increasing trend (23.53% of the companies are observed in 2012, increasing their number by 15.36% in 2017), which means that for many of them the chosen profit margin does not matter to test the veracity of transfer prices. For the rest of the companies, it is observed that there are differences in terms of the profit margin chosen. For this reason, they should regard to aspects of their activity and economic environment in order to reach the appropriate profit margin and to establish transfer prices that certify compliance with ALP.

The study did not conduct a functional analysis of the activity of the companies to determine exactly which profit margin would be appropriate for testing transfer prices in their compliance with ALP, which is a limitation of our research. However, this would hardly be possible, as access to data from the companies' management accounts is required, as the information provided is often confidential. However, we were not directed to identify the appropriate profit margin, but to show that there are differences in the results of applying the net margin method, depending on the chosen margin. The fact that some situations in this study indicate or disprove the ALP confirmation in the case of some or all of the profit margins does not necessarily mean that companies follow transfer pricing regulations or not. TNMM can be used related to other methods; in order to build on the observance of ALP by related parties engaged in transfer pricing transactions. Regulations recommend using the appropriate method, i.e. the most relevant one, taking into consideration economic reality of the transactions and their specificity in determining transfer prices. The way in which transfer pricing

is substantiated in the case of related party transactions is governed by the presumption of innocence principle. It is therefore mandatory that, in case of transfer pricing audit, tax authorities have access to all the information necessary to ensure that the decision to use one of the transfer pricing methods is reasonable and it was correctly applied.

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Appendixes
Appendix 1. Companies' calculated profit margins for analyzed periods

No	Symbol	2018			2017			2016			2015			2014			2013			2012		
		ROA	ROS	ROC	ROA	ROS	ROC	ROA	ROS	ROC	ROA	ROS	ROC	ROA	ROS	ROC	ROA	ROS	ROC	ROA	ROS	ROC
1	ARS	0.1707	0.2351	0.2883	0.1390	0.1768	0.2036	0.1572	0.1814	0.2149	0.1628	0.1776	0.2075	0.0788	0.0921	0.0982	0.0636	0.0755	0.0793	0.0674	0.0823	0.0847
2	ALR	0.0986	0.3134	1.3730	0.1484	0.1544	0.1749	0.0761	0.0851	0.0922	0.0737	0.0731	0.0751	0.0020	0.0022	0.0022	-	-	-	0.0263	0.0288	0.0291
3	CBC	0.0368	0.0998	0.1004	0.0164	0.0404	0.0420	0.0171	0.0419	0.0417	0.0449	0.1120	0.1149	0.0241	0.0491	0.0522	0.0127	0.0279	0.0281	0.0120	0.0269	0.0269
4	CEON	0.1613	0.3168	0.4056	0.0985	0.1889	0.2316	0.0851	0.1644	0.2049	0.0385	0.0906	0.0689	0.0337	0.1079	0.1139	0.0175	0.0585	0.0618	-	-	-
5	CMF	0.0234	0.0255	0.0254	0.0234	0.0255	0.0254	0.0324	0.0313	0.0315	0.0251	0.0269	0.0258	0.0573	0.0514	0.0558	0.0330	0.0310	0.0315	0.0512	0.0409	0.0471
6	CMP	0.0610	0.0547	0.0569	0.0723	0.0613	0.0645	0.0758	0.0673	0.0693	0.0625	0.0735	0.0777	0.0679	0.0740	0.0766	0.0638	0.0609	0.0643	0.0667	0.0622	0.0651
7	ELMA	0.0189	0.0260	0.0249	-	-	-	0.0123	0.0203	0.0190	-	-	-	0.0211	0.0159	0.0157	0.0568	0.0438	0.0446	0.0572	0.0362	0.0368
8	EPT	0.0071	0.0280	0.0183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	ECT	0.0295	0.5079	0.5166	-	-	-	-	-	-	0.0036	0.0179	0.0148	-	-	-	-	-	-	-	-	-
10	MECF	0.0535	0.1139	0.3414	-	-	-	0.0585	0.0919	0.0988	0.0513	0.1004	0.0970	0.0889	0.2118	0.2570	0.0043	0.0090	0.0085	0.1567	0.2781	0.3613
11	MECE	-	-	-	-	-	-	0.0032	0.0914	0.0902	0.0021	0.0649	0.0616	-	-	-	-	-	-	-	-	-
12	PREH	0.0185	0.0675	0.0653	0.0118	0.0441	0.0384	0.0104	0.0422	0.0376	0.0058	0.0217	0.0186	0.0140	0.0690	0.0555	0.0159	0.0654	0.0537	0.0199	0.0896	0.0758
13	PPL	0.0240	0.0432	0.0427	0.0001	0.0002	0.0002	0.0525	0.0665	0.0675	0.0234	0.0307	0.0317	-	-	-	-	-	-	-	-	-
14	RTRA	-	-	-	0.0220	0.0163	0.0179	-	-	-	0.0097	0.0152	0.0125	-	-	-	0.0756	0.0952	0.1049	-	-	-
15	MCAB	-	-	-	-	-	-	-	-	-	0.0770	0.0852	0.0796	0.0785	0.0762	0.0635	0.0825	0.0795	0.0749	0.0500	0.0625	0.0621
16	ROCE	0.0190	0.0240	0.0221	0.0281	0.0383	0.0373	0.0161	0.0244	0.0238	0.0095	0.0216	0.0215	0.0132	0.0198	0.0196	0.0117	0.0200	0.0191	0.0198	0.0414	0.0407
17	RRC	0.0142	0.0079	0.0079	0.0276	0.0200	0.0202	0.0405	0.0314	0.0320	0.0611	0.0412	0.0438	-	-	-	-	-	-	-	-	-
18	SNO	0.0320	0.0670	0.0716	0.0320	0.0670	0.0716	0.0272	0.0510	0.0536	0.0057	0.0166	0.0167	0.0527	0.1007	0.1113	-	-	-	-	-	-
19	STZ	-	-	-	-	-	-	0.0844	0.2473	0.1482	0.0089	0.0311	0.0311	0.0121	0.0405	0.0361	0.0058	0.0218	0.0200	0.0142	0.0632	0.0606
20	TRP	0.0051	0.0079	0.0077	0.0173	0.0286	0.0286	0.1450	0.1319	0.1489	0.1218	0.1113	0.1189	0.0650	0.0599	0.0638	0.0427	0.0399	0.0409	-	-	-
21	ART	0.0554	0.0597	0.0629	0.0378	0.0415	0.0412	0.0113	0.0148	0.0143	0.0171	0.0176	0.0175	0.0635	0.0620	0.0664	0.0308	0.0331	0.0328	0.0784	0.0763	0.0805
22	UAM	0.0169	0.0171	0.0173	0.0464	0.0522	0.0511	0.0495	0.0574	0.0604	0.0404	0.0472	0.0480	0.0547	0.0599	0.0624	0.0975	0.1064	0.1177	0.0493	0.0617	0.0624
23	UZT	0.0118	0.0191	0.0148	-	-	-	-	-	-	-	-	-	0.0204	0.0386	0.0348	0.0186	0.0442	0.0316	0.0274	0.0737	0.0474
24	VESY	-	-	-	0.0023	0.0037	0.0029	0.0324	0.0512	0.0466	0.0311	0.0651	0.0648	0.0362	0.0698	0.0674	-	-	-	0.0489	0.0761	0.0664
25	VNC	0.0543	0.0778	0.0820	0.0740	0.1027	0.1098	0.0824	0.1050	0.1132	0.0903	0.1038	0.1133	0.1038	0.1157	0.1291	-	-	-	0.0541	0.0683	0.0722
26	SCD	0.3454	0.6725	0.6910	0.2134	0.2314	0.2933	0.2044	0.2142	0.2667	0.1580	0.1541	0.1771	0.1656	0.1633	0.1934	0.1405	0.1742	0.2012	0.1157	0.1542	0.1697

Values in gray are those that do not correspond to the interquartile range Q1-Q3, respectively do not satisfy the ALP

Source: own processing

'COMMUNICO,-ARE' CONJUGATED IN THE FISCAL VOICE

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Abstract

The fiscal mechanism relies on the continuous communication between a debtor (the taxpayer) and its creditor (the public budget). This communication is highly regulated as to the content and the form. And like any other form of communication, it rests under the guarantees of freedom of speech and protection of private life. The fiscal normative frame develops subsidiary forms of communication, involving not only the parties of the patrimonial relation, but also authorities from third states, public and private entities in possession of relevant information regarding the patrimonial elements serving as proof in taxation matters, as well as an increasing due diligence informative system. This system has an European dimension and an international source, as it answers the states' global preoccupation of preventing the erosion of the taxable base in its more relaxed form: tax optimization. The study aims at evaluating the current legal tendency of regulating this field and limiting the freedom of movement of the taxable base in order to prevent damageable practices. The study will browse through the European regulation and the member states implementing it, sifting our findings through the filter of protection of human rights and through other legal guarantees of the privacy of personal data.

Keywords: *obligation to communicate; fiscal authorities; tax optimization; privacy; personal data.*

JEL Classification: K34, K41

1. INTRODUCTION

The study comprises two conceptual parts, a general presentation of the national, European and international framework for communicating information with fiscal relevance, through a comparative lens with traditional inquisitive procedures and an empirical approach by the analysis of European case law (from both European Court of Human Rights and European Court of Justice) through the filter of standard guarantees in a contradictory procedure both administrative and judicial. The study is a step forward from our prior research on the impact of fiscal procedures on the right to a fair trial, this time limited to fiscal investigations

and the legal status of fundamental human rights faced with the sovereign right to taxation. This right appears almighty even in democratic legal orders and slightly stronger even than the right to enforce the law as reflected in criminal procedures. The working hypothesis is given by the unbalanced arms provided by law to the parties of a taxing relation and the extremely burdening and costly position of the taxpayer.

2. THE CONTINUOUS COMMUNICATION

The Romanian Fiscal Procedure Code (Law no. 207/2015) is written under a certain linguistic sort; the RFPC includes the word “obligation” 765 times as to the French Fiscal Code (Livre de Procédures Fiscale) which uses this term 117 times, the Fiscal Code of Germany (Abgabenordnung) 171 times, the Italian Regulation regarding the declarative procedures (presentazione delle dichiarazioni) 17 times and it is surpassed by the Spanish Fiscal Code (Codigo del Legislation Tributaria) which uses the notion more than a thousand times. This brief statistic overview, apart from language differences, reflects a conceptual statement; in a bilateral social relation, between a creditor and a debtor, this linguistic option accentuates the efforts of the latter in sustaining the fiscal system. Thus, the all shadow of equality amongst the parties is shattered and replaced with a reinforced penalizing procedure where public resources are protected by mandatory, pecuniary actions of the private party. Semantically, tax procedures are relying on obligation more than on rights; syntactically, the fiscal system is built on the passive voice.

A transversal search of the same term in other legal fields will reveal that the obligation to communicate is strictly a part of the fiscal context. In criminal procedures, the burden of proof is lying on the shoulders of state agents and it is limited by the right to remain silent; in civil procedures (amongst civil parties) the regime of proof is governed by the equality of arms, as a result of regulating means of proof. In this context, the fiscal procedure, which is a *sui generis* procedure, as it finds consolidating provisions in the Civil Code (Law no. 287/2009) and the Civil Procedure Code (Law no. 134/2010), is defining itself as a civil procedure, but uses stronger means of inflicting obligations even than the criminal procedure. Furthermore, fiscal procedures are possible ground for criminal consequences, as tax audit can be a tool for identifying tax fraud and gathering proof to be used in consecutive criminal procedures. In this context, it is safe to state that fiscal procedures, due to the traditional subordinate position of the parties, is far from the civil equality of weapons and even more restrictive than the criminal trial as it does not reflect same guarantees (Costea, 2008). Even the jurisprudence of the European Court of Human Rights, reflected in Jussila Case (Juridice.ro, 2020) is cautious in affirming that fiscal litigation is covered by the penal dimension of the Convention’s article 6.

The burden of proof residing within a taxpayer's obligations has a double dimension; a continuous one through the direct communication with tax authorities and an enforced one with auditing procedures.

(A) A continuous and direct communication between fiscal authorities and the taxpayer is the backbone of the fiscal system; any taxpayer will recurrently deliver specific information (article 59 Fiscal Procedure Code) via the declarative system regarding revenues, expenses, profit or losses and will back-up these information by a systematic and unified accounting frame reflecting all relevant business activities (qualified as civil acts). This mechanism of generating and conserving proof is extremely formalized as all basic communication is standardized through tax declarations and rules of accounting. This procrustean evidence landmark will drive us away from the variety of factual situations characterizing a taxpayer's day-to-day activity and will prove itself inflexible in reflecting contractual and business models (relevant both in tax audit and management decisions). Regarding the intensified obligation of a taxpayer to communicate and cooperate within control and audit procedures, we can assert that the entire context is dedicated to examine the means of proof conserved by the taxpayer and to confront with deeper layers of factual analysis. As to the proof value of all these resources generated with significant financial load for the taxpayer, the Fiscal Procedure Code confirms (art. 55 par. 3) if necessary that means of proof (information from the taxpayer or third parties, experts report, documents, factual search and even current, operational and unannounced controls or thematic controls) will be assessed in dependency and conditioned by their probation force assigned by law.

(B) A spontaneous and indirect communication will ensure specific information for tax authorities from two sources. Within the private sector of society (1), tax authorities will inquire business partners, including independent or affiliated companies and professional consultants such as tax consultants, legal advisers, banks, insurance companies. Within the public sector (2) we have identified several layers of communication as follows: (2.1.) an in-house communication with other national state authorities such as other fiscal bodies, population evidence services, authorizing bodies in different fields of economy (food, medication, constructions etc.), criminal authorities; (2.2) off-border communication with other states, with two subdivisions differentiated by legal bonding instruments (2.2.1.) within the European Union and (2.2.2.) worldwide, especially under the policy of the Organization for Economic Co-operation and Development (OECD from hereon).

(1) As to the communication within the private sector, the first surprising ascertainment is that under the Romanian Fiscal Procedure Code (article 58) the obligation to provide information is encompassing as it addresses the taxpayer, the payer, any other person authorized by them and all persons with whom the taxpayer/payer has or had economic or legal relations, that have the legal

obligation to provide the requested information. The procedure is a written one as the tax authority will address the targeted person with a specific claim indicating the nature of the information and the documents supporting this information. This generalized obligation to provide information will prove itself rather onerous and time consuming, as it is not limited to the context of an auditing procedure, but to a day-to-day “dialogue”. A horizontal distribution of the burden of proof will support the tax authorities efforts to collect, but will also prove itself, as we will show in the empirical part of this study, tangential to human rights protection and even modulating these fundamental rights in the name of a more powerful claim, the claim of public funds. For example, the right to private life, in different aspects, such as personal expenses, personal mail is attenuated or even sublimated in the name of tax collection; the professional secret that covers several business sectors, especially consultancy, is obliterated in these investigations. As to the probative value of the gathered information, the Fiscal Procedure Code expressly stipulates that its force is conditioned by confirmation from other means of proof. As all information is contained in declarations, the obligation to inform is enforced under the provisions of the Criminal Code (Law no. 286/2009) regulating false statements (article 320). A general observation allows us to assert that there is no direct confirmation of the right to silence [2], in similarity to criminal procedures. A taxpayer will deliver the requested information, while the lack of response is treated as a failure to comply and sanctioned with a penalty. There is no protection granted neither to the secrecy of professional affairs. As to the level of protection of the obtained information, a general provision (article 11 of the Fiscal Procedure Code) ensures an indirect protection as the agents of the fiscal authorities are held responsible to keep all the gathered information confidential. But a taxpayer or a business partner is forced to deliver any piece of information, including information obtained in a contractual bond concluded under privacy terms.

In the context of collecting information from the private sector, some particular categories of taxpayers, payers or professional entities indicated in articles 60, 61, 62 and 62¹ of the Fiscal Procedure Code have specific, enforced obligations in investigation procedures. These obligations have different normative sources and are justified by various reasons, such as the European tax cooperation system, by the significance of the source as is the case of financial institutions which will provide information on all accounts they administrate, by international commitments that Romania assumed in international legal instruments binding all financial institutions to annually declare all accounts that they administer belonging to non-resident taxpayers and by the purpose of fighting money laundering where delivering entities will provide, on request, information and documents regarding the identity of the clients and of the real beneficiary of the transactions, the purpose and nature of a business relation, measures of monitoring business relations and all transaction records.

(2.1.) As all public authorities (both administrative and judiciary), tax bodies have different competences on a two-dimension scale: some bodies administer special information as to the taxes due to a specific budget (such as public contributions budgets for references see ECJ, C-201/14, *Smaranda Bara and Others v President of the National Health Insurance House, National Health Insurance House, National Agency for Fiscal Administration (ANAF) or local budgets*); other authorities have general competency in administering taxes, but these competences are limited territorially. In this context, it is highly possible that the information delivered by a taxpayer, payer or business partner and collected locally will remain unused. In order to prevent that relevant information will be gathered locally or will be accessible only to some fiscal bodies, article 57 from the Fiscal Procedure Code states that tax bodies have the competence to transfer information from an entity to another. This provision has generated specific difficulties in the context regulating general protection of personal data, which prevent authorities from transferring information without notifying the taxpayer about the transfer (see C-201/14 *Bara and others*). When transferred on request, the adequate and quick answer is ensured under disciplinary sanction, applied to the non-complying agent.

The mechanism of communication also applies to other public authorities, which function for a variety of purposes. In a fiscal investigation, this source will ensure access to a multitude of relevant information, as public authorities are transferring information directly or on request. The examples are numerous and we will only underline two hypotheses, both analyzed by ECJ: one is the case of information regarding physical taxpayers, where the incidence of provisions regarding protection of personal data is accrued, the second is the case of taxable persons in VAT matters, where information provided by national office of employment (C-277/14 *PPUH Stehcemp sp. J. Florian Stefanek, Janina Stefanek, Jarosław Stefanek v Dyrektor Izby Skarbowej w Łodzi*), or by national authorizing body in the food sector (C-329/18, *Valsts ieņēmumu dienests v 'Altic' SIA*) are used in order to prove that taxable transactions are part of a fraudulent chain.

(2.2.1.) Off-border fiscal communication within the European Union is the result of a merger between the single market and the state power to tax. Some fiscal elements are born and raised within the single market, such as excise duty and VAT; other fiscal elements are more attached to the national legal and economic context, like revenue taxation. In both hypotheses, a larger single market has proven to be also auspicious to aggressive tax planning, tax avoidance and even tax fraud. In correlation with the vision of the European Court of Justice, member states are bound to protect the financial interests of the European Union without limiting the freedoms of movement. Hence, a number of European normative instruments were created and improved in order to uphold the member states' efforts to prevent the erosion of the taxable base and to fight tax fraud. The

form of these instruments within the European Union legal order has been crafted to the relevance of the protected tax.

In respect of indirect taxation, due to the intensified connection to the single market, the European normative intervention is more robust, through the leveling application of Council Regulation (EU) No 904/2010 on administrative cooperation and combating fraud in the field of value added tax and Council Regulation (EU) No 389/2012 on administrative cooperation in the field of excise duties.

As to direct taxation and support activities, such as account information, we can evoke a broad spectrum of softer regulation formulas, subservient to the harmonization technique and protective to the ego of the member states, such as: Council Directive 2011/16/EU of 15 February 2011 on administrative cooperation in the field of taxation (with a general vocation of protection except VAT and contributions).

Both instruments tend to formalize similar work procedures, organized within three coarse prints: exchange of information on request, mandatory automatic exchange of information and spontaneous exchange of information. Through these instruments, the basic interrogations about the taxpayer's position and his rights throughout tax procedures transgress national communication in a broader tax environment, but do not gain rights evocable within the European Union judicial order.

Thirdly, some taxation objectives with immediate relevance, such as those enforced through Council Directive (EU) 2018/822 amending Directive 2011/16/EU as regards mandatory automatic exchange of information in the field of taxation in relation to reportable cross-border arrangements; through Council Directive 2014/107/EU introducing the Common Reporting Standard ('CRS') developed by the OECD for financial account information within the Union; through Council Directive (EU) 2016/2258 granting tax authorities access to customer due diligence procedures applied by financial institutions under Directive (EU) 2015/849 and the rather flexible Council Directive (EU) 2016/1164 laying down rules against tax avoidance practices that directly affect the functioning of the internal market. The latest is the result of a shift of paradigm within the European Union internal order from an accent on the freedom of movement to an enhanced fight not only against tax fraud, but mainly against tax avoidance (Costea, 2011).

As to the content of the obligation to communicate, art. 8 from Directive 2011/16/EU has a rather generous and encompassing legal formula to bind any person *that knows or could be reasonably expected to know that they have undertaken to provide, directly or by means of other persons, aid, assistance or advice with respect to designing, marketing, organizing, making available for implementation or managing the implementation of a reportable cross-border arrangement*. This requirement to deliver information addresses the private sector,

such as shown above, business partners and consultants and binds them to a duty of diligence in evaluating and reporting relevant information, which transfers to these agents a part of the public right to enquire and investigate.

As to the standard of protecting the taxpayer's rights, we notice a more elevated standard as to the secrecy of business models. For example, art. 291¹ from Fiscal Procedure Code transposing Directive 2011/16/EU stipulates that information transferred by the Romanian fiscal authority ought be processed and presented *in abstract terms, without leading to the disclosure of a trade, industrial or professional secret or of a commercial process or of information the disclosure of which would be contrary to public policy*. We can only welcome a focus on the commercial relevance of this information and on the necessity of a secure on-line environment of communication.

As to formalizing a European standard of human rights protection within fiscal procedures, we conclude with sadness that the peculiarity of the fiscal law field, which tends to encumber private parties with duties deriving from manipulating, transferring and transgressing information within different jurisdictions both *ratione materiae* and *ratione loci* is intact within national and European legal order. This procedure is not a criminal one, does not grant specific defendant rights, such as the right to silence and to refuse communication, upholds a constant inequality of arms (Onet, 2019) and, if necessary, fuels criminal procedures with external evidence.

Some interrogations to human rights content in fiscal procedures are relevant through a judicial filter and confirm some nuanced standards both in the European Union and under the standards of the Council of Europe.

3. SOME EMPIRICAL HIGHLIGHTS FROM EUROPEAN JURISPRUDENCE

The theoretical findings in the previous part of our study are largely based on concrete practical aspects of administrative communication in fiscal matters and reinforced by European jurisprudence, both from the case-law of the European Court of Justice (ECJ from hereon) and of the European Court of Human Rights (ECHR from hereon), which covers all of the working hypotheses outlined above.

In administrative procedures and subsequent court procedures in taxation issues, the taxpayer has invoked a number of rights aimed to protect his position in the legal relation with the public authority and to rebalance the inherent asymmetry in such a relation, testing and even pushing the limits of this subordinated position. Apart from specific national provisions, a more cohesive approach can be found in the European Convention on Human Rights and in the Charter of the Fundamental Rights of the European Union. Despite their ample use in litigation arising in various branches of law, some rights may very well be applicable in taxation matters, such as the right to respect for his private life (under Article 8 of the Convention), the right to protection of property (under Article 1

of Protocol No. 1 to the Convention), the right to a fair trial (under Article 6 of the Convention). As for the Charter, in a more fragmented wording, but similar as to the content, taxpayers have been found to rely their claims on the protection of personal data (article 8), on the freedom to conduct a business (article 16), on non-discrimination (article 21), but most commonly on the right to good administration (article 41), on the right of access to documents (article 42) and on the right to an effective remedy and to a fair trial (article 47). Since the rights in the Convention and the ones in the Charter can overlap, a taxpayer may invoke any or both, in which case it was suggested by the advocate general in Case C-73/16 Peter Puškár that “if a national court comes to the conclusion that the decision in a case before it would be affected by case-law of the Court of Justice under which rights in the Charter, which correspond to rights guaranteed by the ECHR (Costaş, 2019), are afforded less protection than under the case-law of the ECtHR, it may call on the Court of Justice to ascertain how EU law is to be interpreted in that situation”.

Having made this remark, we chose not to present our empirical findings in a bipartite manner, structured around the two Courts, but rather in a way that emphasizes the proposed taxonomy of communication.

(A) In regards to the first type of communication – the direct one between the tax authority and the taxpayer –, the ECJ laid down specific procedural safeguards of a taxpayer’s right to access information in the administrative file. In Case C-298/16 Ispas, the Court makes a point in interpreting the general principle of EU law of respect for the rights of defense by showing that it is legitimate to expect that a person subjected to a tax inspection procedure would request access to documents and information in order to grant that person to chance to provide explanations or support their claims against the point of view of the tax authority. Moreover, “(i) f the rights of the defense are to be genuinely respected, there must nonetheless be a real possibility of access to those documents and that information”. In the Court’s view, such an obligation imposed to the tax authority is not absolute, since it can (only) be limited by objectives of public interest that warrant restricting the access to that information and those documents. We notice that this preliminary limitation will be enhanced in the following analyzed rulings, particularly in those in which the prevalence of a state’s interests in expressly brought into discussion.

(B) In view of the second type of communication – the indirect one – various cases acknowledge the different levels of communication.

(1) Communicating with the private sector, other than with the taxpayer himself, can pose challenges if the private party has its activity established under a different jurisdiction. For example, in Application no. 28601/11 G.S.B v. Switzerland, the issue before the ECHR concerned the possibility of the US tax authority (the IRS – Internal Revenue Service) to obtain information from a bank in Switzerland regarding off-shore accounts owned by US citizens that allowed them to conceal their assets and income from the IRS. Leaving the off-border

communication between the US and Switzerland aside for the moment (to be analyzed in the corresponding topic), at this point we highlight the fact that the Swiss tax authorities took it upon themselves to order the bank to provide the required information, to which the bank complied by sending the files to them and not to the IRS directly. This means that, at times, a multi-layered (double-tiered) communication is possible: in the higher level tier, a horizontal communication from the national requesting authority to the national requested authority, followed by the lower level tier vertical inquiry of the national requested authority in the private sector and circularly finalized by higher level tier horizontal communication of the national requested authority back to the national requesting authority.

(2) In regards to the communication within the public sector, specifically as to the (2.1.) in-house communication with other state authorities, the ECJ once again set out a procedural safeguard to the taxpayer's rights in the transfer of personal data. In Case C-201/14 *Bara and others*, based on a national provision in Law no. 95/2006 on the health reform, the national tax authority transferred data relating to the declared income of a number of natural persons to the National Health Insurance Fund without informing the data subjects. The ECJ noted that "34. It follows that the requirement of fair processing of personal data laid down in Article 6 of Directive 95/46 requires a public administrative body to inform the data subjects of the transfer of those data to another public administrative body for the purpose of their processing by the latter in its capacity as recipient of those data". Moreover, even though it seemed like the national provision allowed the aforementioned transfer, it became clear from the explanations provided by the referring court that the necessary data do not (and should not) include those relating to income, since the law permits persons with no taxable income to qualify as insured. Hence, the Court's ruling was categorical in interpreting the EU law as "46. (...) precluding national measures, such as those at issue in the main proceedings, which allow a public administrative body of a Member State to transfer personal data to another public administrative body and their subsequent processing, without the data subjects having been informed of that transfer or processing".

In spite of the fact that the judgment was somewhat predictable, we rhetorically wonder what happens to this safeguard if the procedures turn into criminal ones (e.g. for determining the existence of tax evasion), where the "element of surprise" is of the essence.

(2.2.) From another perspective, the off-border communication with entities in the public sector gives rise to a different type of litigation. A landmark decision regarding the off-border communication within the EU (2.2.1.) is the ruling in Case C-682/15 *Berlioz Investment Fund*. Referring very specifically to Directive 2011/16 on administrative cooperation in the field of taxation and to art. 47 of the Charter (the right to an effective remedy and to a fair trial), the request for a

preliminary ruling appeared in the context of Berlioz being a joint stock company governed by Luxembourg law, which received the dividends from its subsidiary, Cofima, a simplified joint stock company governed by French law, in application of an exemption from withholding tax. Having doubts about the compliance between the applied exemption and conditions laid down by French law, the French tax administration sent the Luxembourg tax administration a request for information on Berlioz, pursuant to Directive 2011/16.

The ECJ carefully underlines that member states have an obligation to cooperate under the directive, meaning that the states “must take all necessary measures to ensure the smooth operation of the administrative cooperation arrangements”, even to the extent to which pecuniary penalties could be imposed in order to ensure that the directive has a practical effect by creating a “sufficient incentive for the relevant person to respond to tax authorities’ requests”.

In terms of the content of the requested information, by referring to the commentary of Article 26 of the OECD Model Tax Convention, the ECJ sets limits on the relevance of the requested information, as states “are not at liberty ‘to engage in fishing expeditions’, not to request information that is unlikely to be relevant to the tax affairs of a given taxpayer”. Assessing the foreseeable relevance implies passing a double standard: firstly, the requesting authority must assess the relevance of the information according to the circumstances of the case, on the basis of the progress made in the proceedings and after having exhausted the usual available sources of information; to this end, the requesting authority must provide an adequate statement of reasons explaining the purpose of the information sought. Secondly, “the requested authority must nevertheless verify whether the information sought is not devoid of any foreseeable relevance to the investigation being carried out by the requesting authority”. The ECJ emphasizes that the procedure should rest under the protection of secrecy and the exigency of a fair hearing.

Turning to the jurisprudence of the ECHR, Application no. 30128/96 *F.S. v. Germany* deals with the general regime of transmission of information in tax procedures. Even though it does not pertain to the recent case-law and in spite of the fact that the application was found inadmissible, the importance of this case resides in the communication being based on EC Mutual Administrative Assistance Act, a precursor to Directive 2011/16. The applicant complained that the German Federal Ministry of Finance transmitted information concerning his assets and capital income to the Dutch authorities, thus breaching his right to respect for his private life under Article 8 of the Convention and his right to respect for his possessions under Article 1 of Protocol No. 1.

From the reasoning of the European Commission of Human Rights, we can extract three requisites for a lawful information transmission: criterion 1 – the transmission needs to have a legal basis (in the discussed case, the transmission between the two founding states of the EU was based on the EC Mutual

Administrative Assistance Act), criterion 2 – relevant reasons for the transmission of information must exist (“The German authorities found that in the applicant's case there were reasons to assume that he was evading taxes in the Netherlands”), criterion 3 – the measure and the legitimate aim pursued need to be proportional (this type of communication being designed “to support the correct assessment of taxes in the EC Member States”). The conclusion is very much in line with our previous assertion that the state’s interest prevail, since the ECHR reaffirms that “States may enforce such laws as they deem necessary to secure the payment of taxes”.

The worldwide off-border communication with entities in the public sector (2.2.2.) led to some very interesting cases being brought in front of the ECHR.

Referring back to Application no. 28601/11 *G.S.B v. Switzerland*, but this time in regards to the international communication between the US and Switzerland, the Court found that there was no violation of article 8 in the Convention after having analyzed if the interference was justified under the demands of article 8 § 2 of the Convention. What is interesting at this point in our review is the way the Court explains the legitimate aim pursued by Swiss authorities, arguing that “the banking sector is an economic branch of great importance to Switzerland” and “(t)he measure might validly be considered as conducive to protecting the country’s economic well-being”. What is more, on the necessity in a democratic society, the Court accepts that Switzerland had an important interest and that by concluding the international agreement it succeeded in averting a major conflict with the US. Once again, this amounts to our statement that in tax procedures the state’s interests casts a shadow on the taxpayer’s interests, with the Court expressly affirming that “it was not unreasonable for Switzerland to prioritize the general interest of an effective and satisfactory settlement with the United States of America over the private interest of the applicant”.

We conclude our empirical approach with Application no. 42937/08 *Janyr v. Czech Republic*, a case in which tax procedures turned into criminal ones. In investigating customs offenses relating to the importation of poultry, Czech authorities requested information from their Gibraltar counterparts. Under article 6 of the Convention, the applicant complained of the breach of the principle of equality of arms and of the rejection of his offers of evidence by the courts, in particular their refusal to hear G. residing in Gibraltar, who he said was an important prosecution witness. Interestingly enough, in examining the fairness of the procedure as a whole, the Court implies that the equality of arms is recognized only in regards to the evidence leading to a certain verdict. Since the national court’s verdict was not in any way based on the previous statement of G. and given that other evidence (e.g. invoices) made it unnecessary for G. to be cited and heard, it was the applicant’s burden to prove that hearing G. could have brought new and relevant information.

The criminal implications of this final case make us wonder (perhaps as a premise for future research) if issues could be raised regarding the right to silence and the *nemo tenetur* principle, since tax administration procedures involve in themselves the disclosure of information by the taxpayer (Funke v. France – Application no. 10828/84). The ECHR clarifies that when the investigation changes from tax purposes to criminal purposes, the taxpayer becomes “substantially affected” (Abas v. The Netherlands – Application no. 27943/95), hence the right to silence and the *nemo tenetur* principle must be given efficiency.

4. CONCLUSIONS

The obvious conclusion of the systemized normative and jurisprudential dispositions is that the entire fiscal procedure is governed by its internal voice, in which the taxpayer has an encased role. The introductory references to the ruling of the passive voice in this legal context are confirmed at both levels. The fiscal procedure has a significant autonomy and is built upon specific obligations; the continuous effort of just collecting is a legitimate preoccupation in a democratic society and puts supplementary and costly pressure on the private and public sector. This purpose binds taxpayers, payers, business partners, and public entities in a consistent and rather aggressive manner; the sole purpose of ensuring public revenues weaves a complex cloth of obligations, limits, responses and counter-responses where the agent complement is the central element.

The not so obvious conclusion, there is a constant struggle in tax law that uses all legal tools, such as human rights and that allows a certain evolution of this law fields towards a more balance confrontation. This struggle generates progress or at least paths to follow in our future research.

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THE DIFFICULTIES IN REGULATING THE FIGHT AGAINST TRANSNATIONAL ORGANISED CRIME

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Abstract

The fight against organised crime has become extremely important in the present-day, due to the high negative impact that organised crime has on the society as a whole. Especially, the transnational organised crime creates a severe threat, because it uses expanded resources and affects a large number of people. The need to adopt international documents in order to fight against transnational organised crime is justified by the effects of transnational organised crime, which can even influence international relations and, also, poses a great threat to human security. In their efforts to fight against transnational organised crime, international organisations must create a legal frame, which would allow states to adopt the most appropriate measures, both at national and international level. As the process of creating such regulations has begun, the members of international organisations (United Nations, European Union) realised that there is an issue, which is difficult to solve. This issue refers to the fact that it is very hard to find an appropriate definition to the phenomenon of “organised crime” and, subsequently, to “transnational organised crime”. This difficulty is generated by the fact that organised crime is very versatile, meaning it takes various shapes, and, also, it changes over time. The international organisations came up with an appropriate solution, which consists in defining not the phenomenon itself, but the organisation, which sits at the core of the concept “organised crime”. In the United Nations regulations, this organisation is called “organised criminal group” and is built on the concept of “structured group”. European Union regulations, in a similar approach, refer to “criminal organisation”, built on the concept of “structured association”. As it is obvious that the terms used by the two international organisations differ, we are entitled to ask the question whether their visions are in accordance with each other. This paper analyses the need to adopt international documents referring to transnational organised crime and, further, refers to the discrepancies, but also to the similarities in international regulations on transnational organised crime, and argues the need for a solid common view, which is absolutely necessary for an effective fight against transnational organised crime.

Keywords: *transnational organised crime; organised criminal group; criminal organisation; United Nations; European Union.*

JEL Classification: K420

1. INTRODUCING THE CONCEPT OF TRANSNATIONAL ORGANISED CRIME

Organised crime creates a very serious threat to present-day society. Although it is not a new form of anti-social behaviour, the facilities existing in the modern society greatly enhance its potential (Kleemans, 2014).

Probably the most dangerous form of organised crime is the *transnational organised crime* (TOC). The illegal activities associated with TOC are extremely diverse. These include: drug trafficking, human trafficking, human smuggling, trafficking in arms, trafficking in nuclear materials, illegal cigarette trade, trafficking in stolen vehicles, trafficking in stolen art objects and antiquities, trafficking in protected wildlife, cybercrime, illicit waste disposal, serial burglary, fraud and so on (von Lampe, 2012). Virtually, new activity domains of TOC can be created whenever there is an opportunity for obtaining a profit out of an illegal action (for example, the illegal production and trafficking of surgical masks during the Coronavirus Disease – COVID-19 pandemic in 2020). Because of its transnational character, this kind of organised criminality has the potential to affect a large number of people, from many countries. Therefore, it is necessary to take measures at an international level.

Before analysing the international legal documents, which have taken into account the notion of TOC, we must highlight the fact that the concept of *transnational organised crime* is not a clear one. Also, the concept of *organised crime* is not a sharply defined one.

First of all, it is difficult to understand exactly what *organised* means. Moreover, there is a debate on the *degree of organisation* which organised crime must have (von Lampe, 2012). Regarding the *type* of organisation which organised crime may have, the legal literature points out that there are mainly two *types* of criminal organisations, corresponding to two main theories, namely the *organisation theory* and the *network theory* (Calderoni, 2014). The *organisation theory* emphasizes the features of the so-called “classical form” of organised crime (like *Italian Mafia*), where there is a strict hierarchy and compulsory rules. The *network theory* presents organised crime as a structure where members are not hierarchically structured; in this perspective, organised crime does not consist of large structures with well-defined leaders, being rather a cooperation between two or many core-structures, which can even consist of one individual person (Kleemans, 2014). The scholar tendency is to accord prevalence to the *network theory* (von Lampe, 2012). However, there is the opinion that the priority given by academics to the *network theory* may be a response to the image of organised crime created by media, which is an image that corresponds mainly to *organisation theory*. This is because the information offered by media as regards organised crime usually presents criminal organisations as being similar to Italian Mafia, which is not always an accurate image (von Lampe, 2012).

Also, the term *crime*, used in the phrase-organised *crime*, is subject to theoretical debates (Cășuneanu, 2013).

We must also point out that there are two perspectives from which we can analyse TOC, as TOC can be understood as an *organisation of criminal activities* or as an *organisation of criminals* (von Lampe, 2012).

As regards the term *transnational*, although it may seem a clear one, it becomes blurred when it sits next to the term *organised crime*, because there are different elements which can give the transnational aspect: the members of the criminal group, the resources, the effects of the criminal activities and so on. And this reality raises different questions, like: which element must exist, in order to offer to the criminal organisation the transnational aspect? Or, is it necessary that all the elements, which define the organised group, are transnational? Also, we can easily notice that criminal activities performed by only *one* perpetrator can have transnational features (for example, the perpetrator can act in different countries, or can have victims with different citizenships, or the effects of his or her actions can expand in different countries).

It is easy to see, from the information presented above, that the concept of TOC is far from being well understood. As we will see in this paper, the difficulties existing in the doctrinal approach of this concept have been fully shown in the context of searching for an international legal regulation of the fight against TOC. One of the causes for the lack of clear understanding of TOC (apart from those mentioned before, which are mainly of theoretical nature), is of *empirical nature*, and resides in that it is very hard to obtain correct information about what is *really* inside such an organisation. Accurate information can only be obtained from people who *are* a part of organised crime or who *were*, at one point, members of such entities. But these people usually do not offer any information about the criminal structure they *are* a part of or they *were* a part of, from various reasons, like fear (for themselves or for their families) or loyalty. Some authors speak about the *trust*, which is often found among criminals involved in organised structures, and this mutual trust can be a strong barrier against any leak of information (von Lampe and Johansen, 2004).

Also, we must mention that little research has been conducted on some areas of organised crime. For example, there are no representative *gender studies*, which could analyse the role of women in criminal structures. Also, there are no significant studies focused on *each individual* who is a part of organised crime, as most studies focus on the whole entity (von Lampe, 2012). We strongly believe that research on organised crime should be also conducted on areas, which were not or were poorly analysed before, because only this way we can hope to obtain an image at least *close* to the real meaning of organised crime. Even more, we believe that a good understanding of the phenomenon of TOC is a needed premise for taking effective prevention measures. And, as we have mentioned in previous

scientific papers, prevention of crimes must always be in view of people who work in the theoretical or practical field of fighting against crime (Frant, 2014).

In order to understand the necessity of analysing the TOC issue, it is very important to mention the fact that the impact of TOC can be extremely high. The effects of the illegal activities conducted by TOC can easily be felt by the society as a whole. Also, TOC can have an important influence in shaping international policies, as the postinternationalist paradigm states, and can affect human security, as we will see in the following lines.

2. THE NECESSITY TO TAKE INTERNATIONAL MEASURES AGAINST TRANSNATIONAL ORGANISED CRIME

The present-day society is undoubtedly marked by profound changes. It may be that we are not completely aware of the specificity of our era, as we, usually, focus on the details of our everyday life and we miss the whole picture. But if we take just a little time to think of the features of our contemporary society, and, especially, if we compare the last 50 years to what has happened before in human history, it becomes very clear that the context of our lives is dramatically different than the context of our grandparents' and parents' lives.

In what concerns the purpose of this paper, it is important to understand *why* it is necessary to take international measures specifically directed against TOC. Of course, a part of the explanation is contained in the name given to this form of criminality. It is *transnational*, so its effects spread at international level. But this explanation is not enough, as states could manage the components of TOC each on their own territories, and cooperate in the criminal law field on the basis of already existing international cooperation treaties. But, still, states felt the need to adopt international regulations expressly directed to this kind of criminality. In the quest for an answer, we must go beyond the significance of TOC for the Criminal Law field. The answer comes from understanding that TOC has deep implications in the very *shape* of our society.

2.1 The influence of transnational organised crime in shaping international relations

In order to understand how TOC can influence international relations, we must examine the elements which have the power to influence international relations. In a view which was hard to accept a few decades ago, we can see that the actors that shape international relations are no longer *only* the states. For a better understanding of this view, we must turn our attention to the advocates of postinternationalist paradigm.

This paradigm is founded on the empirical observation of some fundamental changes which are defining for the contemporary era. In a synthetic view, these changes are: *the skill revolution, organisational explosion, a pervasive*

disaggregation of authority and the bifurcation of global structures (Rosenau, 2006).

The *skill revolution* is generated by the explosive evolution of technology and especially by the previously unimaginable access to information. Because of the new facilities, people become aware of their power to influence the course of events, therefore becoming “central actors on the world stage” (Rosenau, 2006).

The *organisational explosion* refers to the fact that people form and adhere to an extraordinary large number of organisations of all kind – for example, non-governmental organisations (Rosenau, 2006).

The *pervasive disaggregation of authority* designates the continuous disintegration of authority, in the sense that the authority does no longer exist in hierarchical and centralised structures. The disaggregation of authority does not mean that authority ceases to exist; it only means that it changes its form. The effect is that, nowadays, authority is dispersed in different structures, which “sometimes cooperate, often conflict, and endlessly interact” (Rosenau, 2006). We can see that these structures form a network of associations of all sizes and shapes. Anyway, it is obvious that the role of states has diminished; maybe this is a consequence of the fact that states “are unable to provide solutions to the so called ‘global’ or ‘transnational’ issues” (Ştefanachi, 2013a).

The *bifurcation of global structures* means that the actors on the field of international relations are no longer *only* states, but also other entities, which can exert authority, due to the *pervasive disaggregation of authority* (as presented above). All the actors of the global stage become members of the so-called “multi-centric world” (Rosenau, 2006).

The elements presented above allow us to see that transnational criminal organisations fit in the frame of structures which can influence international relations (Picarelli, 2006). As well as an organisation with a legal purpose, criminal organisations acting at an international scale are formed by ambitious people who are aware of their skills and are determined to obtain a certain effect, albeit an illicit one. Therefore, sooner or later, such a transnational criminal organisation will have an impact strong enough to influence international policies.

2.2 The menace posed by transnational organised crime on human security

In order to understand how TOC can influence international relations, we must also examine the effects of TOC on human security. Contrary to what we may think, the concept of human security is relatively new. This new understanding of security is introduced in the middle of the last decade of the XXth century (Ştefanachi, 2011).

Essentially, the concept of human security is opposite to the traditional view of security as national security, achieved through military security. The core of the concept of human security consists in the belief that security should be focused on human level, therefore on each person (Ştefanachi, 2017). The concept of

human security develops alongside the concept of human development, as the two concepts are strongly connected. Even more, human security must not be perceived as a defensive concept (as territorial and military securities are conceived), but as an „integrative concept built on (human) development” (Ștefanachi, 2011).

The emergence of the concept of human security has been foreshadowed by the United Nations Declaration of Human Rights (UN, 1948). Also, some of the traits of human security can be identified in International Humanitarian Law (Moldovan, 2019). However, it is the end of the Cold War which created the context favourable to the open acknowledgement of the necessity for a change in the view on security, and, therefore, opened the door for the concept of human security. The main background for the emergence of this new concept is the globalisation, which brought new threats, which cannot be appropriately addressed by using traditional military methods (Ștefanachi, 2017; Ștefanachi, 2013b).

The international document which is considered a milestone for understanding the concept of human security is the United Nations Human Development Report from 1994 (UN, 1994). This document asserts that there are seven components of human security: *economic security* – granting a basic income to each individual; *food security* – providing each individual access to basic food; *health security* – granting access to basic health care; *environmental security* – protecting people against natural disasters or against the consequences of the degradation of natural environment; *personal security* – protecting individuals against physical violence; *community security* – protecting individuals so they can maintain and carry on their relationships and traditional values and also protecting them from ethnic or segregationist violence; *political security* – providing a life standard according to the basic human rights, as well as ensuring individual and group liberties against any governmental attempts to exert control (UN, 1994; Ștefanachi, 2017).

Apart from discussing the *components* of human security, the concept of human security is seen as having two fundamental *dimensions*: *freedom from fear* and *freedom from want*. Each of these dimensions can be interpreted in a broad or in a restrictive manner (Ștefanachi, 2015).

There is some criticism to the concept of human security. One of the aspects of this criticism emphasises that the concept of human security lacks a clear definition. Some critics consider that, usually, definitions of human security are vast and imprecise. The main problem derived from such definitions consists in that they cannot set efficient guidelines, in order to reach an actual accomplishment of human security (Paris, 2001).

Also, some authors notice that “somehow paradoxically (...) security remains a marginalised concept” (Ștefanachi, 2017). This, in our opinion, is a distressful conclusion, which casts a shadow on the contemporary rhetorical discourses on

the emphasis of human rights and puts under question the honesty and, further, the viability of the measures taken in order to protect human security.

Beyond the theoretical debate on the concept of human security, in what concerns this paper, it is important to understand if TOC poses a threat to human security. Analysing the elements presented above as *components* of human security, it is obvious that organised crime, and therefore TOC, creates a direct and serious threat for *personal security*. United Nations Human Development Report from 1994 expressly mentions that personal security can be threatened by “individuals or gangs” who act “against other individuals or gangs”, in the form of crime or street violence (UN, 1994). Also, the document states that, for many people, „the greatest source of anxiety is crime, particularly violent crime” and that „increase in crime is often connected with drug trafficking” (UN, 1994). As TOC is centred on the purpose of committing crimes, it becomes clear that TOC is a severe threat to *personal security*, and, by that, to *human security*.

Also, *community security*, as a component of human security, can be seriously endangered by TOC and we do not exclude the possibility that, at least indirectly, the other components of human security may be affected, too, by TOC.

We must notice that TOC also strongly affects one of the two fundamental *dimensions* of human security, namely *freedom from fear*.

The elements presented above urge us to conclude that TOC poses a severe threat on *human security*. As human security has become an object of interest for international organisations, it is somehow natural that such an important threat for human security, as TOC is, to be also analysed at international level. Therefore, it is necessary to adopt international documents in order to organise the fight against TOC.

3. DEFINING TRANSNATIONAL ORGANISED CRIME IN INTERNATIONAL DOCUMENTS. DISCREPANCIES

When states started to think about the necessity to coordinate their efforts in order to fight TOC, they first thought, naturally, at adopting an international document in that respect. United Nations was the first organisation, which initiated at a global scale the creation of an international document in order to fight TOC. The first element, which was taken into account in writing this document, was the necessity to give a definition to TOC. The officials working at the document realized that it is very hard to give a definition to organised crime. This leads to the unique and uncomfortable situation to fight something that you do not exactly know what it is. It is pretty much like fighting a chimera; this comparison clearly illustrates the difficulties existing in taking legal measures against something, which does not have a clear definition. Also, when we look at the way legal system works, and especially the way Criminal Law works, we realize that, without a clear legal image about what organised crime is, the members of organised crime will have the possibility to find ways to escape from criminal prosecution and, therefore, to escape from being punished.

The difficulty comes from the *versatility* of organised crime, which takes various shapes. There are organised groups with only three or four members, and others with hundreds or thousands of members. The activities performed by organised crime are also extremely diverse, so we cannot rely on the type of activities in order to build a definition of organised crime. Also, the way a criminal structure is organised varies greatly. There are criminal organisations with a strict hierarchy and others, which do not have such a hierarchy. There are groups based on family ties and others where members are not bound by such family ties. Also, organised crime changes over time. An organised criminal group can quickly change the type of activity, in the permanent quest for the most profitable criminal activity. At the same time, some members may go out, and some new members may come in the criminal organisation (Căşuneanu, 2013).

How can we define such a complex concept? Moreover, how can we find a definition, which is clear enough in order to sustain the legal effects that should occur from such a definition?

The United Nations came up with an innovative solution. In the so-called “The Palermo Convention”, which is the United Nations’ Convention against Transnational Organised Crime (adopted in 2000 and which came into force in 2003), the creators have chosen to define not the phenomenon of organised crime (which we have seen that is an evasive concept), but the *structure* which sits at the core of the concept of organised crime. This structure of individuals is not easy to define, but the Palermo Convention succeeds in creating a very accurate image of what this structure is, by presenting the *characteristics* of this structure. The Palermo Convention gives to this essential structure of organised crime the name *organised criminal group* (UN, 2004).

Article 2 of the Palermo Convention defines *organised criminal group* as a “structured group of three or more persons, existing for a period of time and acting in concert with the aim of committing one or more serious crimes or offences established in accordance with this Convention, in order to obtain, directly or indirectly, a financial or other material benefit” (UN, 2004).

We can see that the definition of *organised criminal group* relies on another concept, namely the *structured group*. The Palermo Convention, also in article 2, offers a definition of the *structured group*, which is a “group that is not randomly formed for the immediate commission of an offence and that does not need to have formally defined roles for its members, continuity of its membership or a developed structure” (UN, 2004). The creators of the Palermo Convention have chosen a *negative definition* for explaining the nature of the structured group. In other words, the Palermo Convention shows what a structured group *is not* (which means what *does not define* a structured group). This way of defining leads to a broad sense of the notion *structured group*. Actually, we can consider as *structured groups* (and, further, as *organised criminal groups* if the other

conditions are fulfilled) even loosely affiliated groups, without any formally defined roles for its members and without a developed structure (UN, 2018).

It results that The United Nations Convention against Transnational Organised Crime uses a *layered definition* in order to define what organised criminal group is. The main concept (*organised criminal group*), which is a very complex one, relies on the understanding of another concept (*structured group*). By offering a clear image of what structured group is, we obtain a clear image of the essential notion (*organised criminal group*).

This legal technique used in defining TOC by the Palermo Convention has also been used by European Union in its own documents regarding TOC. In the Council Framework Decision 2008/841/JHA of 24 October 2008 on the fight against organised crime (Council Framework Decision, 2008), The Council of the European Union also offers a layered definition, not of the phenomenon of organised crime, but of the structure which sits at its core, called by the European document *criminal organisation*. This Council Framework Decision, in article 1, defines *criminal organisation* as “a structured association, established over a period of time, of more than two persons acting in concert with a view to committing offences which are punishable by deprivation of liberty or a detention order of a maximum of at least four years or a more serious penalty, to obtain, directly or indirectly, a financial or other material benefit” (Council Framework Decision, 2008). In the same article, *structured association* is defined as “an association that is not randomly formed for the immediate commission of an offence, nor does it need to have formally defined roles for its members, continuity of its membership, or a developed structure” (Council Framework Decision, 2008).

We appreciate the unity of these two international legal documents in what regards the approach, but we also must highlight the existing discrepancies.

Although the two documents share the same vision, the terms used are different. While the United Nations` document uses the terms *organised criminal group* and *structured group*, the European Union`s document uses the terms *criminal organisation* and *structured association*.

Also, as regards the number of members of the criminal groups, while the United Nations` document refers to *three or more persons*, the European Union`s document refers to *more than two*, which, actually, means the same thing.

Because fighting against TOC needs a very strict coordination, any discrepancy between international documents regulating fight against TOC casts a shadow on the efficiency of this coordination. This is why we hope that all further international documents referring to TOC will be precisely synchronised, in order to eliminate all possible controversies, which could negatively affect the fight against TOC.

4. CONCLUSIONS

As we have presented above, TOC has gained the power to influence international relations and to pose a great threat on human security. The profound global implications of TOC lead to the necessity to adopt international documents, in order to create the premises for success of a world-wide scale fight against TOC. Creating such international documents proves to be a difficult task. Because of the complexity of the terms implied, it is hard even to give a clear definition of TOC. However, United Nations and European Union succeeded in defining TOC, using specific techniques (the layered and the negative definition). The visions embedded by United Nations and European Union in their documents referring to TOC reflect the same essential approach to the phenomenon of TOC. However, it is striking that there are some discrepancies in what regards the terms used. Although these differences do not fundamentally affect the unity of the two international documents, they raise unnecessary questions about the effectiveness of the international coordination in fighting against TOC. This is the reason why we consider that, in the future, all international documents regarding TOC must avoid discrepancies, in order to offer a solid base for an efficient fight against TOC.

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AUDIT OF PROJECTS FINANCED FROM EU FUNDS AND THE FINANCIAL IMPACT OF IRREGULARITIES REPORTED IN ROMANIA IN THE LAST DECADE

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Abstract

In Romania, the Audit Authority (AA) is the competent body to conduct external audits on the use of EU funds received from the European Union. Following the audit of European projects financed from non-reimbursable funds in the first programming period, the Audit Authority detected irregularities with major financial impact, of over 50 million euros, only for the expenses declared for settlement to the European Commission (EC) in 2013 by Romanian entities which have benefited from non-reimbursable Structural and Cohesion Funding. This study aims to analyze the financial impact of irregularities found after auditing projects funded by European funds from their inception to the present. The results of the research focus, on the one hand, the fact that improvements have been found in the legality and regularity of expenditures declared to the European Commission by Romanian entities involved in European projects, following the recommendations made by the Court of Accounts after auditing previously implemented projects. On the other hand, this research aims to see to what extent the irregularities found during the period under review influence the materiality accepted by the EC.

Keywords: *external public audit; audit of operations; European funds; financial impact of irregularities; materiality.*

JEL Classification: K22, M42, M48

1. INTRODUCTION

The audit of non-reimbursable funds made available to Romania by the European Union (EU) is the responsibility of the Audit Authority (AA) of the Romanian Court of Accounts (RCA), considered the only national authority competent to perform external public audit according to European and national regulations (RCA, 2018). For the 2007-2013 programming period, the non-reimbursable funds allocated to Romania were over 19 billion Euro, and for the 2014-2020 programming period, Romania has over 43 billion Euro allocated from

the EU budget for economic development, the creation of jobs work and better living conditions. In these circumstances, it is absolutely necessary for a competent authority, such as the AA, to be responsible for auditing how the funds allocated to and attracted to Romania have been and are being used in accordance with the objectives and conditions for which they were granted. AA must submit to the EC, annually, an audit opinion on how to manage the non-reimbursable financial assistance received by Romania from the EU. (Regulation EU, 2013; Vârteiu, 2018).

Audit missions are conducted by the AA in accordance with International Standards on Auditing (IAASB, 2015) and cover: *the system audit, the audit of operations and the audit of accounts*. This research aims at auditing operations with a view to obtaining reasonable assurance as to the correctness, legality and regularity of expenditure declared to the EC. The audit opinion issued by the AA takes into account a materiality accepted by the EC of 2% of the amount of expenditure declared, above which the error rate is considered significant (RCA, 2018). The role of the AA is not only to signal deficiencies that require remedial measures, but also to strengthen financial discipline at the level of the entities involved in the implementation of European funds. It is known that the obligation to audit projects financed from European funds made its presence felt after 1995, at the request of the EU (Kameniczki, 2009).

For the 2007-2013 programming period, Operational Programs financed from the Structural Funds (SF) and/or the Cohesion Fund (CF) have been: the Regional Operational Program (ROP), Sectoral Operational Program Increase of Economic Competitiveness (SOP IEC), the Operational Program Technical Assistance (OPTA), The Sectoral Operational Program Environment (SOP E), Sectoral Operational Program Transport (SOP T), The Sectoral Operational Program Human Resources Development (SOP HRD), Operational Program Administrative Capacity Development (OP ACD). In the 2014-2020 programming period, EU Cohesion Policy, for which more than 23 billion Euro has been allocated, has as a priority the investment in growth and jobs in EU Member States (RCA, 2018). To achieve this objective, the Operational Programs, financed from the European Structural and Investment Funds (ESIF), implemented in Romania are: Regional Operational Program (ROP), Large Infrastructure Operational Program (LIOP), Competitiveness Operational Program (COP), Human Capital Operational Program (HCOP), Administrative Capacity Operational Program (ACOP) and Operational Program Technical Assistance (OPTA).

If we analyze the Operational Programs related to the two programming periods, it is observed that in the first period the division is made into seven Operational Programs, and in the second programming period, the separation is made into six Operational Programs. Under these conditions, in order to ensure

comparability over the analyzed period, in our study, the SOP E and SOP T Programs for the 2007-2013 programming period are treated together.

In this research, the 2007-2013 programming period is considered the first Programming Period (PP1), and the 2014-2020 budgetary framework will be considered the second Programming Period (PP2). This study aims to analyze the financial impact of irregularities found following the audit of projects financed from European funds, implemented in Romania, from their inception until now, noting that the last financial year for which the data were reported is the one ending at 30 June 2018. For ESIF, the accounting year established by European regulations shall begin on 1 July and end on 30 June of the following year (Regulation EU, 2013).

2. LITERATURE REVIEW

Reflections on the legal framework according to which the audit activity is organized regarding the projects financed from non-reimbursable funds can be found in several papers (Staicu, 2014; Şerban, 2014; Şuteu, 2015). Other authors (Haţegan, 2013) focused on conducting studies on the involvement of active financial auditors in the field of related services to verify expenditure on European projects, respectively, the concentration of the market for these services in Romania, compared to other auditors' activities. There are also authors (Botez, 2012a; Botez, 2012b) who have proposed Guides for documenting a mission to verify the amounts spent on projects funded by the Structural Funds. Also, the paper "Structural Funds Audit" can be a useful guide that outlines the steps for auditing European Projects (Mataragiu *et al.*, 2013). In the specialized literature we also find concerns for the synthesis of the difficulties identified in the practice of auditing the projects financed from European funds (Şerban, 2012; Burja and Jeler, 2018; Dobre, 2014). For the 2014-2020 programming period, there are authors who have analyzed the EU Cohesion Policy for the current period starting from the 2007-2013 funding period (Anghelache *et. al*, 2017; Săvoiu, Bănuţă and Gădoiu, 2013). Aspects of the absorption of structural funds in Romania in the period 2007-2013 were also analyzed by the authors (Gelămancă and Zai, 2013). It is known that in 2007 and 2008, the first year of integration, the absorption capacity of Romania was much smaller compared to the new EU member states belonging wave of accession in 2004 (Zaman and Georgescu, 2009).

Starting from the analysis of the specialized literature, this study considers the analysis of the financial impact of the irregularities found following the audit of the projects financed from European funds from their beginning until now. The aim is to report, analyze and compare the most common irregularities found in terms of eligibility of expenses incurred in projects during this period in Romania. It is important to mention that some expenses declared and audited in the period 2014-2018 do not belong to the 2014-2020 programming period, these being an extension of the previous programming period. The research aims, on the one

hand, to highlight whether there have been improvements in the legality and regularity of expenditures declared to the European Commission by Romania, as a result of the recommendations made by AA after auditing previously implemented projects. On the other hand, the research carried out aims to highlight the extent to which irregularities found over an audited period of ten years on the new types of Operational Programs (PP1) exceed the materiality or not accepted by the EC.

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

Starting from the literature, the following research hypotheses are stated:

1. *The legality and regularity of expenditure incurred in Projects financed from grants and declared to the European Commission have recently improved as a result of remedial measures taken in previous audit missions;*

2. *A profile of the Operational Program can be identified according to the expenditure declared to the European Commission, the expenditure audited and the financial impact of the irregularities found;*

3. *The materiality accepted by the EC is largely influenced by the share of audited expenditure in the declared expenditure and the share of irregularities found in the audited expenditure.*

For the comparative study, the analyzed *sample* consists of: over 7000 projects implemented in the two programming periods: 2007-2013 (PP1) and 2014-2020 (PP2), included in the above-mentioned Operational Programs, which represents approximately 30% of the entire *population* of non-reimbursable projects. However, the analysis was performed on POs and not on individual projects, as separate information was not available. At the level of the last audited financial year, approximately 800 public and private entities were verified, respectively over 1.300 requests for reimbursement from European funds. Within them, the audit missions of operations were 20% (RCA, 2018).

The analyzed *variables*, after collecting the primary data from the Public Reports of the Romanian Court of Accounts (RCA), are presented in the Table 1.

For the period 2007-2013, the variables were analyzed starting with 2009, the year in which the data were available, but also because the projects were launched, approved and audited after the opening year of the programming period. For the 2014-2020 programming period, the last year studied is 2018, for 2019 no data have been reported yet. In order to be able to make a comparison at the level of irregularities found in the analyzed period, we used the merging of the reported quantities in the two programming periods (PP1 and PP2), the comparative study following the comparison on total periods and not on years taken individually. A study on the audit of projects funded from European funds only for the period 2007-2013 and the implications for future grants was previously carried out by the same author (Grosu, Robu and Maha, 2018).

Table 1. Variables

Symbol	Explanation
ROP	<i>Regional Operational Program</i>
ESOP and TSOP – LIOP	<i>Environment Sectoral Operational Program and Transport Sector Operational Program – Large Infrastructure Operational Program</i>
SOP IEC – COP	<i>Sectoral Operational Program Increase of Economic Competitiveness – Competitiveness Operational Program</i>
SOP HRD – HCOP	<i>Sectoral Operational Program Human Resources Development – Human Capital Operational Program</i>
OP ACD – ACOP	<i>Operational Program Administrative Capacity Development – Administrative Capacity Operational Program</i>
OPTA – TAOP	<i>Operational Program Technical Assistance – Technical Assistance Operational Program</i>
DE_PP1	<i>Declared Expenses – Programming Period 1 (thousands ROL)</i>
DE_PP2	<i>Declared Expenses – Programming Period 2 (thousands ROL)</i>
AE_PP1	<i>Audited Expenses – Programming Period 1 (thousands ROL)</i>
AE_PP2	<i>Audited Expenses – Programming Period 2 (thousands ROL)</i>
AE/DE_PP1	<i>Share of Audited Expenses in Declared Expenses – PP1 (%)</i>
AE/DE_PP2	<i>Share of Audited Expenses in Declared Expenses – PP2 (%)</i>
FIIAE_PP1	<i>Total Financial Impact of Irregularities in the Audited Expenses – PP1 (thousands ROL)</i>
FIIAE_PP2	<i>Total Financial Impact of Irregularities in the Audited Expenses – PP2 (thousands ROL)</i>
IF/TI_PP1	<i>Share of Irregularities Found in Total Irregularities – PP1 (%)</i>
IF/TI_PP2	<i>Share of Irregularities Found in Total Irregularities – PP2 (%)</i>
IPP/TI_PP1	<i>Share of Irregularities in Public Procurement in Total Irregularities – PP1 (%)</i>
IPP/TI_PP2	<i>Share of Irregularities in Public Procurement in Total Irregularities PP2 (%)</i>
IOIE/TI_PP1	<i>Share of Irregularities in Other Ineligible Expenses in Total Irregularities – PP1 (%)</i>
IOIE/TI_PP2	<i>Share of Irregularities in Other Ineligible Expenses in Total Irregularities – PP2(%)</i>
IF/AE_PP1	<i>Share of Irregularities Found in Audited Expenses – PP1 (%)</i>
IF/AE_PP2	<i>Share of Irregularities Found in Audited Expenses – PP2 (%)</i>
IF/DE_PP1	<i>Share of Irregularities Found in Declared Expenses – PP1 (%)</i>
IF/DE_PP2	<i>Share of Irregularities Found in Declared Expenses – PP2 (%)</i>

Source: own projection

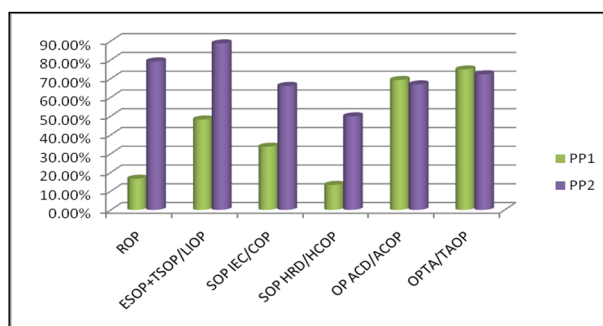
For the data analysis, *quantitative methods* were used, respectively: *systematization* (grouping, tabulation, graph) and *comparison*, using primary, derived and relative indicators, as can be seen from the presentation of the variables in table no. 1. Also, for a synoptic presentation of the phenomena, the

Analysis of Main Components (AMC) was used, as a descriptive method of multidimensional data analysis that is applied in the study of correlations between numerical variables (Pintilescu, 2007). More specifically, it was considered to highlight the statistical links between the variables taken into account, on the one hand, as well as the similarities and differences between the statistical units, respectively POs considered in the two programming periods, according to the registered variables. To test the influence of expenditure weights audited expenditure declared and audited spending irregularities on materiality were used *multiple linear regression models* (Jaba, 2008). Next we will present the final results and their interpretation, following each research hypothesis stated above.

4. RESULTS AND DISCUSSIONS

In order to test the first research hypothesis: *The legality and regularity of the expenditures made within the Projects financed from non-reimbursable funds and declared to the European Commission have improved lately as a result of the remedial measures taken during the previous audit missions*, the systematization was achieved with graphic tool.

First of all, the share of audited expenditure in the EC declared expenditure is analyzed, being known that the audit is an activity that uses the survey technique, the exhaustive verifications not being indicated for reasons of cost and time. Figure 1 shows the share of audited expenditure in the EC declared expenditure in the two programming periods (PP1 and PP2) on the OP.

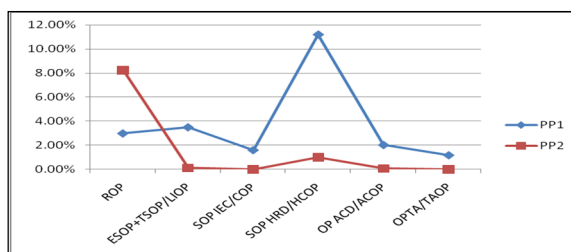


Source: own projection

Figure 1. Share of Audited Expenses in Declared Expenses (AE/DE – PP1 and PP2)

From the previous figure it can be seen that in the second programming period, the share of audited expenditure in the total declared expenditure increased significantly for some OP (from 16% to almost 80% for ROP) or remained approximately the same (around 70% for OP ACD, OPTA, respectively ACOP, TAOP). Overall OP, this indicator increased from 33% to almost 85%. We consider that this increase also took place as a result of the EC recommendations in response to the deficiencies and irregularities previously identified. In the

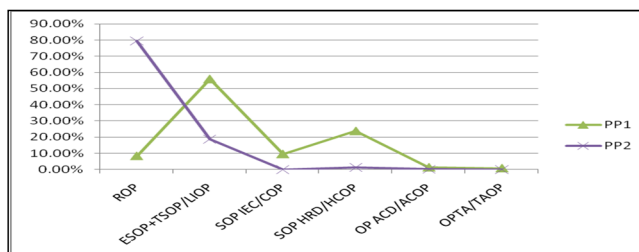
audited expenses, the share of irregularities also changed during the two analyzed periods, as can be seen in Figure 2.



Source: own projection

Figure 2. Share of Irregularities Found in Audited Expenses (IF/AE – PP1 and PP2)

As in Figure 1, and in Figure 2, the ROP is also noticeable, the share of irregularities found in the audited expenditures increasing from 3% to 8%. One aspect is remarkable, although the share of audited expenditures increased, however, for the other OPs, the share of irregularities identified in the audited expenditures decreased, with OPs related to human resources decreasing from 11% to 1% over the two periods analyzed (PP1 and PP2). On average, this indicator decreased by 3%. The share of irregularities found in the total irregularities is also important.



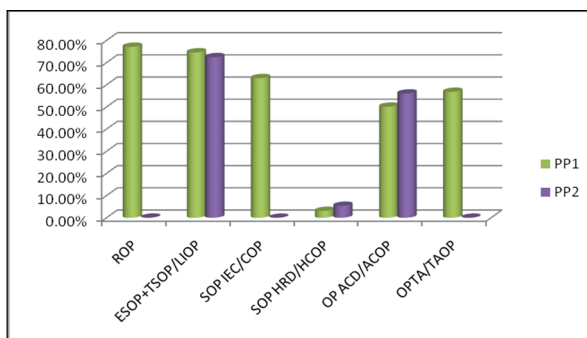
Source: own projection

Figure 3. Share of Irregularities Found in Total Irregularities (IF/TI – PP1 and PP2)

Figure 3 shows that when an increase in the share of audited expenditures from the total expenditures declared on the ROP (from 16% to 80%), there is also an increase in irregularities identified as a percentage of total irregularities, from 8% at almost 80%. However, the other OPs show significant reductions in irregularities for human resources and infrastructure projects.

The following is an analysis of the irregularities identified as a result of the audit of the projects included in the sample by types of irregularities. There are two types of irregularities identified: irregularities with a financial impact on

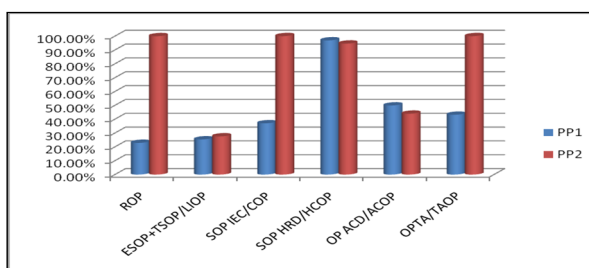
public procurement and irregularities with a financial impact on other ineligible expenditure, as can be seen in Figures 4 and 5.



Source: own projection

Figure 4. Share of Irregularities in Public Procurement in Total Irregularities (IPP/TI – PP1 și PP2)

Significant changes in the share of public procurement irregularities in total irregularities are noted in the case of three categories of OP, in the sense of its decrease, respectively, in the case of ROP, SOP IEC/COP and OPTA/TAOP. In the case of the other OPs, things remain roughly the same.



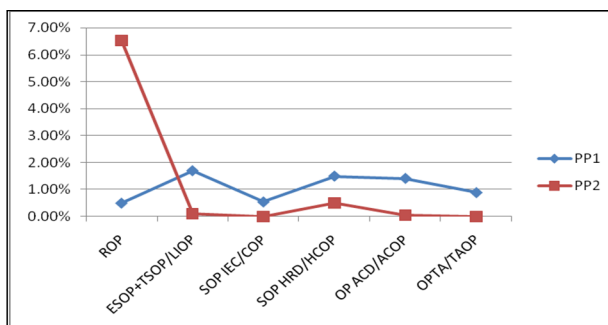
Source: own projection

Figure 5. Share of Irregularities in Other Ineligible Expenses in Total Irregularities (IOIE/TI – PP1 and PP2)

The mirror image can be seen in Figure 5, in the sense that the share of irregularities with financial impact targeting other ineligible expenditure increases in PP2 for ROP, SOP IEC/COP and OPTA/TAOP. Therefore, in the total OP, irregularities with financial impact targeting public procurement decrease (from 56% to 14%), and irregularities with financial impact targeting other ineligible expenditures increase (from 44% to 86%) in PP2 compared to PP1.

The figure below (Figure 6) shows the share of irregularities identified in the declared expenditure, taking into account the fact that for this indicator the

maximum allowed limit is 2%. This is, in fact, the materiality that should not be exceeded.



Source: own projection

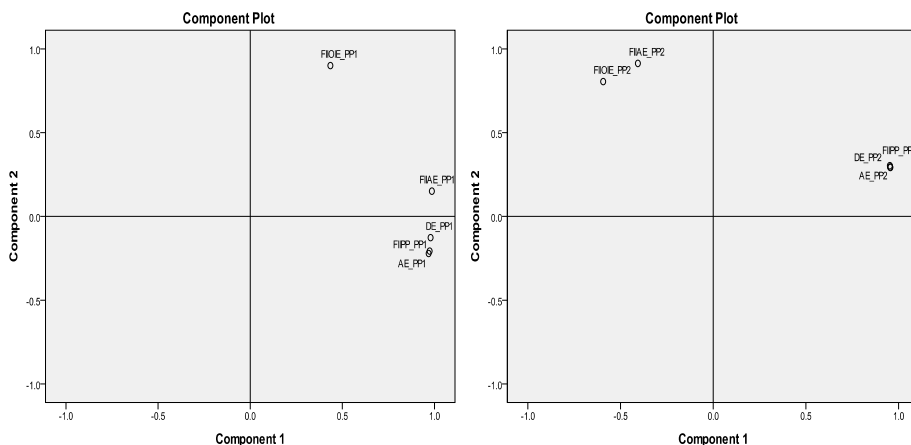
**Figure 6. Share of Irregularities Found in Declared Expenses
(IF/DE – PP1 and PP2)**

It can be seen that the limit of 2% is maintained in the two analyzed periods, with the exception of the ROP, for which the tolerable error limit is much exceeded, reaching over 6%.

In view of the above, the second research hypothesis aims *to Identify a profile of the Operational Program according to the correlations identified between the expenditure declared to the European Commission, the expenditure audited and the financial impact of the irregularities found.*

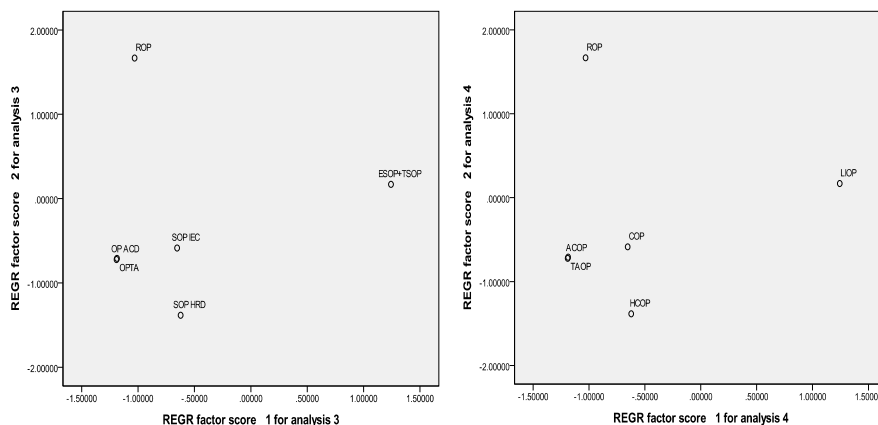
In order to render synoptically the situation of the analyzed variables, following the application of the Analysis of Main Components (AMC), it can be seen in Figure 7 below that for the two analyzed periods, the situation of the correlations is approximately the same. There is a negative correlation between the irregularities found in public procurement and the irregularities found in other types of ineligible expenditure.

Instead, if we correlate the graphs in Figure 7 with Figure 8, the following findings can be made: ROP is characterized by the fact that it records a significant increase in the share of irregularities found in PP2 compared to PP1, being in a negative correlation with all other POs. At the opposite pole is ESOP+TSOP/LIOP, which records a decrease in the share of irregularities found in the total irregularities.



Source: own processing in SPSS 22.0, using AMC

Figure 7. Correlations between variables for PP1 and PP2 after AMC



Source: own processing in SPSS 22.0, using AMC

Figure 8. Similarities and differences between the OP for PP1 and PP2 after the AMC

To test the latest research hypothesis: *The materiality accepted by the EC is largely influenced by the share of audited expenditure in the declared expenditure and the share of irregularities found in the audited expenditure*, the proposed multiple linear regression models are:

$$IF/DE_PP1_i = \beta_0 + \beta_1 AE/DE_PP1_i + \beta_2 IF/AE_PP1_i + \varepsilon_i \quad (1)$$

$$IF/DE_PP2_i = \beta_0 + \beta_1 AE/DE_PP2_i + \beta_2 IF/AE_PP2_i + \varepsilon_i \quad (2)$$

Where:

- IF/DE_PP1_i represents the share of irregularities found in the expenditure declared for the first programming period related to operational programs i , and $i = 1, \dots, 7$;
- IF/DE_PP2_i represents the share of irregularities found in the expenditure declared for the second programming period related to operational programs i , and $i = 1, \dots, 6$;
- AE/DE_PP1_i represents the share of audited expenditure in the expenditure declared for the first programming period related to operational programs i , and $i = 1, \dots, 7$;
- AE/DE_PP2_i represents the share of audited expenditure in the expenditure declared for the second programming period related to operational programs i , and $i = 1, \dots, 6$;
- IF/AE_PP1_i represents the share of irregularities found in the audited expenditure for the first programming period related to operational programs i , and $i = 1, \dots, 7$;
- IF/AE_PP2_i represents the share of irregularities found in the audited expenditure for the second programming period related to operational programs i , and $i = 1, \dots, 6$;
- $\beta_{i=0,\dots,2}$ represents the parameters of the regression models;
- ε_i represents the error component, $\varepsilon \sim N(0, 1)$.

The results of the processing for PP1 and PP2 on the influence of the weights of the audited expenditure in the declared expenditure and of the irregularities found in the audited expenditure on the significance threshold are presented in the Table 2.

From the previous regression models, it can be seen that the share of irregularities found in the declared expenditure (IF/DE) is influenced by 86% (PP1) and 99% (PP2) respectively by the independent variables (AE/DE and IF/AE). It is noted that the greater influence is given by the share of irregularities found in the audited expenditure in both situations. The interpretation is as follows: with a 1% increase in the share of irregularities found in the audited expenditure, the share of irregularities found in the declared expenditure increases by 0,15% (PP1) and 0,79% (PP2), respectively, on average. This may lead to reaching or exceeding the accepted materiality, which has a negative influence on funding from European non-reimbursable funds.

Table 2. Estimates of regression model parameters

Variables included in model1	β	S.E.	df	Sig.	R²
<i>AE/DE_PP1</i>	.034	.000	2	.000	.862
<i>IF/AE_PP1</i>	.157	.000	2	.000	
<i>Constant</i>	-.006	.000	2	.000	
Variables included in model2	β	S.E.	df	Sig.	R²
<i>AE/DE_PP2</i>	.007	.000	2	.000	.999
<i>IF/AE_PP2</i>	.793	.000	2	.000	
<i>Constant</i>	-.006	.000	2	.000	

Model1: $IF/DE_PP1_i = \beta_0 + \beta_1 AE/DE_PP1_i + \beta_2 IF/AE_PP1_i + \varepsilon_i$

Model2: $IF/DE_PP2_i = \beta_0 + \beta_1 AE/DE_PP2_i + \beta_2 IF/AE_PP2_i + \varepsilon_i$

Source: own processing in SPSS 22.0

5. CONCLUSIONS

The conclusions of this research are presented punctually considering the three research hypotheses. With regard to the first research hypothesis, it can be stated that this is validated in the light of the fact that, indeed, in the second programming period (PP2) there is an improvement in the situation regarding the legality and regularity of the expenditures made within the funded Projects from non-reimbursable funds and declared to the European Commission. This positive aspect is due to the fact that all remedial measures taken in previous audit missions and the recommendations received have been taken into account in strengthening financial discipline at the level of the entities involved in the implementation of European funds. The synthetic OP indicators included in the sample studied show that the share of irregularities found in the audited expenditure in the second programming period (PP2) decreased by 3%, given that the share of audited expenditure increased by 50%, which is visibly, an improvement in the situation. Given the second research hypothesis, it is found that a profile of the Operational Program can be identified based on the correlations identified between the expenditure declared to the European Commission, the expenditure audited and the financial impact of the irregularities found. Therefore, the defining features that characterize the OP fall into two categories: either it is an OP for which the audited expenditures have increased significantly from one period to another and the financial impact of the irregularities found has changed significantly, or it is an OP for which, although the share of audited expenditure increased, the share of irregularities found decreased. The latest research hypothesis highlights that the materiality accepted by the EC is largely influenced by the share of irregularities found in the audited expenditure, an insignificant difference being explained by the influences of other variables not included in the models. The general

conclusion is that on the line of management and implementation of projects financed from European funds, Romania has recently seen an improvement in financial discipline at the level of entities involved in such projects.

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ARE THE RECURRENT TAXES ON IMMOVABLE PROPERTIES GOOD HEDGES AGAINST HOUSING MARKET VOLATILITY? EMPIRICAL EVIDENCE FROM EU COUNTRIES

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Abstract

Due to the peculiar characteristics of immobility, indivisibility, heterogeneity, complexity, the real estate properties are subject to a wide range of taxes. The recurrent tax on immovable property is considered the most beneficial tax instrument in terms of its long-run effect on GDP per capita, but nevertheless, the property tax contribution to GDP is very low in all EU countries. Apart from increasing tax revenue, property taxation is an important policy mechanism to reduce the housing price volatility and thus ensures the macroeconomic and financial stability. In this context, the purpose of this paper is to investigate the relationship between immovable property taxation and housing market volatility in EU countries, following a three stages approach. First, a housing price reaction function was constructed to provide preliminary evidence about the impact of the property tax on the house prices. In the second stage, was assessed the impact of property tax on the housing price volatility and in the last one, was investigated the price volatility under the influence of the property basis of assessment depending on value or non-value. The findings show that immovable property taxes have a smoothing effect on housing prices, reducing the house price volatility when the tax revenues increase, and amplifying the price fluctuations when the taxation is lower. A higher effect on attenuating the housing market volatility was observed in the countries that apply an ad valorem property tax system. Thus, the property tax can dampen the wide boom-bust cycles of property markets. This research produces beneficial information for the national and local authorities, as for the investors and practitioners interested in real estate.

Keywords: *property taxation; housing prices; volatility; property value.*

JEL Classification: H2, K25, R31, R38

1. INTRODUCTION

Housing is a complex system that due to its intrinsic characteristics (immobility, indivisibility, heterogeneity, complexity) differs significantly from other goods (Arnott, 1987). These characteristics determine the triple role of housing – as a durable consumer good or a capital good generating consumer services, as an investment good, bringing income and, at the same time, as mortgage collateral (Sommervoll, Borgersen and Wennemo, 2010). In addition to this, Lundqvist (1992) illustrates the housing sector as “a perpetual process of adjusting households and dwellings to each other” through the interactions of

household purchasing power and dwelling price. In this context, the state intervenes with different policies to reduce the risks associated with the real estate market: macroeconomic policies (monetary and fiscal policies), prudential policies (supervisory and regulatory policies), and structural policies (Hilbers *et al.*, 2008). Monetary policy affects the user cost of property directly through the interest rates, and thus can manipulate the housing demand (Whelan, 2012). The taxes impact the efficiency of the housing market by influencing the allocation of resources between different forms of tenure and represent an important indicator of affordability. Prudential policies influence the property prices through cost and access to the financing house purchases (Hilbers *et al.*, 2008). The structural policies refer to labour market policies, competition policies, and urban policies. All these policies influence directly and/or indirectly the housing demand and supply.

Real estate is subject to a wide range of taxes that are an important source of tax revenue to most governments (Stewart, 2012), which may have important fiscal and non-fiscal effects (Bird and Slack, 2007). Apart from increasing revenue for the government, the property taxes are assigned to improve macroeconomic stability and resource allocation, to lower economic inequality and social exclusion, and to support concerns over the environment, sustainability and other social values (Muellbauer, 2005). Taking into account the recommendation of OECD (2010) to design tax structure to support GDP per capita growth, Arnold *et al.* (2011) suggest that the recurrent taxes on immovable property are the most beneficial tax instrument in terms of its long-run effect on GDP per capita, followed by consumption taxes, personal income taxes and corporate income taxes. The property taxes would increase GDP per capita by between 0.25-1.0% in the long run (Arnold *et al.*, 2011). The theory and international best practice agree that the property tax has a strong potential for revenue mobilization, especially in rapidly urbanizing areas (Kelly, 2014).

Regarding the residential real estate market, the analysis of the effects of property tax on house prices has always been a hot research topic, but very controversial (Oliviero *et al.*, 2019). In the first decade of the twenty-first century, the real estate market experienced a sustained period of growth in many economies, which caused a general upward shift in house prices until the economy fell into recession in 2008 due to the subprime and ensuing worldwide economic and financial crisis (Bimonte and Stabile, 2020). To explain this economic phenomenon, the researchers carried out numerous studies that highlighted the significant influence of monetary variables, financial innovations, demographic challenges and locally fundamentals on house prices, to which housing supply reacted, generating a building boom in several countries (Ionaşcu, Mironiuc and Anghel, 2018; Taltavull de la Paz and Gabrielli, 2015). Finally, it has been demonstrated that the regulatory policy may dampen the property supply response to exogenous demand shocks and thus impacting the housing price dynamics

(Meen, 2016). Consequently, in recent years, more and more countries use tax instruments to mitigate excessive house price fluctuations (Poghosyan, 2016).

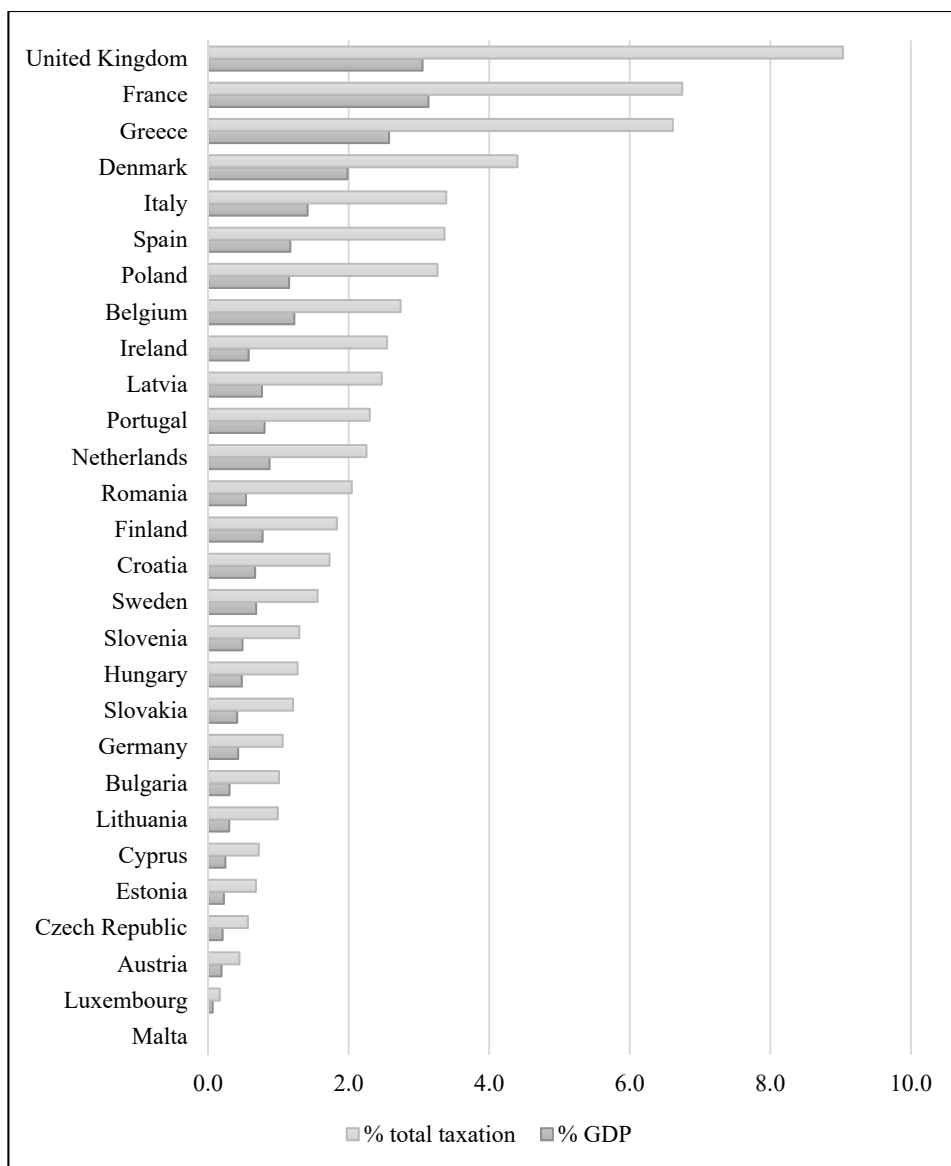
Most earlier studies on property tax capitalisation validate the hypothesis that lower property taxes lead to higher house prices (Elinder and Persson, 2017). The immovable property taxation can act as a policy instrument for property price stabilisation, dampening the volatility of housing prices and excessive house price increases (Blöchliger *et al.*, 2015; Klein *et al.*, 2016; Oliviero *et al.*, 2019; Poghosyan, 2016). Although many researchers have assessed the impact of the macro-prudential regulation on housing prices (Cerutti, Claessens and Laeven, 2017; Kuttner and Shim, 2012), evidence on the relationship nature between house price and property tax revenues is scarce (Blöchliger *et al.*, 2015; Lutz, 2008; Poghosyan, 2016). Most of the studies are focused on local or regional cross-sectional variation in property taxes and their effects (Elinder and Persson, 2017), ignoring the role of property tax in price development at the country level (Oliviero *et al.*, 2019).

This paper contributes to the above literature by providing new evidence about the impact of the property tax revenues on house prices and housing market volatility across the EU countries over the period 2000 – 2017. The originality of this paper consists in approaching the effect of property tax revenues on the house price volatility through the perspective of the two fundamental property tax base – value and non-value. The theoretical background of this approach is that rising property tax revenues in line with property prices on the bases of regular updates of property values can dampen the boom-bust cycles of the real estate market as opposed to the area-based property tax system (Blöchliger *et al.*, 2015).

The paper is structured as follows. Section 2 describes the property taxation in the EU countries. Section 3 presents the research methodology. Section 4 lays out the main empirical results. Finally, Section 5 provides concluding remarks.

2. PROPERTY TAXATION IN THE EU COUNTRIES

The taxation system of the real estate properties in the EU countries, based on the tax classification system of the International Monetary Fund (IMF) and Organisation for Economic Cooperation and Development (OECD), includes recurrent taxes on immovable property and other property taxes (DG TAXUD, 2019). The taxes on immovable property are paid, regularly, annually by the owners of immovable properties, while the other property taxes include taxes on property transfers and transactions. In the EU, generally, recurrent taxes on immovable properties dominate with 61% of total property taxes in 2018, accounting for around 1.5% of GDP and 3.9% of total taxation.



Source: author’s projection based on European Commission, DG Taxation and Customs Union

Figure 1. Recurrent taxes on immovable property as a percent of total tax revenue and GDP in 2018

Even though, the property tax contribution to the budget is reduced and different among EU countries. Property taxes generate a significant contribution to the local government revenues in relatively few countries, which are mainly

developed countries influenced by the British experience (Bird and Slack, 2007). In 2018, the highest revenues of recurrent property taxes as percent of the total tax revenue were collected in United Kingdom (9.0%), France (6.7%) and Greece (6.6%), while the lowest revenues were registered in Malta (0.0%), Luxembourg (0.2%), Austria (0.4%), Czech Republic (0.6%), Estonia (0.7%) and Cyprus (0.7%) (Figure 1).

In terms of the contribution to the GDP formation, the recurrent taxes on the immovable property range from 0.0% in Malta to 3.1% in France (Figure 1). Bahl (2009) shows that property taxes expressed as a percentage of GDP have been gradually trending upward since the 1970s, but even so, the property tax contribution to GDP is very low in all countries. The implicit recurrent property tax rate on dwellings, which represents the ratio between the revenues from recurrent taxes on the immovable property collected from households and the net stock of dwellings in the household sector (Barrios *et al.*, 2019), varies from 0.03% in Austria to 2.03% in the United Kingdom, while the EU average is 0.45%. This fact attracted the attention of policymakers because the recurrent taxes on real estate property offer a potential source for increasing tax revenue and economic growth due to the immobility of the tax base (DG TAXUD, 2019).

Property taxes are very different across countries (Bird and Slack, 2004). Differences arise from how the tax base is determined, how the tax rates are set, and how the taxes are levied and collected (Bird and Slack, 2007, p. 208). Thus, the administration's way of the property tax influences the contribution of the property tax revenues to the government's revenues (Bird and Slack, 2007). Table 1 summarizes the characteristics of the recurrent taxes on residential buildings across EU countries.

Table 1. Characteristics of the residential property tax system in EU countries

Country	Property tax existence			Implicit property tax rate (%)	Basis of assessment	Taxable base	Updated or outdated value
	1995	2005	2017	2017			
Austria	Y	Y	Y	0.03	Value	Fair value and rental value	Outdated
Belgium	Y	Y	Y	0.69	Value	Rental income value	Outdated
Bulgaria	Y	Y	Y	0.05	Value	Assessed value	Updated
Croatia					-	-	-
Cyprus	Y	Y			-	-	-
Czech Republic	Y	Y	Y	0.13	Non-value	Built-up or floor area	-

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Country	Property tax existence			Implicit property tax rate (%)	Basis of assessment	Taxable base	Updated or outdated value
	1995	2005	2017	2017			
Denmark		Y	Y	0.68	Value	Property value	Outdated
Estonia					-	-	-
Finland	Y	Y	Y	0.29	Value	Fair market value or assessed value	Updated
France	Y	Y	Y	1.35	Value	Cadastral Rental value	Outdated
Germany	Y	Y	Y	0.13	Value	Assessed property value	Outdated
Greece	Y	Y	Y	0.77	Value	Assessed property value	Updated
Hungary					-	-	-
Ireland	Y		Y	0.18	Value	Market value	Updated
Italy	Y	Y					
Latvia			Y	0.10	Value	Market value	Updated
Lithuania			Y	0.08	Value	Market value	Updated
Luxembourg	Y	Y	Y	0.07	Value	Rental income value	Outdated
Malta					-	-	-
Netherlands	Y	Y	Y	0.60	Value	Market value	Updated
Poland	Y	Y	Y	1.09	Non-value	Usable area	-
Portugal	Y	Y	Y	0.36	Value	Property value	Outdated
Romania	Y	Y	Y	0.28	Non-value	Built-up area	-
Slovakia	Y	Y	Y	0.16	Non-value	Built-up or floor area	-
Slovenia	Y	Y	Y	0.16	Value	Assessed value	Updated
Spain	Y	Y	Y	0.34	Value	Cadastral value adjusted to	Outdated

Country	Property tax existence			Implicit property tax rate (%)	Basis of assessment	Taxable base	Updated or outdated value
	1995	2005	2017	2017			
						market value	
Sweden	Y	Y	Y	0.42	Value	75% of market value	Updated
United Kingdom	Y	Y	Y	2.03	Value	Property value	Outdated

Note: Y means property tax existence.

Source: author's projection based on data collected from Barrios *et al.* (2019) and "Taxes in Europe" database (European Commission, 2020)

In general, the EU countries have instituted several *ad valorem* taxes on residential real estate, and only some Eastern countries, including Czech Republic, Poland, Romania (only for residential buildings owned by natural persons), and Slovakia still apply area-based taxation. According to Barrios *et al.* (2019), in 2017, several EU countries, like Croatia, Cyprus, Estonia, Hungary, Italy and Malta, did not levy any housing taxes. Croatia currently collects only a utility fee that has elements of the property tax, but in recent years, the Croatian authorities have developed a process of reforming the real estate tax system (DG TAXUD, 2019). Based on the last data of TEDB, Cyprus abolished the immovable property tax from 1 January 2017, while Italy reinforced the municipal tax from 1 January 2020 to tax the immovable properties. In Estonia, only a tax land is applied, considering the assessed value of the land. Hungary does not levy any property tax, but since 2015, the local authorities are free to introduce a building or a land tax (Barrios *et al.*, 2019). However, in 2016-2017, only around 17% of Hungarian municipalities have introduced a building tax.

The *non valorem* or area-based property tax system operates with land area, building area, or both as the usual basis of the property tax. Under the area-based tax system, taxes are determined by multiplying the measurement of the area by a tax rate and some coefficients to capture the economic conditions. The advantages of the area-based systems consist of simple and low-cost administration, lack of need for periodic re-valuations, low volatility, high predictability of tax revenues, greater visibility and objectivity (Salm, 2017; UN-HABITAT, 2013).

The *ad valorem* or value-based tax system is based on the value concept. Several options are used to measure the value of a property tax, like: "market value, restricted market value (such as current use value), or some national (or normative)" (UN-HABITAT, 2013). The value tax system is sub-divided into the rental and capital approaches (Salm, 2017). The capital value is established on the highest and best use principle, and as is determined by the comparable

transactions, allows the alignment of the market value to the market fundamentals, which maximizes fairness of the property tax. In contrast, the annual value captures only the current use of the property, according to the logic of that taxes are paid from income flow instead of wealth (Salm, 2017). In this case, the benefits from property services “are more closely reflected in property values than in the size of the property” (Slack and Bird, 2015).

However, many European countries have not revised the tax base over the last decades, registered as the cadastral value, which is why it often deviates from the market value (Bauger and Isbasoiu, 2012). Examples include Germany, which applies cadastral values of 1935 or 1964, depending on the federal area, Luxembourg of 1941, Austria of 1973, Belgium of 1975, France of 1978, the United Kingdom of 1991, Denmark of 2001 and 2002. The cadastral values are adjusted with inflation rate or other corrective coefficients to reflect the current economic conditions, while for the dwellings built after the date of the cadastral value, are given notional values for tax purposes. In consequence, due to the taxable base that frequently is below market values, recurrent taxes on immovable properties generate relatively low revenues (Fatica, 2015; Grover and Walacik, 2019).

The *non valorem* property tax system is more suitable for less efficient real estate markets, characterised by low availability of market information, while the *ad valorem* for the efficient markets (Salm, 2017). In a well-functioning market, the properties being transacted on an open, free and competitive market, their values reflect the higher and best use of the property, and thus the market prices would equal the capital/market values (RICS, 2019). Good market evidence requires efficient and transparent markets with adequate numbers of transactions of each type of property in each location (Grover and Walacik, 2019).

3. RESEARCH METHODOLOGY

To examine the empirical relation between the housing prices and property taxes, a house price reaction function was constructed using data from EU-28 countries ($N=28$) during the period 2000-2017 ($T=18$). As the property tax rates differ across jurisdictions in most countries, often data are not available at the country level, and in the absence of comparable data, the cross-country studies are difficult to achieve.

The empirical strategy of this paper consists of three stages: (1) providing preliminary evidence about the relationship between housing prices and recurrent property tax; (2) assessing the impact of property tax on the housing price volatility; and (3) investigating the housing price behaviour under the influence of the property tax system characteristics.

3.1. Empirical strategy

To provide preliminary evidence about the relationship between immovable property tax and house prices, the following panel model was estimated in the first stage:

$$HPI_{it} = \alpha_{it} + \beta \cdot Property\ tax_{it} + \gamma \cdot Fundamentals_{it} + \tau_i + \lambda_i + \varepsilon_{it} \quad (1)$$

Where HPI_{it} denotes the dependent variable – housing prices in the country i at period t , α_{it} is a constant term, β provides an estimate of the sensitivity of the house prices to changes in the growth of immovable property tax (*Property tax_{it}*), keeping constant the changes in all other explanatory variables; *Fundamentals_{it}* represents a set of control variables normally used in the literature as determinants of housing demand and supply; τ_i is the country fixed effects, controlling for country-specific invariable unobserved factors; γ_i captures the year fixed effects to control for aggregate shocks common to all countries, like the global financial crisis; and ε_{it} indicates the error term.

Panel data model presents several advantages over cross-sectional or time-series data in terms of greater accuracy and efficiency of inferences, of reducing the collinearity between variables, of increasing the degree of freedom, of expanding the sample size and of controlling the problems of endogeneity and individual heterogeneity (Hsiao, 2005).

According to the model of Poterba, Weil and Shiller (1991), the property tax rate as a share of house value represents an important cost of owner-occupied houses that determines the housing price fluctuations and future housing investments. Thus, an increase in property taxes entails a growth in the user cost of housing and therefore will be capitalised in lower housing prices. Based on the study of Barrios *et al.* (2019), the recurrent property taxes represent by large the biggest component of the user cost of housing in most EU countries.

In the second stage, the impact of the property tax on the housing price volatility (σ^{HPI}_{it}) was estimated as follows:

$$\sigma^{HPI}_{it} = \alpha_{it} + \beta \cdot Property\ tax_{it} + \gamma \cdot Fundamentals_{it} + \tau_i + \lambda_i + \varepsilon_{it} \quad (2)$$

In general, it is expected that property taxes have a negative impact on the housing price volatility (Blöchliger *et al.*, 2015; Oliviero *et al.*, 2019; Poghosyan, 2016; Van den Noord, 2005). The negative causal impact is explained by the increase of the property tax rate (Lutz, 2008; Poghosyan, 2016) and/or property tax base.

The effectiveness of the property tax policy against price volatility depends on the country's tax system. In order to capture the housing prices reaction to the property tax design, in the third stage, a dummy variable was introduced to describe the basis of assessment (*TaxBase*), with value one if the base is a measure of value and zero if the base is represented by a type of building area. According to Klein *et al.* (2016), the housing taxes act as an automatic stabiliser for the

housing market and the general economy if the current property base reflects the value of the home. In this regard, the regression model (2) includes interactions effects as follow:

$$\sigma^{HPI}_{it} = \alpha_{it} + \beta \cdot (\text{Property tax}_{it} \times \text{TaxBase}_{it}) + \gamma \cdot \text{Fundamentals}_{it} + \tau_i + \lambda_i + \varepsilon_{it} \quad (3)$$

Where β coefficient indicates how the effect of the immovable property tax on the house price volatility differs depending on assessment base.

3.2. Variables and data description

Data describing the variables were derived from the Eurostat, “Taxes in Europe” database (TEDB), European Mortgage Federation (EMF) and Barrios *et al.* (2019). Table 2 presents the descriptive statistics for each variable.

Table 2. Descriptive statistics

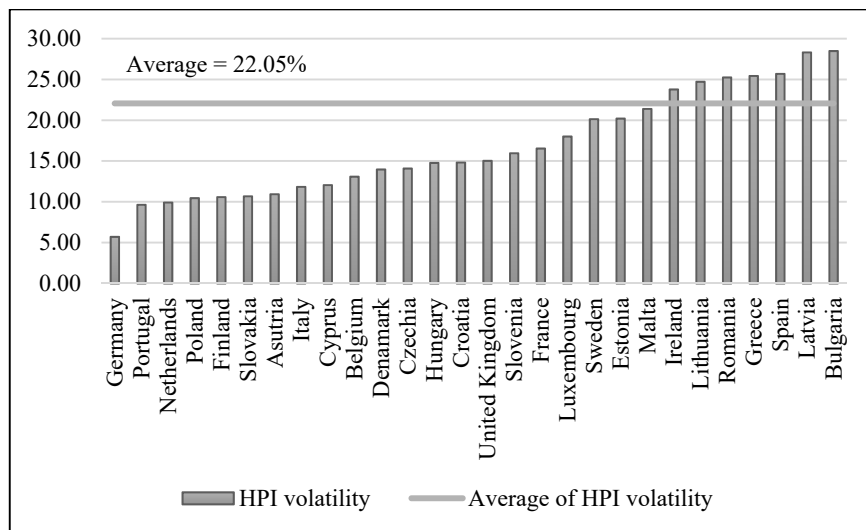
Variable	Obs.	Mean	Std. dev.	Min	Max
<i>HPI</i>	464	101.16	22.05	46.98	167.69
σ^{HPI}	408	5.58	5.47	0.57	29.05
<i>RHP_{tax}</i>	408	5197.25	8288.87	12.04	32721.00
<i>EMP</i>	504	0.69	2.06	-6.90	5.30
<i>GDP</i>	502	24004.98	15659.83	4200.00	80600.00
<i>RIR</i>	407	2.09	1.95	-3.72	8.29
<i>HRents</i>	502	85.43	17.08	33.46	115.90
<i>RCCosts</i>	483	99.84	7.08	76.47	122.46
<i>RVDS</i>	503	605576.70	988169.70	10342.75	3882776.00
<i>TaxBase</i>	418	0.79	0.40	0	1
<i>TaxValue</i>	332	0.36	0.48	0	1

Source: author’s calculations

The dependent variable – housing prices (*HPI*) is measured by the house price index (2015=100), as provided by the Eurostat. This index aggregates the prices of all types of residential properties purchased by households, both newly-built and existing ones, with the primary source being national statistical institutes (Eurostat, 2019). To remove the price impact, the real house price index was used, namely, the nominal series deflated using the consumer price index (*CPI*).

In the second stage, the volatility of the residential property prices (σ^{HPI}) was estimated as the standard deviation of annual real house price growth over five years, based on the recommendations of Blöchliger *et al.* (2015) and Poghosyan (2016). During the period 2000 – 2017, the house prices experienced different boom-bust periods, the price dynamics varying on average between -5.57% and

10.05%. The highest volatility of housing prices was registered in Bulgaria, Latvia, Spain, Greece, Romania, Lithuania and Ireland, as their volatilities were above the EU average of 22% (Figure 2). After an initial sharp decline following the financial crisis in 2008, house prices remained more or less stable between 2009 and 2014, but since early 2015 there was a rapid and constant rise in most of the EU countries (Eurostat, 2019).



Note: House price (HPI) volatility is calculated based on standard deviation.
 Source: author's calculations

Figure 2. House price volatility in EU-28 countries

The independent variable related to taxation is reflected by the real revenues from the recurrent property tax (RHP_{tax}). Following the standard international tax classifications, for the purpose of this paper, the property taxes are restricted to annual taxes and excludes taxes on transfers, capital gains, wealth etc. To assure the cross-country comparability, the data about RHP_{tax} were collected manually and deflated by CPI for each country from the TEDB, which is an online information tool covering the main taxes in force in the EU Member States. Also, the information on the tax base ($TaxBase$) was taken from the TEDB. In the absence of comprehensive data on the division between residential, commercial and industrial property taxes, we rely on the fact that households constitute the largest group of taxpayers, and the residential property taxes account for the largest share of total property tax revenues (Oliviero *et al.*, 2019).

Besides these variables, a set of control variables are used, based on the house price fundamentals literature: employment growth (EMP), real GDP per capita (GDP), real interest rate (RIR), housing rents ($HRents$), construction costs ($RCCosts$) and residential dwellings (RDS).

The employment growth controls for demographic changes and labour market factors (Ionaşcu, Mironiuc and Anghel, 2018), while the real GDP per capita reflects both the economic performance of the countries and the purchasing power of the households (Ilhan and Yobas, 2019). The increase of the population and its employment, as well as the disposable income, lead to a higher demand for housing, affecting, *ceteris paribus*, the prices in a positive sense. Based on the standard deviation and average estimations, the employment growth varied between -1.37% and 2.75%, while the average of real GDP per capita was 24,005 euros per capita.

The real interest rate reflects the cost of financing which conditions the population's access to housing. The costs of financing residential properties are expressed by the real interest rate on new residential loans granted by banking institutions. In general, at EU level, real interest rates on housing loans are low but with slight increases (EMF, 2019), the average of the panel being equal to 2.09%, which supports lending the households interested in purchasing housing, but also the development of residential constructions (Muhlebach and Alexander, 2014). A higher mortgage rate reduces demand and further decreases house prices (Adams and Füss, 2010).

Based on the model of DiPasquale and Wheaton (1992), the rent levels defined in the property market are central in determining the demand for real assets, which then are capitalized into the property prices. Since the dwelling stock cannot change in the short-run, the rents increase, leading to higher housing prices in the asset market (Adams and Füss, 2010). While the house prices have fluctuated significantly during the period 2000 – 2017, the housing rents have increased steadily (Eurostat, 2019). The index of actual rentals for housing (2015=100), deflated by the CPI, was used to control for rental markets.

The index of construction costs (2015=100), deflated by CPI, measures the costs of construction materials and labour costs for new residential buildings. Higher costs of construction increase the financing costs of construction, and thus reduce the housing stock, which means less housing space, higher rents that are capitalised in higher house prices in the asset market (Adams and Füss, 2010).

In order to control for the effect of the current housing supply on the housing prices, the real value of the net stock of dwellings was included in the regression analysis. When the housing supply is limited, a greater demand may trigger higher prices (Wang *et al.*, 2020). The sample average value of the net stock of dwellings is 605,577 million euros with a standard deviation equal to 988,170 million euros.

Table 3 shows the Pearson correlations of the variables used in this paper. The highest correlation is 0.7871 between the property tax (RHP_{tax}) and residential dwellings (RDS), which is evident as the amount of the property tax revenues depends directly on the stock of real estate properties. The second highest direct correlation 0.6225 is between housing prices (HPI) and real construction costs ($RCCosts$), which is understandable.

Table 3. Pearson correlations

	HPI	σ^{HPI}	RHP _{tax}	EMP	RIR	RCCosts	HRents	RDS	GDP
HPI	1								
σ^{HPI}	0.0446	1							
RHP_{tax}	-0.0684	-0.2000*	1						
EMP	0.0154	-0.2137*	0.0299	1					
RIR	-0.1601*	-0.1191*	-0.0019	-0.1202*	1				
RCCosts	0.6225*	0.0184	-0.005	0.0266	-0.1209*	1			
HRents	0.4058*	-0.2302*	0.0807	0.0488	-0.0265	0.2584*	1		
RVDS	0.0642	-0.2535*	0.7871*	0.0026	-0.048	-0.0435	0.1642*	1	
GDP	-0.1901*	-0.3607*	0.1267*	0.1896*	-0.2157*	-0.0968*	0.2292*	0.1982*	1

Note: * denotes the significance of the Pearson correlations at the 0.05 level; variables are defined in the text.

Source: author’s calculations

To improve the normality of the data and to reduce the effect of extreme values, the continuous variables were winsorized 1 percent and transformed in natural logarithmic values, except the variables expressed as ratios and in percent. As the regressions run on non-stationarity time series variables produce spurious results, the panel unit root was tested using Im, Pesaran and Shin (IPS) test, which have more power than other tests because it allows for panel heterogeneity (Stock and Watson, 2015). Table 4 presents the results of the IPS test, where an I(0) variable passes the stationarity tests. To assure the stationarity condition I(0), the variables RHP_{tax} and GDP were treated as lagged variables (l).

Table 4. Panel unit root tests results and conclusions

Variables	IPS test result	Conclusion
HPI	-2.3499***	I(0)
σ^{HPI}	-2.3480***	I(0)
l.RHP _{tax}	-4.6635**	I(0)
EMP	-3.4179***	I(0)
RIR	-3.5911***	I(0)
RCCosts	-2.7373***	I(0)
HRents	-5.6667***	I(0)
RVDS	-1.9288**	I(0)
l.GDP	-2.2708***	I(0)

Note: H_0 : All panels contain unit roots is rejected if statistics are significant at 0.1*, 0.05** and 0.01*** levels.

Source: author’s calculations

4. ESTIMATION RESULTS

4.1. Preliminary evidence: house prices reaction to the property tax

Table 5 provides a preliminary set of regression to estimate the equation (1) over the whole sample of countries to capture the common picture of the relationship between revenues of immovable property tax and housing prices for the period 2000-2017. All regressions include the option robust to control for heteroskedasticity (Stock and Watson, 2015).

The first regression presents the significant negative relationship between house prices (*HPI*) and immovable property taxes (*RHP_{tax}*), which is consistent with the capitalisation hypothesis. The conceptual framework of the housing capitalisation reports that a house must be considered „the same as any other asset whose price in equilibrium is equal to the present value of the after-tax flow of rents from owning it”, which is why a change in the property tax is directly capitalised in the housing prices (Oliviero *et al.*, 2019, p. 2). More precisely, an increase in 1% of the real immovable property tax revenues is associated with a 0.09% decrease in the house price index.

To the initial regression [Reg (1)], then were added, one by one, all the other variables discussed in the previous sections regarding the demand and supply sides of the housing market [Reg (2)-(7)] to assure the robustness of the negative relationship between the housing prices and the immovables property tax.

Table 5. First stage estimation: preliminary evidence

Dependent variable: <i>log Real House Prices (HPI)</i>							
Variables	Reg. (1)	Reg. (2)	Reg. (3)	Reg. (4)	Reg. (5)	Reg. (6)	Reg. (7)
<i>l.RHP_{tax}</i>	-0.090*** (0.020)	-0.088*** (0.020)	-0.096*** (0.015)	-0.080*** (0.012)	-0.061*** (0.012)	-0.072*** (0.011)	-0.070*** (0.011)
<i>EMP</i>		0.011*** (0.004)	0.011*** (0.003)	0.011*** (0.003)	0.012*** (0.003)	0.009*** (0.003)	0.008*** (0.003)
<i>RIR</i>			-0.027*** (0.004)	-0.024*** (0.004)	-0.024*** (0.004)	-0.018*** (0.004)	-0.019*** (0.004)
<i>RCCosts</i>				1.076*** (0.182)	0.932*** (0.198)	0.363* (0.201)	0.349* (0.202)
<i>HRents</i>					0.327*** (0.083)	0.192** (0.079)	0.121 (0.091)
<i>RVDS</i>						0.552*** (0.065)	0.537*** (0.066)
<i>l.GDP</i>							0.151 (0.106)

Dependent variable: log Real House Prices (HPI)							
Variables	Reg. (1)	Reg. (2)	Reg. (3)	Reg. (4)	Reg. (5)	Reg. (6)	Reg. (7)
Constant	4.913*** (0.157)	4.881*** (0.160)	5.159*** (0.163)	0.140 (0.858)	-0.746 (0.904)	-4.482*** (0.997)	-5.510*** (1.314)
Observations	364	364	328	313	313	313	313
R-squared	0.673	0.679	0.743	0.788	0.799	0.850	0.851
Year and country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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

Source: author's calculations

Overall, the results for this preliminary set of regressions are largely consistent with the theoretical predictions. All the control variables have the expected signs and are statistically significant, except the GDP per capita (*GDP*). The coefficients of employment growth (*EMP*) are highly significant and have the expected positive sign in all the different specifications. As expected, a higher real interest rate (*RIR*) has a negative impact on housing prices, increasing the financing costs for households, dampening the demand for houses and making renting more attractive than buying, however, the magnitude is relatively modest (between -0.02% and -0.03%), but consistent with other research such as Ciarlone (2015), Asal (2018), Ionaşcu, Mironiuc and Anghel, (2018), etc. The increase of real housing rents (*HRents*) is capitalised in higher house prices in the asset market.

Turning to the supply-side variables, the results suggest that the appreciation of the housing stock value (*RVDS*) is reflected in the increase of house prices with around 0.5%. A significant positive effect on the housing prices is also exerted by the real construction costs (*RCCosts*) of the residential buildings.

4.2. The reaction of house price volatility to the property tax

Table 6 summarises the results of the second stage estimation, which confirm that the property tax revenues are negatively associated with house price volatility. The regressions estimated in turn with various control variables support the robustness of the negative relationship between property tax and housing price volatility.

Compared to the effect of property tax revenues on house prices, the impact on house price volatility is higher, the β coefficients range from -0.6*** to -1.3*** depending on the inclusion of the control variables. This evidence means that property taxes have a smoothing effect on housing prices (Blöchliger *et al.*, 2015). More precisely, higher residential property tax revenues reduce the housing price volatility, while lower taxation is related to higher volatility on the housing market. In this context, it is important to mention the significant negative effect of

the real value of the net stock of dwellings on the house price volatility, whose coefficients range from -5.6*** to -7.0***. The appreciation of the real value of the net housing stock contributes also to the increase of the revenues from the annual taxation of these properties, which thus dampens the housing price fluctuations. The growth of the taxable value, generated by an appreciation of house prices, leads to an increase in the taxes payable by the homeowners, which would reduce their willingness to pay (Klein *et al.*, 2016). This relationship should be more evident in the case of the value-based property tax system, a hypothesis tested in the third stage of the research.

Table 6. Second stage estimation: the reaction of house price volatility to the property tax

Dependent variable: <i>house price volatility</i> (σ^{HPI})							
Variables	Reg. (1)	Reg. (2)	Reg. (3)	Reg. (4)	Reg. (5)	Reg. (6)	Reg. (7)
<i>l.RHP_{tax}</i>	-0.969*** (0.350)	-0.995*** (0.353)	-0.402 (0.281)	-0.600** (0.296)	-1.310*** (0.352)	-1.224*** (0.347)	-1.328*** (0.355)
<i>EMP</i>		-0.142 (0.156)	-0.302* (0.158)	-0.288* (0.158)	-0.335** (0.154)	-0.277** (0.139)	-0.229 (0.150)
<i>RIR</i>			-0.228 (0.174)	-0.241 (0.177)	-0.256 (0.183)	-0.336* (0.179)	-0.251 (0.177)
<i>RCCosts</i>				-12.214** (5.838)	-5.927 (5.138)	0.848 (5.732)	3.303 (5.637)
<i>HRents</i>					-12.580*** (2.715)	-10.746*** (2.946)	-5.021 (3.384)
<i>RVDS</i>						-6.974*** (2.053)	-5.587*** (2.123)
<i>l.GDP</i>							-13.010*** (4.832)
Constant	9.450*** (2.942)	9.824*** (2.950)	4.732** (2.225)	61.362** (27.519)	92.186*** (27.001)	141.307*** (31.928)	223.954*** (42.973)
Observations	336	336	318	303	303	303	303
R-squared	0.693	0.695	0.703	0.720	0.744	0.756	0.766

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

Source: author's calculations

4.3. The reaction of house price volatility to the property tax base

The results of testing the effects of the property tax system on the house price volatility, depending on the value or non-value tax base (Equation 3), are reported in Table 7.

The coefficient of the interaction term ($RHP_{tax} \times TaxBase$) when the $TaxBase$ is equal zero, which means non-value tax system, is negative and statistically significant in all regressions, except [Reg (3)]. The β coefficients highlight the larger negative effect of the property tax on the house price volatility in countries that apply the *ad valorem* tax system than it does in the countries with a *non valorem* tax system. Also, the Wald tests assert that the overall interaction between property tax revenues and $TaxBase$ variable is statistically significant ($F(1, 294) = 7,51^{***}$ and $F(2, 294) = 3,88^{***}$). Therefore, the increase in residential property tax revenues, determined by a possible growth of tax base in the context of the *ad valorem* taxation system, has the ability to dampen the large fluctuations of house prices, thus reducing the risk of bubbles on housing markets. In this regard, Klein *et al.* (2016) argue that as the household expectations of house price dynamics are widely affected by the most recent price developments, housing taxes based on value act as an automatic dampener on house price volatility.

Table 7. Third stage estimation: the reaction of house price volatility to the property tax base

Dependent variable: house price volatility (σ^{HPI})							
Variables	Reg. (1)	Reg. (2)	Reg. (3)	Reg. (4)	Reg. (5)	Reg. (6)	Reg. (7)
<i>Value (1)</i>	-1.020***	-1.096***	-0.484	-0.650**	-1.240***	-1.136***	-1.334***
<i>TaxBase x l.RHP_{tax}</i>	(0.349)	(0.357)	(0.304)	(0.315)	(0.373)	(0.359)	(0.384)
<i>EMP</i>		-0.170	-0.311**	-0.307*	-0.355**	-0.305**	-0.263*
		(0.152)	(0.158)	(0.157)	(0.150)	(0.140)	(0.151)
<i>RIR</i>			-0.176	-0.207	-0.216	-0.277	-0.174
			(0.172)	(0.172)	(0.176)	(0.174)	(0.174)
<i>RCCosts</i>				-12.610**	-6.959	-1.891	-0.692
				(5.605)	(4.986)	(5.618)	(5.680)
<i>HRents</i>					-11.945***	-10.319***	-5.122
					(2.879)	(3.063)	(3.397)
<i>RVDS</i>						-5.884***	-4.282*
						(2.185)	(2.293)
<i>l.GDP</i>							-12.215**
							(4.927)
Constant	9.756***	10.543**	5.197**	63.400**	93.379***	137.113**	217.402***
	(2.959)	(3.004)	(2.401)	(26.426)	(26.002)	(32.921)	(46.228)
Observations	336	336	318	303	303	303	303
R-squared	0.691	0.693	0.700	0.718	0.738	0.747	0.756

Note: Robust standard errors in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Source: author's calculations

5. CONCLUSIONS

While the recurrent taxes on immovable properties are considered the most beneficial tax instrument in terms of its long-run effect on GDP per capita, few countries have come close to realizing the potential of the property tax. The immovable property tax revenues are low relative to total tax revenues and GDP in most EU countries, a fact that attracted the attention of policymakers, especially after the economic and financial crisis from 2008. As the real estate taxes are capitalised in house prices, they can have an important stabilising effect on the housing market, and thus on the macro-financial stability. Given these multiple roles of property taxes, it is important to study the effects of possible changes in this type of tax on the residential real estate market.

The purpose of this paper was to assess the relationship between immovable property taxation and housing market volatility in EU countries during the period 2000-2017, following a three stages approach. First, a housing price reaction function was constructed to provide preliminary evidence about the impact of the property tax revenues on the house prices. In the second stage, was assessed the impact of the property tax revenues on the housing price volatility and in the last one, was investigated the price volatility under the influence of the property basis of assessment depending on value or non-value.

The findings support the negative impact of the property tax revenues on the housing prices, a fact that is consistent with the other important research. The significant regression coefficients highlight the smoothing effect of the immovable property tax on the housing market, reducing the house price volatility when the tax revenues rise and increasing the fluctuations of prices when the taxation is lower. This indirect relationship is more evident in the case of the value-based property tax system, as was registered a higher effect on attenuating the housing market volatility in the countries that apply an *ad valorem* taxation than in the instance of the area-based assessment.

The key policy implication is that immovable property taxation could be used as an effective contributor to dampen housing price volatility. For this fiscal instrument to generate the desired results, the real estate market must be as efficient as possible to ensure an open, free and competitive environment for real estate transactions, which will increase the information flow necessary to perform valuations. The immovable property tax requires good property registration and tax administration.

A limitation of this study is related to the accuracy and comparability of data across countries, the problem that affects the depth of studies in this field of property taxation. The future research is encouraged to extend the analysis of the role of property taxation in dampening the housing market volatility and assuring the macroeconomic stability.

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TAXATION AND ACCOUNTING OF DIVIDENDS IN ROMANIA

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Abstract

Firms that obtain and report profits have the possibility to remunerate their owners (shareholders or associates) by distributing to them some parts of the profit – the dividends. After a long period in which, in Romania, the company law allowed the payment of dividends only after the financial year was closed, in order to be sure that they are not paid out of fictitious profits, the legislator modified the rules, establishing the legal framework for granting interim dividends, quarterly, but with the fulfilment of the formal obligations to prepare and report the related interim financial statements approved by the general meeting of the shareholders. Listed companies that reported profits in 2007-2018 paid cumulative dividends of 44% of declared net profits, while state-owned companies with profits exceed 60%. From a fiscal point of view, the tax on dividends brings to the budget, on average, more money than the tax on the revenues of micro-enterprises; for the period 2000-2018, this average was 0.22% of GDP. The taxation of dividends paid to the shareholders has evolved, from a rate of 10% (1992-2009), to 16% (in the period 2010-2015), to reach 5%, starting with 2016. The application of this rate is accompanied, starting with 2007, by specifications according to which the payer does not withhold any tax on dividends if the shareholder is a legal person and hold more than a certain percentage of the capital (10% at present) and for more than a certain period (1 year, at present). In the case of dividends paid to non-residents, the tax conventions for avoiding double taxation are involved, which, for Romania, have relatively common provisions, but with the most diverse rates. Dividends paid to individuals are incomes whose tax regime is more favourable than that applied to income from dependent or independent activities.

Keywords: *annual and interim dividends; net income; dividend tax; legal persons; individuals.*

JEL Classification: M41, H20, H30

1. INTRODUCTION

Many for-profit activities in Romania are organized in the form of legal persons, which are set up and operate under the conditions established by the companies' law no. 31/1990. These enterprises of particular legal form represent activities by which one or more persons (individual or legal) pool their contributions, but also competences, in order to obtain profits that they can acquire. To the extent that companies make profits, their total or partial transfer to associates/shareholders is done according to the law, in the form of dividends. According to the accounting norm (OMFP no. 1802/2014), the dividends are

defined very simply as representing the share of the profit that is paid to each associate; the definition is almost identical taken from the company law no. 31/1990. Apparently, the definition is simple, however, the initiators of a change of the law remark, in the explanatory statement, that “the problem of the distribution of the profit and the distribution of dividends, including in the case of the listed companies, in the Romanian legal regime, remains still restrictive and, in a certain kind, unclear, regarding the legal definition of the dividend” (Romanian Parliament – Chamber of Deputies, 2018). The literature on dividends deals with many topics such as the frequency of payment of dividends, their taxation, the rights of majority shareholders vs. those of the minority shareholders, the quality of the profit from which they are paid, the category of shareholders/associates who benefit from dividends, etc.

In this paper, I aim to address accounting and fiscal issues in declaring, taxing and paying dividends. Moreover, in the literature, I find that the level of dividends paid by companies is directly proportional to the actual rate of the dividend tax (Jacob and Jacob, 2013), under the conditions to be taken into account also by the category of paying company (listed or not, state owned or private), the size of the company, the industry, the governance, the type of shareholder and its concentration, the recent changes in the shareholding (for example, privatization or nationalization) the relationship between shareholders and executive management, the predominant mode of financing, the political ideology of the government, institutional characteristics such as shareholder protection, rule of law, etc.

In the continuation of this paper, I propose an overview of the accounting and financial reporting rules of dividends in Romania, after which I analyse the tax regime of the dividends paid by the Romanian legal persons, either to residents, to non-residents, or to individuals or to legal persons, after which I present some details about the dividends paid by the Romanian state-owned companies, before concluding and presenting the references. Whenever I had the opportunity, I took and processed specific statistics from official sources or I analyse data collected manually from the financial statements of some Romanian companies, especially listed. Moreover, in each subchapter, I have specified – directly or indirectly – the elements of methodology used in the research.

2. ROMANIAN ACCOUNTING AND FINANCIAL REPORTING RULES IN THE CASE OF DIVIDENDS

Until 2018 the Romanian law stated that the dividend could only be paid out of the profit realized and confirmed by the approval of the annual financial statements. Therefore, the shareholders had to wait for the financial year to be closed in order to be able to acquire the appropriate dividends. Of course, the payment of dividends is conditioned by the existence of the accounting profit from which they can be deducted. Even if successful entrepreneurs manage to make

profits from which to take dividends, I cannot ignore the frequent situation in which the Romanian companies systematically report losses; there are no dividends in this case! Thus, many Romanian companies, especially some small ones, with an associate who is also administrator, following the continuous losses they report, have negative equity, which means that their associates do not expect dividends. According to an official of the National Bank of Romania (NBR), quoted in the financial press (in August 2019), 38% of the Romanian companies (277,000) reported, at that time, cumulative negative equity of 34 mills euro, representing 21% of GDP (Mihai, 2019).

2.1 Some evidence on the dividends paid by the Romanian listed companies

I am not aware of the availability of any data regarding the dividends paid by Romanian companies. However, from the consultation and manual collection of the data reported by the companies listed on the regulated market of the Bucharest Stock Exchange (BSE), between 2007 and 2018, I managed to create an image of the dividend payments made by these companies. I used the information from the statement of cash flows, where, most often at financing activities, the amount paid as dividends in the presented year appears. Even if the amounts actually paid do not always coincide with those declared as dividends, for a sufficiently long period – 12 years – the cumulative dividends related to the declared net income can quite accurately render the dividends policy of the companies. Thus, out of the 1,073 observations available (the sample is not balanced, but I have an average of 89 observations per year), I explicitly found information on the dividends paid in 953 cases, out of which, in 529 cases, the dividends paid are zero. Thus, less than half of the observations (44.5%) remain with dividends explicitly paid to the shareholders. By eliminating the outliers – especially state-owned companies that have been forced, in the last period, to pay very large dividends, including from the reserves, I obtain an average of almost 44% cumulative dividends over 12 years, compared to the net income accumulated over the same period. The percentage is very close to what Berzins, Bohren and Stacescu (2019), for the situation of Norway before 2006, i.e. when the taxation of dividends paid to individuals has changed, moving from a rate of 0% to one of 28%. The cited authors note that from a weighting of dividends/net income of 43%; as a result of the introduction of the taxation of dividends, they reached a weighting in the declared results of 18%. Another country that has experienced a significant increase in dividend tax is France, which, in 2013, increased the dividend tax from 15.5% to 46%, for most paying companies and with certain conditions (Boissel and Matray, 2019).

2.2 Annual and interim dividends

Many shareholders of companies that have profits have found that the declaration and annual payment of dividends makes their main source of income

generated by the ownership of the respective companies being one out of sync with their personal needs to make payments. Law no. 163/2018 introduces in Romania the possibility of paying interim dividends, in advance, quarterly. The explanations that accompanied the draft introduction of this quarterly dividend reporting rule refers to equal treatment in the remuneration of the entrepreneur, sought between the form of business organization as a company and the forms of authorized individuals (Romanian Parliament – Chamber of Deputies, 2018). Perhaps this way of paying dividends also has the gift of modifying the behaviour of Romanian businessmen, in the sense of stimulating them to report profit and, therefore, dividends, limiting the number of firms with losses, especially under very low rates of dividends tax.

This decision of the authorities also led to the update of the detailed accounting regulations and of the official financial reporting forms of the companies – in the official balance sheet form, a line was introduced in which the interim dividends paid to the associates/shareholders must be reported as an asset. In the case of Romanian listed companies, both on the regulated market and on the AeRo alternative market, I found, from their financial statements in the official format imposed by the tax authorities, that they did not really opt for such a dividend distribution.

Interim dividends are an extremely useful thing for the holders of companies that have no other sources of income than those obtained as a company holder.

3. ROMANIAN TAXATION RULES FOR DIVIDENDS

From a fiscal point of view, dividends are considered income of the individuals or of the legal persons receiving them, which is why the question of their taxation is raised. In order to avoid interpretations that make dividend taxation difficult, the tax code (Law no. 227/2015) defines them in a much more rigorous way than the company law or the accounting standards. Thus, the dividend is, from a fiscal point of view, a distribution in money or in other way, made by a legal person to a participant, as a consequence of having some participation in that legal person, except the following:

- a distribution of new shares or increase of the nominal value of the existing shares, as a result of an operation to increase the share capital;
- a distribution made in connection with the acquisition of the own participation titles by the legal person;
- a distribution in money or in other form, made in connection with the liquidation of a legal person;
- a distribution in money or in other form, made on the occasion of reducing the share capital;
- a distribution of share premiums, in proportion to the share of each participant;

- a distribution of participation titles in connection with a reorganization operation, such as mergers, divisions or various capital contributions.

In order to cover other situations in which taxes may arise, the tax code establishes that the following are assimilated to tax dividends:

- the profits obtained by the individuals from holding titles of participation in collective investment bodies;
- the income in money and in other forms distributed by the agricultural companies, with legal personality, to a participant in the respective company as a consequence of the ownership of the social parts.

The basic rules of the fiscal code establish, for the payer of dividends, the general obligation to withhold a tax on dividends of 5% and to transfer it to the budget. These rules are customized according to the classification of the beneficiary of the dividends as a legal person or as an individual. In the following, I will address the two situations separately.

The evolution of the taxation of dividends in Romania, after 1990 is a fluctuating one, from the share of 10% to 16%, in order to reach, at present, 5% or even to the tax exemption of dividends paid by the legal entities that meet certain conditions (Table 1). The information in Table 1 is valid at the beginning of each year from the ones analysed.

The tendency to lower the dividend tax rate is also present on an international level – Romania has only aligned with this trend, though later than other states. Jacob and Jacob (2013) observe, during the period 1990 – 2008, on a sample that includes companies from 25 countries, an important series of changes in dividend tax rates, most of these changes (2/3 of them) being decrease in rates. The change in dividend tax rates is also analysed by Herron and Platt (2020), who, on a sample of almost 30,000 companies and over a period of 29 years, finds that the reaction of the dividend paying companies is asymmetric, in the case of the increase of the tax rates compared to the reduction of these tax rates for dividends.

I did not find complete Romanian statistics on the dividends tax collected from the state budget. In the Tempo online database, of the National Institute of Statistics and Economic Studies, explicit tax data are provided on dividends collected by the state from trading companies only for the period 1996-2005. After this period, the modification of the reporting format no longer allows the precise identification of the budgetary receipts from dividend tax.

Table 1. Evolution of tax rates for dividends paid by Romanian companies to shareholders or associates, Romanian legal entities

Period	Dividend tax rate	Particular conditions for exemption from withholding tax on dividends
2016-2020	5%	If the Romanian legal entity that receives the dividends holds, at the date of payment of the dividends, a minimum of 10% of the shares of the other legal person, for a period of one year fulfilled up to the date

Period	Dividend tax rate	Particular conditions for exemption from withholding tax on dividends
		of their payment inclusive, the taxation of the dividends will no longer apply.
2014-2015	16%	If the Romanian legal entity receiving the dividends held, at the date of payment of the dividends, at least 10% of the shares of the other legal person, for a period of one year fulfilled up to the date of their payment including, the taxation of the dividends no longer applies.
2010-2013	16%	If the Romanian legal entity receiving the dividends held, at the date of the payment of the dividends, a minimum of 10% of the shares of the other legal person, for a period of two years fulfilled until the date of their payment including, the taxation of the dividends will no longer apply.
2009	10%	If the Romanian legal entity receiving the dividends held, at the date of the payment of the dividends, a minimum of 10% of the shares of the other legal person, for a period of two years fulfilled until the date of their payment including, the taxation of the dividends will no longer apply.
2007-2008	10%	If the Romanian legal entity receiving the dividends held, at the date of the payment of the dividends, a minimum of 15% of the shares of the other legal person, for a period of two years fulfilled up to the date of their payment including, the taxation of the dividends will no longer apply.
2003-2006	10%	Without the possibility of any exemption until joining the EU.
1992-2003	10%	No details on possible exemptions.

Source: the successive tax laws that regulated the taxation of dividends in Romania

The absolute data for the period 1996–2005 are not very useful, so I calculated the share of the receipts from dividends in the tax revenues reported in the budgetary executions of each year: the dividend tax brought, on average, about 1% of the tax revenues (for a maximum of 1.88% in 1996 and a minimum of 0.20% in 2001); for comparison, the corporate income tax accounted for almost 20% of the tax revenues in the same period (up to 27% in 1997, and a minimum of 16% in 2001). The interpretation of these figures is simple, for dividend tax, because the tax conditions have not changed during the period for which I had data. On the contrary, the income tax has undergone major changes, especially at the level of tax rates (from 38%, to 25% and, in 2005, to 16%), but also to the level of tax facilities granted to taxpayers.

In the absence of national data – or lack of our ability to find them – I turned to European statistical data sources. Thus, detailed statistics on budgetary revenue from all EU countries are available on the European Commission's website (European Commission, 2020b), which I consulted on April 2, 2020. The data series starts with 1995, but the income from dividend tax is only available since 2000. This time, in Table 2, I reported absolute figures to GDP and I obtained a series of percentages that start with 0.05% of GDP in 2000, and reaches 0.14% in

2018, for a maximum of 0.36% (in 2007) and a minimum of 0.05% (in 2000). I also make the comparison with the weight of the companies income tax in GDP and I find, for the latter tax, for the same period although here the data are available for several years – an average of 2.05% of GDP, with a minimum of 1.66% (in 2017 and 2018) and a maximum of 2.70% (in 2004). To find a somewhat more comparable tax, I extracted from the data of the European Commission and the percentages related to the tax on the revenues of microenterprises (data available from 2002): an average of 0.12% of GDP, with a maximum of 0.26% (in 2018) and a minimum of 0.01% (in 2010). So, the tax on dividends brings to the state about one tenth of the tax on profit, but more than the tax on the revenues of micro-enterprises.

Even at European, regional or global level, statistics do not make the budgetary income from dividend tax appear very explicitly, this being, most often, presented together with the tax on the income of individuals or with capital taxes. However, indirectly, we can deduce that the tax on dividends is not one of the very important sources of income of the public budgets, but rather an instrument of fiscal policy, that is to say, to orient the investments in an economy. Enache (2020) finds that, at the OECD level, the first source of revenue from public budgets is represented by indirect consumption taxes (VAT, where applicable, excise duties and others), followed by the social contributions and the income tax of individual persons.

3.1 Current taxation of dividends paid by Romanian companies to shareholders/associates legal entities

The taxation of dividends paid to Romanian legal persons is regulated by the part of the Romanian tax code reserved to the corporate income tax (title II). The basic rule states that in this situation, the payer must withhold a 5% dividend tax. However, to limit the multiple taxation of profits paid as dividends between legal entities, the tax authorities have determined that this 5% tax is no longer withheld for dividends paid to legal entities holding at least 10% of the shares of the payer, and this holding is realized over a period of one year fulfilled until the payment of the dividends. This elimination of the taxation of dividends stimulates the holdings of more than 10% and makes the Romanian tax regime more attractive or at least similar to that of other countries.

Table 2. Share of tax on dividends, income tax and income tax on micro-enterprises in Romanian GDP

Year	Tax on dividends as % in GDP	Companies income tax as % in GDP	Tax on the revenues of the microenterprises as % in GDP
2000	0.05	n.av.	n.ap.
2001	0.14	1.91	n.ap.
2002	0.14	2.12	0.14

Year	Tax on dividends as % in GDP	Companies income tax as % in GDP	Tax on the revenues of the microenterprises as % in GDP
2003	0.15	2.33	0.18
2004	0.16	2.70	0.18
2005	0.26	2.21	0.19
2006	0.33	2.39	0.17
2007	0.36	2.61	0.10
2008	0.31	2.39	0.07
2009	0.28	1.95	0.08
2010	0.25	1.84	0.01
2011	0.24	2.05	0.03
2012	0.24	1.69	0.04
2013	0.24	1.72	0.10
2014	0.25	1.79	0.12
2015	0.24	2.01	0.13
2016	0.26	1.94	0.10
2017	0.15	1.66	0.18
2018	0.14	1.66	0.26
Average	0.22	2.05	0.12
<i>Median</i>	<i>0.24</i>	<i>1.98</i>	<i>0.12</i>
<i>Maxim</i>	<i>0.36 (in 2007)</i>	<i>2.70 (in 2004)</i>	<i>0.26 (in 2018)</i>
<i>Minim</i>	<i>0.05 (in 2000)</i>	<i>1.66 (in 2018)</i>	<i>0.01 (in 2010)</i>

Source: (European Commission, 2020b)

If the Romanian legal person pays dividends to a non-resident, individual or legal person, the taxation of these dividends is done according to another title in the fiscal code – the one regarding the taxation of the revenues of the non-residents (title IV). The basic rules also say that the tax on dividends is withheld, the tax rate being also 5%. The Romanian fiscal code recognizes, in this case, the priority of the tax convention signed between the Romanian state and the state where the beneficiary is resident. At the end of March 2020, on the ANAF website (National Authority for Tax Administration, 2020) – I found the texts of these conventions signed by the Romanian state with 87 other states; in some cases, there are also protocols for amending these conventions. In 51 of these conventions, I found unique rates of dividend taxation, unconditional on the fulfilment of any criterion. These rates are very diverse: 1% (Kuwait), 3% (China, United Arab Emirates, Ireland and Qatar), 5% (Saudi Arabia, Bulgaria, Croatia, Lebanon, Macedonia, Singapore and Slovenia), 8% (Georgia), 10% (Belarus, Czech Republic, Cyprus, North Korea, Egypt, Estonia, Ethiopia, France, India, Iran, Latvia, Lithuania, Japan, Kazakhstan, Malaysia, Morocco and Mexico), 12% (Tunisia), 12.5% (Nigeria and Sri Lanka) and 15% (South Africa, Algeria, Ecuador, Russia, Israel, Jordan, Namibia, Turkey and Vietnam). In the other 36 conventions, the maximum rate for dividend taxation is dependent on the shareholding percentage

held by the shareholder in the paying company. Here we find a great variety of combinations, such as:

- a tax rate of 10%, for those who hold more than 25% of the capital of the dividend payer and a tax rate of 15%, in the other cases (Albania, Denmark, United Kingdom, Spain);
- a tax rate of 7%, for those who hold more than 25% of the capital of the dividend payer and tax rate of 10%, in the other cases (South Korea);
- a tax rate of 5%, for those who hold more than 10% of the capital of the dividend payer and tax rate of 15%, in the other cases (Australia, Canada, Germany);
- a tax rate of 0%, for those who hold more than 10% of the capital of the dividend payer and tax rate of 5%, in the other cases (Italy);
- a tax rate of 0%, for those who hold more than 25% of the capital of the dividend payer and tax rate of 5%, in the other cases (Switzerland);
- a tax rate of 0%, for those who hold more than 25% of the capital of the dividend payer and tax rate of 15%, in the other cases (Austria);
- a tax rate of 0%, for those who hold more than 25% of the capital of the dividend payer, 5% for holding more than 10% and tax rate of and 15%, in the other cases (Netherlands).

In the above list, I have taken only the general criteria according to which the taxation of dividends is established – other details may appear, depending on the particular situation. On the other hand, the great diversity of national tax rules and the provisions of the bilateral tax conventions between states makes it difficult to model the dividend taxation for the purpose of econometric analyses (Jacob and Jacob, 2013).

At European level, Romania is one of the 22 EU member states that, as a general rule, imposes a withholding tax on dividends paid to non-residents (European Commission, 2020a, p. 94).

3.2 Current taxation of dividends paid by Romanian companies to shareholders/associates legal entities

Shareholders as a legal entities may receive dividends which they recognize as income of the period in which the right to receive them is generated, that is, of the year in which the general meeting of shareholders decides the distribution of dividends – the official formulation, from OMFP no. 1802/2014 is the following: "the dividends are recognized when the right of the shareholder to receive them is established". In principle, the accrual accounting rules oblige such an accounting treatment, even if the accounting rule of prudence says that an income is only recorded if it is sure. We can appreciate that the shareholders that voted the distribution of profit as dividends know that this distribution will have place and, therefore, the recognition of such income has not imprudent. From an accounting point of view, there is another serious problem in the recognition of dividend

income: are they initially accounted for at the level of the gross dividend or the net dividend (when the payer has the obligation to withhold the tax on dividends)? The practice of Romanian companies is not uniform:

- in some situations, the dividends received or to receive are recognized at the gross value, and the collection of the net dividend obliges the beneficiary to charge the tax withheld by the payer (the expense being non-deductible, when calculating the income tax);

- in other situations, the dividends received or to receive are accounted for at the level of the amount actually received, i.e. it is only recognized as the net value (gross value – dividend tax withheld by the payer).

Both variants are acceptable, but the first is, in our opinion, the only principal, especially since at the date of establishing the right to collect them, the shareholder has the information regarding the distributed amount, that is the gross dividend.

The option for one variant or another has no effect on the taxable income calculated by the recipient of the dividends: the income from dividends from Romanian legal persons is non-taxable and the expense with the tax withheld is non-deductible. On the contrary, if the recipient of the dividends pay the tax on the revenues of the microenterprises, the recognition of the gross amount to the revenue would lead to the payment of a tax to the tax – in the latter case, it is preferable that the income from the dividends be accounted for at the net amount level.

If the dividends are received from foreign legal entities, then the fiscal rule refers to the existence of the tax convention signed by the Romanian state with the state of residence of the dividend payer. If there is such a convention, then the dividends received from the foreign legal persons are non-taxable income on the profit tax, provided that the Romanian shareholder receiving the dividends holds more than 10% of the payer's capital, and this holding is on an uninterrupted period of at least one year. If these two conditions are not met, the income is taxable at the corporate income tax. In all cases, if the recipient of dividends from non-residents is a taxpayer on the income of microenterprises, then the dividends reach taxable income.

4. TAXATION OF INDIVIDUALS: DIVIDENDS VS. SALARIES VS. REVENUES FROM INDEPENDENT ACTIVITIES

The taxes on the income realised by individuals is an important source of revenues for the state budget (Tofan, 2019). The list of taxable revenues realised by the individual include the income from investments, i.e., income from dividends, from interests and others. The taxation of such incomes is different from the taxation of the revenues from salaries or from independent activities. So, if an individual has the choice between performing the activity in the form of an employee, as an authorized individual person (PFA) or as a shareholder of a company, it seems that the latter option is one with lower tax costs.

In the Table 3, I put in parallel some of the fiscal consequences of each of the forms of business activity listed above.

Table 3. Comparison between the tax regime of the income realized by individuals from dividends, salaries or independent activities

	Salaries	Independent activities	Dividends
Income tax	10% on the basis of calculation (in principle, it is gross income – compulsory social contributions – personal deduction, if applicable)	10% of net income, i.e. gross income – deductible expenses	5% of the gross profit, after the company has paid the tax on revenues (usually 1%) or the corporate income tax (16% of the fiscal income)
Social security tax	25% of gross income	25% of net income, only if exceeding 12 gross minimum wages in the economy and within the limit of 25% of these 12 minimum wages *	Not applicable
Health insurance tax	10% of gross income	10% of net income, only if exceeding 12 gross minimum wages in the economy and within the limit of 25% of these 12 minimum wages *	10% of the dividends received (i.e. from the net income from dividends), only if they exceed 12 gross minimum wages in the economy and within 10% of these 12 minimum wages

* The tax payer can choose to make the contribution under this ceiling (in the case that the real income is below the 12 minimum wages), but also for a larger calculation base

Source: processing of the Romanian Tax Code, valid in 2020

There are many other elements that characterize the activities carried out in one of the three mentioned forms, but, if we look exclusively at the fiscal aspects, I find that the income from dividends can represent a less taxed variant than the other categories of income, which makes it makes it for the individuals who has the possibilities in the sense of the tax optimisation. However, we must not forget that the payment of dividends is conditioned by the existence of the profit, that is to say, the ability of the respective person to obtain and declare revenues sufficiently high in relation to the charges, so that the dividend can be applied.

The tax rate on dividends – as with many other revenues – also depends on the ideology followed by the Government that establishes the tax rules. Boissel and Matray (2019) analyse the case of the significant increase in the taxation of dividends in France, an increase introduced by the parliament dominated by socialists, to ensure – says the ideology – the fairness of taxation by applying the same rates to all incomes made by individuals, regardless of whether they come from salaries or from capital investments.

The share of 5% supported by shareholders/associations natural persons who want to make money from companies in the form of dividends is a relatively small one. In fact, this situation, in which the taxation of dividends is predominantly made on their payment to individuals, while the legal persons shareholders either do not bear such tax or they only bear it under certain conditions, it is quite current, worldwide. Berzins *et al.* (2019) state that such a system is valid in most countries, with the notable exception of the United States of America.

In the case that the beneficiary of the dividends paid by a Romanian company is a non-resident individual, the dividend must be imposed in Romania and vice-versa. Thus, if a Romanian resident holds shares in foreign companies and receives from them dividends of profit in the form of dividends, he will owe, in Romania, a tax on the income from the dividends received from abroad. However, it is possible that these dividends have already been taxed. The avoidance of this double taxation of dividends in the state of the profit and in the residence of the beneficiary is also done here in accordance with the provisions of the tax convention between the Romanian state and the state from which the income comes. The fiscal code refers to two mechanisms that can appear in these conventions to avoid double taxation: the tax credit mechanism and the exemption mechanism. In the first variant (of the tax credit), the individual resident in Romania can deduct, from the tax calculated in Romania, the tax that was withheld abroad and which was paid to the tax authorities in the state of origin of the income.

Regardless of the mechanism, the recognition in Romania of the tax on dividends borne abroad by the individuals that are resident in Romania is conditioned by the existence of the tax convention between the Romanian state and the other state. Of course, the tax paid abroad can only be deducted from the one calculated in Romania only within the limit of the rate valid in Romania – otherwise, the Romanian state would transfer income to a foreign state.

5. THE PARTICULAR SITUATION OF THE DIVIDENDE PAID BY THE STATE-OWNED COMPANIES

In the literature about the financial aspects of state-owned firms, they fall into two categories: those of local subordination and those of central subordination. The Romanian Ministry of Finance publishes annually a report on the situation of the Romanian state-owned companies and presents the analyses separating the state-owned firms into the two mentioned categories. The last such report,

available at the time of writing this paper, is the one regarding the year 2018 (MFP, 2019). Also, the state's policy regarding the governance of public enterprises appears in a document that declare that the state's dividend policy is "a prudent and predictable one, respecting the investment needs of the public enterprise" (MECRA & MFP, 2016). From the latter memorandum, I find out that dividends paid by state-owned companies are an important source of budget revenue. Government Ordinance no. 64/2001 establishes the destinations of the profits declared by the companies to which the state is a majority shareholder and, from this normative act, it results that at least 50% of the net profit must be paid to the state authorities in the form of dividends or direct payments. In recent years, the government has mandated its representatives in the general meetings of the state-owned companies to request extremely important dividends (around 90%), from the net income of the financial year and even from the reserves.

The data provided by the MFP (2019) shows that the amounts received by the authorities from the dividends were very important. In Table 4, I put together the data on the dividends paid by state owned companies from the net income realized on the two categories – central subordination and local subordination.

Table 4. Net incomes and dividend declared by the Romanian state-owned companies

Year	State owned companies of central subordination			State owned companies of local subordination		
	Number of companies	Dividends declared (thousands of RON)	% of the net income reported	Number of companies	Dividends declared (thousands of RON))	% of the net income reported
2018	255	3,878,289	69.90	1,250	75,608	54.98
2017	226	4,865,636	65.11	1,220	88,115	62.51
2016	223	3,080,117	66.34	1,186	109,115	58.89
2015	231	2,167,663	53.77	1,063	n.av.	n.av.
2014	232	2,191,220	53.12	1,046	n.av.	n.av.
2013	228	1,631,988	62.36	1,017	n.av.	n.av.
2012	231	1,442,098	65.00	n.av.	n.av.	n.av.
2011	241	1,420,482	32.25	n.av.	n.av.	n.av.
n.av – not available						

Source: (MFP, 2019)

If we retain the 10 state-owned Romanian companies listed on the regulated market of the BSE, which the state is a majority shareholder, the situation is as follows:

- one of them has massive losses, negative equity during the whole period 2007-2018;

- the other nine companies paid dividends during this period and I have opted, also, to make the cumulative presentation, over the 12-year period analysed: the weight of the accumulated dividends paid is significant, considering the obligation imposed to turn at least 50% for profit with this destination.

From a fiscal point of view, it is to be remembered that the payment of dividends to the public administration bodies that exercise the quality of shareholder is not subject to dividend tax – the money would have the same destination.

6. CONCLUSIONS

Dividends are a means by which investors on the financial markets, but also entrepreneurs – shareholders or associates of some companies – take part of the profits realized by the companies in which they have interests. The accounting regime for dividends is quite simple, because the documents justifying the granting of dividends are, in most cases, very clear and easy to account for. The introduction, in Romania, of the possibility to pay quarterly dividends, can be interpreted as a support for shareholders who want a more frequent legal withdrawal of money from the company, although this operation leads to the increase of the administrative effort of the respective companies: general meeting of shareholders to approve interim financial statements prepared as well as annual ones. Also, there is the risk that, if at the end of the year, the declared accounting profit does not reach the level of the interim paid dividends, regularization will be required, both in the relationship between the company and its shareholders, as well as in the relationship with the tax authorities.

I found only very little information regarding the dividends paid by the Romanian companies; these refer to the companies listed on the regulated market of the Bucharest Stock Exchange and to the state-owned companies that appear in the specific reports of the Ministry of Finance. In the case of listed companies, the share of cumulative dividends (over a period of 12 years) in the cumulative net results declared in the same period is around 44%, close to some figures reported in other countries. Romanian state-owned companies – those that report profits – pay at least 50% of these profits as dividends to the holding authorities. Lately, the financial needs of the state have led to a significant increase in the share of dividends in the net income of the state-owned profit companies.

The taxation of the dividends paid by the Romanian companies has evolved significantly in the period after 1990. The current rate is 5%, after starting from 10% (1992-2009) and reaching a maximum of 16% (2010-2015). In addition to the tax rate, the possibility was introduced, with the accession to the EU, to exempt from the tax on dividends the shareholders having the form of legal entities that owned more than 15%, until 2008 and more than 10%, starting with 2009, for an uninterrupted period of at least 2 years (2007-2013) or one year (starting with 2014).

The share of budgetary revenues from the tax on dividends is, on average, 0.22% in the GDP (for the period 2000-2018), almost double reporting to the tax on the revenues of microenterprises.

In the taxation of dividends, account must also be taken of the residence of shareholders – if they are resident in other states, the tax conventions between Romania and the respective states enter into force. The Romanian tax authorities have published 87 such conventions, in which the tax rates for dividends are very different, from 0% to 15%, rates conditioned, sometimes, by the percentage of holding.

From the point of view of the revenues from dividends made by the Romanian legal persons, they represent non-taxable income, at the level of the corporate income tax, but taxable, at the level of the tax on the revenues of the microenterprises.

Often, the beneficiaries of dividends are individuals who hold shares in various companies. In this case, the dividend payer always withholds a tax of 5%, which makes the income from dividends more tax-friendly than the income from dependent activities or from independent activities.

The main limits of the paper consist in the exclusively descriptive character of the research, that is, in the absence of establishing correlations between various variables of interest regarding the financial and fiscal aspects of the dividends. These limits represent future research opportunities.

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FINANCIAL CHARACTERISTICS OF THE ROMANIAN STATE-OWNED COMPANIES IN THEIR TRANSITION TO IFRS

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Abstract

State-owned companies are present in all countries. Despite the differences from private firms, there are common elements for the two categories of entities, especially with regard to accounting and financial reporting rules. In order to improve the transparency of 17 largest state-owned companies, the Romanian authorities – on the recommendation of international financial organizations: IMF and World Bank – have decided to extend the application of IFRS to these companies, from 2016, with a complete transition in 2018. We therefore have information in Romanian standards and in international standards for the 2017 financial year. The comparison of these two series of figures highlights significant impacts on equity and on the net income.

Keywords: *Romanian state-owned companies; transition to IFRS; governance; statement of financial position; income statement.*

JEL Classification: M40, H70

1. INTRODUCTION

For almost 50 years, the Romanian economy has been highly state-controlled – Romanian companies of the communist era belonged to the state, with the exception of some collaborations with foreign firms which gave rise to joint ventures. At the time, state-owned firms were the main source of funding for the public budget (Apostol and Pop, 2019). The fall of communism, followed by the transition to a market economy, created the conditions for the emergence of private firms and, quite late and with many difficulties, for the privatization of state firms. The efforts of the Romanian authorities to join international organizations, the need to finance successive reforms in all areas – including economic – the bad reputation of the state as a business manager, international economic and political developments have led to the fact that currently the number of Romanian state firms is much smaller than it was 20 years ago.

Statistics provided by the Romanian Ministry of Public Finance (MFP) show around 1,500 active state firms (MFP, 2019), among the almost 580,000 firms operating in Romania. Despite their very small number, the weight of these firms in the sales realised in Romania and in the total staff employed is significant.

Romania's membership of the European Union has imposed certain regulatory, administrative and supervisory obligations for public enterprises [1]

(PE). At the same time, the need to finance public spending, as well as the restructuring of state firms, forced Romania to call on the assistance of the International Monetary Fund (IMF) and the World Bank (WB) which imposed conditions for the granting of funding [2]. On the other hand, Romania's (and Bulgaria's) acceptance into the EU was precipitated for political reasons, without these countries fully fulfilling the conditions required by the European treaties. Thus, in the case of these two countries, accession was accompanied by the establishment of a cooperation and verification mechanism (CVM), the role of which is to assess the progress that Romania and Bulgaria should still do to become a full member. Under this CVM, the European Commission presents a report each year which notes this progress. Despite some progress on the part of Romania in the period of more than 13 years of EU membership, the last available report (European Commission, 2019) notes that there is still a lot of effort to make from Romania to fulfil the criteria established by the CVM. Among the points noted by the European Commission in this report, an important place is dedicated to state-owned enterprises, in particular to the application of the rules of good governance.

The current Romanian accounting Standards (RAS), which are almost generally valid (including for the state-owned companies), are based on European directives. It is true that membership of the EU requires the application of IFRS in the consolidated financial statements of listed companies – there are around thirty groups in this situation – pursuant to Regulation 1606/2002 of the European Parliament and of the Council of July 19, 2002 on the application of International Accounting Standards. On the recommendation of international financial organizations [3] (IMF and WB), the Romanian standard setter (the Ministry of Public Finance) has extended the application of IFRS in the individual financial statements of listed companies (since 2012), as well as in the financial statements of banks (since 2012, too). This transition involved about 65 firms – 7 of which were (and still are) state-owned – plus around 30 banks. The impact of IFRS on listed Romanian companies is analysed, among others, in Săcărin (2014) and Istrate (2014).

The management of state-owned companies (or public enterprises – PE) has always been sensitive, in particular due to public expectations, the often strategic nature of their activities, the complexity of their organization and operations, pressures from politicians and bureaucrats who often support each other and lead PEs in order to primarily achieve their objectives, rather than those expected by citizens (Shleifer and Vishny, 1997; Wang and Yung, 2011; Ben-Nasr, Boubakri and Cosset, 2015; Tang, 2016; Anis *et al.*, 2017). Thus, the international and regional organizations which are interested in the smooth running of the Romanian economy have recommended the introduction of strict rules of governance in the PEs, including in the fields of accounting, financial reporting,

audit and financial behaviour, in general, as well as transparency on the part of the owner – the State – who must publish an annual report on the management of PEs.

Also following recommendations made by the IMF and the WB, in 2015 the Ministry of Public Finance (MFP) decided to extend the application of IFRS [4] for 17 large state-owned enterprises [5]. These companies employed, at the time (at the end of 2015), more than 115,000 people (out of a little more than 183,000 people employed by the 225 state firms controlled by the central authorities – CPE), used assets of nearly 18 mild euro (the assets of the 225 CPEs were nearly 27 mild euro) and had combined sales which exceeded 4 mild euro (out of the 8.35 mild euro CPEs sales) – the data come from 2015 financial statements of these PEs, available on the websites of each of the firms, following an obligation of transparency imposed by Romanian law; at the same time, we found data in the annual reports on the situation of state-owned firms, published by the Ministry of Public Finance (MFP). For 2016 and 2017, the application of IFRS was limited to the restatement of the financial statements established in RAS, while, from 2018, these 17 EPs began to apply IFRS both in current accounting and in the financial reporting. The 2018 financial statements, established under IFRS, therefore include the 2017 comparative data under IFRS. For this same fiscal year 2017, we have the financial statements in RAS, which allows us to identify the impact of IFRS on the financial statements of the 17 PEs that made the transition.

The literature on the transition to IFRS is huge; nevertheless, we did not find any studies concerning the impact that IFRS could have on state owned enterprises. In this context, the references we have found are limited to the analysis of the effects of IFRS on companies in general, especially listed companies. For the case of Romania, we can only compare these effects with those identified for listed companies, and for the year 2011. The peculiarities of the functioning of state firms, and mainly their objectives which are not always to make profits, but also the challenges of the governance of these firms under the conditions of the involvement of political leaders, make the comparison with listed firms a little risky. In this study therefore, we do not propose hypotheses on the direction of the modification of the main financial indicators of the 17 EPs following the application of IFRS.

The results of our study show a rather limited influence of IFRS on the total and the structure of assets, as well as on revenues, but of a significant average decrease in equity and an increase in net profit. These results should be interpreted with caution, given the very limited number of PEs analysed, but also the specific context of Romania with regard to compliance with financial reporting rules, in general, and rules concerning the PE sector, on special. For example, in the case of the 17 PEs analysed, the audit reports revealed a majority of modified opinions.

Our study contributes to the literature on the transition to IFRS and to the literature on the financial behaviour of state-owned companies by highlighting the

way in which 17 large Romanian state-owned companies have applied for the first time the IFRSs.

In the following sections we propose a description of the operating framework of Romanian state-owned firms, a literature review, description of the methodology and the population studied, results, conclusions and, at the end, references.

2. STATE-OWNED COMPANIES IN ROMANIA AND WORLDWIDE

The literature on state-owned firms, published in academic journals or in documents from various global, regional and governmental public and private organizations, reveals multiple facets of the analysis of these firms: regulation, governance, transparency, accounting standards applied, impact on public budgets, influence of corruption, profitability, financing, privatization, nationalization, effects of crisis, effects of political connections, effects on the choice of auditors, on audit fees, on audit opinion or on the quality of the audit, effects on the quality of the financial presentation, the fiscal behaviour of PEs, the association with cultural and institutional variables, investments etc. In this section, we will identify some important elements in this literature, first, at the international level and, then, for the specific case of Romania.

Many papers on PE deal with the case of ex-socialist economies where the state has owned (and sometimes still holds) most economic entities; the countries of Central and Eastern Europe, those resulting from the dismantling of the Soviet Union, China, etc. This explains why the firms analysed often come from these countries, to which we add many emerging countries. PwC (2015) lists the 8 countries with the largest state holdings in companies: China, United Arab Emirates, Russia, Indonesia, Malaysia, Saudi Arabia, India and Brazil who contribute more than 20% to international trade.

2.1 On state-owned companies around the world

The European Commission cites statistics which find that state-owned firms provide more than 6 million jobs in OECD countries (9 million worldwide) and that around 10% of the 2,000 largest firms in the Forbes 2000 ranking are majority owned by states; there are sectors of activity in which the position of state firms is much more important – energy and transport, for example (European Commission, 2016). The same document says us that, in the European Union, the role of state firms is more important in the ex-communist countries (Poland, Croatia, Romania and Slovenia), but there are also developed countries in which the state enterprises are very present (France, Italy, Sweden, Finland). OECD confirms the important role of state-owned firms in the world (around 1/5 of the largest firms) and stresses the importance of applying governance standards which are becoming essential for ensuring financial stability and sustainable growth (OECD, 2018).

In assessing the performance of state-owned firms, it must be taken into account that their objectives are not limited to obtaining profits; they must provide public goods and services in important areas of the economy and social life (IBRD, 2014), they often follow objectives related to employment, the cost of the goods/services provided, the availability of these goods/services (Cărăușu, 2016). Sometimes the costs of its goods/services are such that only a public enterprise, possibly subsidized by the state, can engage in their production. Estrin *et al.* (2009) assert that public enterprises were created to ensure a certain political control of production, a better supply of public goods, more effective means of coping with externalities, a means of ensuring economic development in the absence of perfect markets, the employment of large numbers of people and a fair distribution of income. Gaio and Pinto (2018) find that state ownership of a company can have positive effects in terms of shareholder stability and can help in a crisis.

In the countries of Central and Eastern Europe, the efforts of the authorities to create the mechanisms of good corporate governance were a priority in the early 2000s, generally under the leadership of the European Commission (Berglöf and Pajuste, 2005). For the case of Romania, we could find a very good description of the evolution of the legal framework, for the public and for the private companies, in Tofan and Cigu (2020).

The accounting and financial reporting systems of public enterprises must allow the public to be informed, in a transparent manner and by applying a high-quality accounting framework. It is not only a matter of informing state representatives in GAs – they have direct access to the necessary information – but of informing other stakeholders who are interested in how public money is spent.

2.2 General description of Romanian public enterprises

The statistics provided by the Romanian authorities concerning its enterprises take into account two categories: on the one hand, there are public enterprises owned by the central authorities (which will be called CPEs) and, on the other hand, to public companies owned by local authorities – LPE [6]. In Table 1, we trace the evolution of the number of these firms during the period 2013-2018, as it appears in the annual reports of the MFP; we selected only active firms, i.e. firms that are not in insolvency or in liquidation (at the end of 2018, there were just over 300 inactive state-owned companies, both CPE and LPE). In principle, statistics are available for firms whose state holds more than 50% of the voting rights.

Table 1. Evolution of the number of active state firms in Romania

Year	2018	2017	2016	2015	2014	2013*
Centrally-controlled public enterprises (CPE)	225	226	223	231	232	228
Locally-controlled public enterprises (LPE)	1,250	1,220	1,186	1,063	1,046	1,017
Total	1,475	1,446	1,409	1,294	1,278	1,245

* In 2012 and 2011, there were 231 and 211 CPEs respectively; the number of LPCs for these two years was not found.

Source: Romanian MFP annual reports (MFP, 2019)

Despite the limited number of PEs in Romania [7] – 1,475 compared to a total of more than 580,000 active companies, which represents around 0.3% – the size and importance of these PEs are such that they employ 6.71 % of the total staff (3.45% for the CPE), realise 3.31% of sales (2.56 the CPE and 0.75 the LPE) of the Romanian firms and hold 8.78% of the assets (7.22% CPE and 1.56% LPE (MFP, 2019). The important (but not exceptional) role of state enterprises in Romania is also underlined by the Community executive (European Commission, 2016) who also notes the main weaknesses in the management of PEs: 1) sub-optimal performance, compared to private companies, 2) the fact that PEs represent a burden for public budgets, through tax arrears and 3) partial application of the rules of good governance. Another source estimates that the contribution of state enterprises to Romanian GDP is between 6% and 8% (MECRMA and MFP, 2016). but that the Romanian state has not yet demonstrated that it is a good shareholder, on the contrary, public enterprises were associated with inefficiency, political patronage and lack of responsibility.

Like other countries whose governments control companies, a good number of Romanian firms are active in strategic fields: transport (including air, rail, road – national and local – transport, naval, electricity , gas and other hydrocarbons), extractive industry (hydrocarbons, certain metals, salt), defence industry, forestry, research and development, distribution of water to local communities, etc. There are certain business sectors where PE hold more than 50% of the turnover and the staff employed, both centrally and locally.

The importance of state-owned enterprises in the Romanian economy and the fact that the money they manage are, in fact, public money, have forced the public authorities to find transparent and effective solutions for the governance of these firms. These firms can represent a target for all kinds of pressure from politicians – at all levels – regarding jobs, commercial contracts, bank and/or subsidy financing and, in general, for what is called *tunneling*. Thus, in 2011, the Romanian Government issued an emergency ordinance (Government Emergency Ordinance no. 109/2011 on the governance of public enterprises) which establishes the main benchmarks of good governance of public enterprises and

which subjects these enterprises to slightly different obligations than those reserved for private commercial companies. This ordinance is also the result of pressure from international financial organizations (IMF and WB) which, along with the European Commission, have funded Romania by helping it to cope with the effects of the crisis that started in 2008. The solutions provided for by this ordinance are in line with the principles established by the OECD (Organization for Economic Cooperation and Development) and with best practices and international standards for good corporate management. The European Commission finds that the introduction of this law also followed the objective of improving the transparency of these firms and highlighting the costs borne by society due to the poor functioning – notably financial – of these companies (European Commission, 2016).

The European Commission notes that, even if the financial performance of Romanian public companies is good, in the context of sustained economic growth, the corporate governance of public enterprises applies to a limited extent (European Commission, 2019): Government Emergency Ordinance no. 109/2011 has been modified several times and the appointments of the boards of directors of state-owned companies are made on an interim basis, without going through the steps imposed by the ordinance, which removes the reality from the spirit of the rules of corporate governance. The same document (European Commission, 2019) identifies corruption, clientelism and nepotism as obstacles [8] in the development of healthy economic activity in Romania and notes that the Ministry of Public Finance does not exercise its powers to solicit public enterprises to apply the legislation on corporate governance.

At the financial level, state firms can represent a source of revenues for the state budget, in the case of dividend payments – for profitable firms. Although, from 2001, the law establishes that 50% of the profit should be paid to the national or local budget, the financial needs of the public authorities during the 2016-2019 period (increase in public expenditure and reduction in certain taxes) have led the Government to modify the law, passing to 85% of profits and, often, by paying dividends on the results of previous years (MECRMA and MFP, 2016). Thus, in 2018, the CPEs paid dividends of around 1 mild euro, while the total subsidy granted by the state budget was around 1.3 mild euro (MFP, 2019).

2.3 General obligations of transparency for Romanian public enterprises

Many Romanian state-owned enterprises can be described as politically connected, in the sense that in the boards of directors very often people are more or less actively involved in politics or in close contact with politicians. Chaney, Faccio and Parsley (2011) warn us (after analysing more than 4,500 companies from 19 countries) that the quality of declared accounting information is systematically worse for companies with political connections than for companies

that have not such connections. It can be assumed that this conclusion is also valid for Romanian companies.

Efforts to improve transparency in state-owned firms are also justified by the fact that these firms sometimes benefit from easier access to resources and are therefore not encouraged to make more efforts – including transparency – in order to obtain such resources (Ho, Liao and Taylor, 2015).

Government Emergency Ordinance no. 109/2011 establishes that Romanian public companies must publish certain information intended for shareholders and the public on their websites: decisions of general shareholders' meetings, annual financial statements, interim financial statements, the annual financial audit report, the list of directors and their CV, the reports of directors etc. The financial reports must remain on the site for at least three years.

Transparency is achieved by an efficient financial presentation system, coupled with a quality audit. The literature (Wang, Wong and Xia, 2008; Guedhami, Pittman and Saffar, 2009) find that state-owned enterprises are not champions of financial transparency. Guedhami, Pittman and Saffar (2009) suggest that state officials – as a shareholder – try to cover up the politically motivated diversion of company resources to activities that do not maximize value, such as rewarding their supporters with jobs, grants and other benefits; for this the state avoids hiring Big 4 auditors, in order to make the financial statements less transparent on the real performance of the company. In fact, state-owned enterprises choose auditors by applying criteria different from those used by private firms (Kuo, Lin and Lin, 2016).

Questions relating to the transparency of state firms and their functioning in a country like Romania must take into account the specific institutional framework: the economies in transition, just like many other developing countries, were characterized by weak institutions (Estrin *et al.*, 2009) which did not facilitate the application of good governance rules.

The transparency of Romanian firms, in general, and of state firms, in particular, is not acquired by the mere effect of the existence of regulations in this sense. Indeed, Romanian society is still characterized by a culture of secrecy (Apostol and Pop, 2019), at almost all levels, including in companies.

3. LITERATURE REVIEW

There are authors who find that the financial performance of public firms is worse than that of private firms (Shleifer and Vishny, 1997; Estrin *et al.*, 2009; Wang and Yung, 2011; Cărauşu, 2016; European Commission, 2016; Huang and Boateng, 2016; Tang, 2016; Gao, Gao and Wang, 2017; Gaio and Pinto, 2018). IBRD (2014) asserts that the poor financial performance of certain PEs is generated by fundamental governance problems for these firms, in particular due to the difference in objectives between, on the one hand, the owner – the public authorities, on behalf of citizens – and, on the other hand, the executive of these

firms – directors, bureaucrats. On the other hand, there are studies which find the opposite, i.e. a positive association between state ownership and financial performance (Anis *et al.*, 2017) or which explain the displayed performance by PEs through possible downward earnings management, in order to reduce political costs (Ben Rejeb Attia, Lassoued and Attia (2016). Capalbo *et al.* (2014) measure significant manipulation of the earnings by unlisted Italian PEs.

There are several reasons why public enterprises are less efficient: social and political objectives may not be compatible with maximizing profits; managers are chosen based on their political relationships rather than their skills and performance; information asymmetry and increased transaction costs; higher agency costs and less monitoring (Gaio and Pinto, 2018).

Ben-Nasr, Boubakri and Cosset (2015) find, on a sample of 350 companies from 45 countries, that state control of companies is strongly associated with a diminished quality of the earnings reported. For a sample of European firms (25% of which come from Central and Eastern Europe), Gaio and Pinto (2018) find that unlisted state-owned companies are less cautious and less likely to adopt earnings management practices (notably because of the protection offered by the State) and that, on the other hand, listed PEs have higher discretionary accruals than unlisted firms. On the contrary, Wang and Yung (2011) find lower levels of discretionary accruals for state-owned enterprises and explain this by less pressure from shareholders on managers of these firms.

Alfraih (2017) finds, in the case of Kuwait, a negative relationship between the quality of the audit and state control. Chen *et al.* (2018) justify this kind of relationship, finding that the audit quality is perceived as less important in the case of PEs than in the case of private firms (for Chinese firms). This translates, for Desai, Xu and Zeng (2016) by lower audit fees paid by Pes [9]. In contrast, politically connected firms pay more fees for non-audit services – in the case of Malaysia firms (Effiezal-Aswadi *et al.*, 2015). At the same time, Alfraih (2017) provides us with a good review of the literature concerning the relationship between audit and state-owned firms. Thus, Wang, Wong and Xia (2008) show that in China, public enterprises tend to use the services of small auditors; Husnin, Nawawi and Puteh Salin (2016) consider that this behaviour sends a negative message to the public. Likewise, Guedhami, Pittman and Saffar (2009), by analysing public enterprises before and after privatization, find a limited probability of choosing a Big 4 auditor before privatization and after privatization for firms in which the state retains control, while this probability becomes more than double in the case of firms that leave state control.

Alhababsah (2019) cites numerous studies which suggest that government officials in SOEs may be less incentivized to effectively monitor PEs, as their behaviour may be driven by political interests and they would be interested in creating an opaque information environment to hide their ineffectiveness and corruption. This leads to a lower quality of the financial information provided by

the PEs. Incentives towards less transparency on the part of PEs can come from the government support they receive and which makes them less dependent on external sources of capital (financial market, banks).

4. METHODOLOGY AND DATA

The list of 17 EPs obliged to switch to IFRS is found in an order of the Minister of Public Finance (OMFP no. 666/2015). In application of this order, in principle, the financial statements in RAS and in IFRS should be found for the financial years 2016 (with comparative information for 2015) and 2017, for a complete transition to IFRS in 2018. Thus, there are three fiscal years for which we should have two categories of data (RAS and IFRS): 2015, 2016 and 2017. However, despite a legal obligation to publish financial statements, 2 public companies concerned by the transition to IFRS do not present on their sites the IFRS financial statements IFRS for 2016 and 2017. Under these conditions, we have chosen only 2017 for the identification of the effect of the transition to IFRS: RAS data are available in the 2017 financial statements and comparative IFRS data appear in the 2018 financial statements.

The transition to IFRS is a major change in accounting policies and, in accordance with IFRS 1, the entities subject to it should present in the notes explanations concerning the impact of this transition on the main financial indicators (this obligation is included in OMFP no. 666/2015). The 17 Romanian firms generally comply with this obligation, but sometimes the explanations are very summary.

The indicators for which we have chosen to make the RAS – IFRS comparison, for the 2017 financial year are: total assets and asset structure (fixed assets/total assets), equity, revenues (sales), net income.

We choose to calculate the impact of IFRS in percentages, by dividing the difference between the value of the indicator in IFRS and its value in RAS by the absolute value in RAS (like Săcărin, 2014):

$$\text{impact IFRS} = \frac{\text{IFRS indicator} - \text{RAS indicator}}{|\text{RAS indicator}|} \times 100 \quad (1)$$

The numerator is put in absolute value, so that, in the case of indicators which can take negative values (equity, net profit, ROE), the sense of the calculated modification is correct.

5. RESULTS

We will present the effects of IFRS on the figures of Romanian state firms by separating the balance sheet indicators from those specific to the income statement.

5.1 Impact of IFRS on balance sheet indicators for the 17 public companies analysed (assets, equity and leverage)

For the companies analysed in our study (and for the year 2017), the changes in total assets generated by the transition to IFRS do not seem very significant:

- the average difference is an increase of 8.73%;
- for 3 companies there is no change;
- for 6 other companies, the differences between IFRS values compared to RAS values are less than 1% (from -0.70% to + 0.53%);
- 7 companies have differences between -12% and 4% (from -11.86% to 3.79%);
- for one of the companies analysed, total assets increased by 183.10%, this extreme value requiring special attention.

In order to identify the main causes of significant changes in total assets, we analysed the financial statements of 7+1=8 companies, in the last two categories mentioned above. However, before proceeding to the detailed analysis of the sources of differences for the 8 companies, it should be noted that, for most of the other entities, the differences are zero or very small. This can probably be explained by the accounting options of the respective companies before switching to IFRS. In fact, Romanian standards (which these companies applied before 2018) allowed, in certain cases, the use of accounting methods compatible with those of IFRS; this is why the assets and liabilities to which these accounting policies were applied do not undergo significant changes in value during the transition to IFRS. Another explanation would be that the transition to IFRS was made approximately, without all the necessary restatements having been made.

The main reasons for which there were differences between the values of IFRS assets compared to NCR, for the 8 companies mentioned above can be systematized as follows:

- cancellation of certain revaluations of fixed assets, with the reconstitution of their costs by applying inflation accounting for the period until 2003 (Romania fulfilled the conditions for a hyperinflationary economy until that date); the correction of the depreciation of certain fixed assets, the recognition of a certain impairment of fixed assets;

- the greatest differences appear in the case of the company which manages motorways and national roads, where the contractual values of concession rights are only recognized in IFRS and have been added to (intangible) assets; the recognition of these concession rights was made as a subsidy from the budget, in the absence of an explicit obligation of payment/reimbursement; there is also a very significant increase in inventories, due to the recording of the production of roads and motorways which do not belong to the company, but to the Romanian State, but which, once completed, will be taken over by the company.

Overall, if we eliminate the extreme value where assets increase by 183.10%, we see an average change of -2.17%, which suggests a relatively insignificant

effect of the transition to IFRS on the total assets of the 17 public enterprises analysed.

Regarding the structure of the assets, we calculated the changes in the ratio of fixed assets to total assets. This ratio was, in 2017 in RAS, on average, almost 73% and in IFRS, for the same year, almost 72%. The difference therefore does not seem significant. However, we have calculated the percentage with which this ratio changed during the transition to IFRS for each PE:

- there is an average decrease in the weight of fixed assets of 0.70%;
- for three companies there is no change;
- for six companies, the change is less than 1% (from -0.32% to + 0.67%);
- six other companies undergo a variation ranging from 1% to 5% (from - 4.55% to 4.19%);
- only two companies exceed 10%: -19.44% and + 11.06%; the first recognizes large work in progress, while the second recognizes in particular significant impairment of inventories and receivables.

In the case of the CPEs analysed in our study, unlike the total assets and the asset structure, the changes generated by the transition to IFRS on equity seem more significant than in the case of listed companies (as reported by Săcărin, 2014 and Istrate, 2014). We know that, to record for the transition to IFRS – as with any other change in accounting policies – increases and decreases in assets/liabilities are recorded in equities. It can thus lead to a significant change in equity, in particular when the restatements of assets/liabilities are not offset. For the 17 CPEs, the characteristics of these changes are:

- the average variation in equities for the 17 companies, for 2017, is - 15.15%;
- two companies find no difference between IFRS equity and RAS equity;
- three companies have differences of up to 1% (-0.95%; 0.11% and 0.24% respectively);
- eight companies report differences ranging from 1% to 10%; for two of them, equity increased (by 2.62%, respectively 5.83%), for the others, equity decreased (from -2.00% to -8.74%);
- the other four companies present significant decreases in equity: -12.90%, -17.06%, -43.89%, -157.87% respectively.

In most cases of decrease in equity, an important role plays the deferred tax liability recognized during the transition to IFRS, knowing that deferred taxes do not exist in RAS. For the four companies in the last position in the previous list, the most visible explanations for the decrease in equity come from:

- in the case of the 12.90% drop: there was a significant decrease in fixed assets, accompanied by the identification of a large deferred tax liability, as well as by the increase in other liabilities;

- for the decrease of 17.06%, we note a significant decrease in assets (fixed and current assets), cumulated with the appearance of the deferred tax liability;
- the decrease of 43.89% is justified by the decrease in fixed assets, to which is added the appearance of the deferred tax liability;
- finally, the drop of 157.87% (from 80 million positive equity to almost 50 million negative equity) is justified by the significant negative adjustment of fixed assets and a moderate increase in short-term liabilities.

In line with changes in equity, leverage increased, on average, by 10.17%:

- in two cases, the variation is zero, but the leverage is extremely high for the two companies: 96% and 270% respectively;
- in two other cases, the variations go up to 1% (-0.86% and + 0.34%);
- there are changes of up to 10% for 8 companies (from -4.70% to + 7.67%);
- the other 5 companies report an increase in the leverage of more than 10%: from 10.60% to 83.52%.

For the sample of companies analysed by Săcărin (2014), the leverage does not change significantly, while Istrate (2014) calculates an increase in this indicator, but of smaller dimensions than in this study.

5.2 Impact of IFRS on income statements figures

In the case of sales (revenues, under IFRS) we have not proposed any hypothesis on the direction of the modification, not having enough references in the literature in this regard. The main conclusions are as follows:

- the average of the variations is an increase of 0.50%, but it results from the compensation of significant deviations in both directions;
- for seven companies, the percentage change is zero, declaring the same revenues in RAS and IFRS;
- four companies have differences of up to 1%: -0.56%; 0.25%; -0.18% and 0.03%;
- three companies report changes of up to 5%: -4.63%; - 1.03% and + 3.16%;
- the three remaining companies recorded a significant change in their revenues of -55.27%; -15.00%, respectively + 82.22%.

The decrease with 55.27% of the sales seems to be mainly due to the restatement of subsidies linked to sales, eliminated from this indicator.

In the case of the company whose revenues decrease by 15.00%, the main reason has been the elimination of joint ventures, which do not meet the criteria for recognition as such (IAS 28), as well as due to the 'elimination of the revenues which appeared following the re-invoicing of certain expenses.

For the situation of the company for which revenues increase by 82.22%, the explanation comes from the integration in the indicator of certain operating subsidies.

The impact of the transition to IFRS on the net income of the 17 Romanian PEs is significant, if we take into account each of the firms analysed. First, one of the companies reports a zero result in the profit and loss account, because the profit it obtains is immediately recognized in debt to a public authority, being recorded as an expense, so that the balance of the result always be zero. For the other 16 companies, the effects of IFRS are very diverse, with an average difference of + 9.03%. There are a few extremes that are worth mentioning. So:

- only one company calculates a difference of less than 1% between the IFRS net income and the RAS net income (-0.33%) – it must be said that this company has significant losses, so that the transition to IFRS hardly changes its catastrophic financial situation;
- six companies show variations of up to 5% (from -4.34% to 3.18%);
- four companies have differences between 5% and 10% (from -8.93% to + 9.18%);
- the 5 other companies established differences of more than 10% between IFRS and RAS: -30.70%, -13.88%, 16.97%, 32.59%, 142.30%.

For the company whose result has decreased by 30.70%, the explanations that we find by comparing the IFRS financial statements with those in NCR are:

- the significant drop in revenues from the production of fixed assets, which led to a drop in total operating profit;
- significant increase in operating expenses, without the profit and loss accounts showing exactly which expenses are changed – the company concerned does not make public a comparative situation between the two lines of the financial statements.

For the company whose net income decreased by 13.88%, the most important adjustment which led to this situation was the recognition of a significant charge with the depreciation of tangible fixed assets, partially offset by a deferred tax revenue.

In the case of the increase in profit to 16.97%, the explanation comes mainly from the deferred tax revenue recognized by the respective company in 2017.

For the company with an increase of 32.59% in the net income, the explanation comes from the significant drop in depreciation charges, impairment and charges with provisions, to which is added a significant deferred tax revenue.

Finally, the transition from a loss of more than 20 million lei to a profit of more than 8 million lei represents an increase of 142.30% of the net income, generated to a large extent by deferred taxes after restatement to IFRS.

Of the 17 companies analysed, 10 show comprehensive income different from the net accounting income, the others having no differences. The average difference between the comprehensive income and the net income, for the 10 companies mentioned above, of -28.94%, for a minimum of -147.53 and a maximum of 13.57% (for seven companies the comprehensive income is lower than the net income).

There are one or more sources of other comprehensive income:

- recognition of actuarial differences concerning the rights of employees (in seven cases);
- error correction (in 3 cases);
- revaluation of tangible fixed assets (2 times).

In all cases, the deferred tax generated by the timing differences resulting from the taking into account of these other elements of the comprehensive income also occurred.

5.3 The audit opinions received by the state-owned enterprises switched to IFRS

PwC (2015) confirms that the role of the financial auditor in public enterprises is very important, especially because the auditor must approach state firms in a holistic manner, in order to cover the needs of stakeholders who may have various interests in the analysis of these companies. IBRD (2014) insists on the financial transparency of each individual PE, but also of the public authorities which own them.

The financial statements published by the 17 PEs are subject to the financial audit. The entities analysed are companies of public interest and, in this capacity, the financial audit is compulsory. If, by the financial audit, we verify the regularity and the sincerity of the financial statements in order to identify the possible risks and irregularities in accounting and in financial reporting, then, we can affirm that, for the 17 EPs analysed in our study, the situation can be described as worrying: for the 2018 financial year, there were 12 cases of modified opinions. This 71% rate of modified opinions for 2018 suggests that the way in which the 17 PEs prepare and present financial information is not really of the best quality (the high percentage of modified opinions is relatively persistent in time: Istrate (2018) found almost the same percentage for the 2010-2017 period, and for the same companies). In fact, the rate of 71% of modified opinions is exceptional, even for the case of Romania, when compared to other categories of companies:

- for Romanian firms listed on the regulated market of the Bucharest Stock Exchange, the percentage of modified opinions for the RAS period (794 observations) is 36.40%, while for the IFRS period (from 2012 to 2018, 567 observations), this percentage drops to 22.40% (for the two periods as a whole, we have 30.57%); the Big 4 have slightly more modified opinions than the non-Big 4;
- for Romanian firms listed on the alternative market of the Bucharest Stock Exchange (AeRo), applying the RAS, the percentage of modified opinions is 22.95% (2,270 observations); here too, the Big 4 (very few by the way), give more modified opinions than the non-Big 4;
- in the case of all the firms owned by the Romanian state, MFP (2019) find that 66.67% (98 out of 147) of the CPEs (including the 17 EPs analysed

in this study) have published on their websites the audit report for the year 2018, and that 31.63% of these firms have received modified opinions; at the level of LPEs, MFP (2019) finds only 305 financial audit reports for the 1,169 firms analysed and, among these reports, there are 14.43% of modified opinions.

6. CONCLUSIONS

Romanian state-owned companies account for barely 0.3% of the country's total firms, but they employ almost 7% of the staff, control almost 9% of the assets and generate more than 3% of the total sales of Romanian firms. Among these nearly 1,500 Romanian public companies, there are 225 (end of 2018) controlled by the central authorities. Problems – sometimes serious – in the functioning of these state-owned firms have led the authorities to establish strict rules of governance, according to models proposed by international and regional organizations such as the OECD, the EU, the IMF and the WB. As part of these efforts to improve the functioning of Romanian state-owned companies, we note the introduction of the obligation to apply IFRS in the case of 17 large state-owned companies, from 2018, with a 2-year preparatory period (2016 and 2017). The expectations of stakeholders regarding the application of IFRS are aimed at more transparency, more quality in the accounting and financial presentation of these firms. At the same time, given that this transition to IFRS was made following the insistent recommendations of the international financial organizations, it is likely that the Romanian authorities are trying to create an easier framework for the access of these firms to direct or indirect financing from these organizations or from other international banks.

Unlike the previous wave of application of IFRS, which was decided in June 2012 for application from fiscal year 2012, the 17 state-owned firms affected by the transition to IFRS had 2 preparatory years, during which they kept current accounts in Romanian accounting standards and only restate the final balance of accounts in order to obtain IFRS financial statements for 2016 and 2017. The first full year of application of IFRS is 2018, which provides access to 2017 data in both IFRS and RAS. By comparing these two sets of data, we found that the effects of the transition to IFRS seem relatively significant for only part of the firms analysed. Indeed, there are cases in which the differences are not significant at all, which can be explained by pre-IFRS accounting choices compatible with international standards, but also by an approximate application of the new standards.

At the balance sheet level, significant differences appear for 8 entities and the main sources of these differences consist in the cancellation of certain revaluations (very common in Romania in RAS), the recognition of impairments and the recognition of a series of intangible fixed assets by a company that manages Romanian national roads and motorways. Regarding the asset structure

(fixed assets vs current assets), there are few differences (for only 2 PE the differences exceed 10%) and they are due to the recognition of work in progress and the impairment of inventory and receivables. On average, the equity of state-owned enterprises that switch to IFRS decreases, in particular due to the depreciations and provisions recognized, but also due to deferred tax liabilities.

At the level of the income statement, there are three entities for which the sales amount changes significantly, due in particular to the accounting treatment of operating subsidies. The net income is one of the indicators whose variation occurs for the majority of firms.

A peculiarity of these companies is that the opinions of the financial auditors are mostly modified (71% for the 2018 financial year, against 76% in 2017), which requires us to be very careful in the interpretation of the accounting figures, both in RAS and in IFRS.

The limits of the study consist in the reduced dimensions of the selected population and in the strictly descriptive character of the analysis. The improvement of these limits represents as many possibilities for future research.

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NOTES:

- [1] To designate companies in which the state is the majority shareholder, several terms are used: government firms/companies, companies linked to the state, parastatal entities, public enterprises, public sector entity, etc. (PwC, 2015).
- [2] There are other countries – from ex-communist space or elsewhere – that have had to comply with the conditions imposed by international financial organizations (Alon and Dwyer, 2012).
- [3] Romanian experience tells us that these international financial institutions insist a lot on the adoption of IFRS. Indeed, there is a vast literature that finds positive effects of the application of IFRS, especially for listed companies, but we must also take into account the fact that there are studies that warn us that the impact of IFRS has not always been positive (Mantzari, Sigalas and Hines, 2017).
- [4] One country where all state firms are required to apply IFRS is Greece (Mantzari, Sigalas and Hines, 2017).
- [5] OECD believes that all large state enterprises worldwide must apply internationally accepted accounting standards (OECD, 2016) and must comply with the same transparency requirements as listed companies, at a minimum.

- [6] The separation of these two categories is very common in the literature (Capalbo *et al.*, 2014; IBRD, 2014; PwC, 2015; the literature on PE in China, including Dai *et al.*, 2018; Bradshaw, Liao and Ma, 2019).
- [7] At European level, a study proposed by KPMG and Bocconi University find that the public enterprise sector represents 0.9% of European firms, but contributes to the regional economy with roughly 4% in terms of jobs, total assets or value added (European Commission, 2018).
- [8] In fact, corruption and waste of resources are associated with state enterprises all around the world (PwC, 2015); for Central and Eastern Europe, Berglöf and Pajuste (2005) found that corruption was a serious problem for many countries.
- [9] Similar conclusions propose Wang, Wong and Xia (2008) and Lin and Yen (2016). In contrast, Nelson and Mohamedd-Rusdi (2015) find that government control leads to an increase in audit fees.

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ABOUT ROYALTIES AND OTHER REVENUES OWED TO THE PUBLIC BUDGETS FROM THE EXPLOITATION OF ROMANIA'S NATURAL RESOURCES

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Abstract

This paper provides a comprehensive study of royalties and other categories of budget revenues that the Romanian state collects in exchange for its natural resources. The paper contains details on the form of ownership and how to exercise it on the basement and its resources, so that then, the main body of the paper refers to royalties as sources of budget revenue for the Romanian state and its administrative subdivisions.

In the content of the paper is presented the notion of royalty, in general, with the meaning given to it by the Romanian Fiscal Code as the consideration of the right to exploit a private property, respectively as payment made to a person for the right to use or grant a work of any kind. Starting from this content given to the notion of royalty, we then referred to the meaning given to this legal institution in public law. Thus, we referred to the provisions of the Romanian Administrative Code regarding the royalty resulting from public concessions. This time it is about the consideration of the right to exploit a natural resource that belongs to the public domain of the state or a public service.

In these circumstances, the paper specifies the conceptual and content differences between the notion of royalty, on the one hand, and the notions of tax, respectively fee, on the other hand, all being sources of supply for the public budgets of the state or administrative-territorial units.

Most of this paper presents the way in which the royalties in the mining, oil, exploitation of natural gas in both onshore and offshore systems are regulated, as well as the forestry royalty and other categories of taxes, duties and guarantees that the Romanian state charges for the exploitation of its natural resources and for the services related to these activities, or for the restoration of the environment affected by such activities.

Keywords: *royalty; budgetary income; mining royalty; oil royalty; forest royalty.*

JEL Classification: K23

1. INTRODUCTION

1.1. The exercise of the ownership over the subsoil and its richness

According to the Romanian Constitution, the mineral and hydrocarbon resources located on the territory and in the subsoil of the country, respectively of the continental shelf, in the economic zone of Romania from the Black Sea, form the exclusive object of public property and belong to the Romanian state (see art.

136, paragraph 2 of the Romanian Constitution, respectively art. 1 of the Mining Law no. 85/2003, updated).

All the data regarding the mineral resources and reserves obtained from mining and oil activities, regardless of the nature of the storage, constitute, according to the law, **the national geological fund**.

In order to legally operate the subsoil, the **extractive cadastre** was drawn up, which is that cadastre of specialty representing a subsystem of evidence and systematic inventory of real estate related to mining and oil activities (land, construction and surface and underground installations) under technical, economic, legal aspect and other information regarding the established perimeter.

It was also drawn the **mining book**, which is a component of the extractive cadastre, which includes all the data concerning the legal regime of the areas related to the perimeter of prospecting, exploration and exploitation, the ownership, the topographic situation of works related to mining, to resources and mineral reserves and production. At the same time, the **oil book** is the evidence tool that includes all the data on the legal regime of the areas related to the perimeter of development and exploitation, the ownership, the topographic situation of works related to oil operations, the oil resources and reserves, as well as the data on the delimitation of perimeters and oil operations carried out in the prospecting and exploration phases.

The subsoil is an appropriable property, being the object of the right of property. The Constitution of Romania, in art. 44 paragraph (5), regulates **the right of use over the subsoil** as it follows: “For works of general interest, the public authority may use the subsoil of any real estate, with the obligation to compensate the owner for damaging the soil, plantations or buildings, and any other damage imputable to the authority”. The compensations referred to shall be determined by mutual agreement with the owner or, in case of divergence, shall be determined by the courts. There is, therefore, a right to use the subsoil, which must be at the basis of the exploitation of its richness.

The right to use the land necessary for mining and oil activities within the perimeter of exploration or exploitation is acquired by selling – buying the land and, as the case may be, the constructions located on them, at the price agreed between the parties, by exchange of lands, accompanied by relocation of the affected owner and the reconstruction of the buildings on the newly granted land, at the expense of the owner who benefits from the released land, according to the agreement concluded between the parties, by renting the land for a fixed period, on the basis of contracts concluded between the parties, by expropriation for public utility, by grant of the lands, by the association between the land owner and the licensee or by other procedures stipulated by the law (according to art. 6 of the Mining Law no. 85/2003, updated, as well as art. 6 of the Oil Law no. 238/2004, updated).

The goods which are stipulated by the law or which by their nature can be exploited for the purpose of harvesting natural, civil or industrial fruit and products may be the subject of a granting (according to art. 302 of the Administrative Code). The goods in public property may be granted by the state or by the administrative-territorial units based on a public property grant contract.

The public property grant contract is that contract concluded in writing by which a public authority, called the grantor, transmits, for a certain period, to a person, called the grantee, who acts at his own risk and responsibility, the right and obligation to exploit a good public property in exchange for a royalty.

The state has the quality of grantor for the public property of the state, being represented, in this sense, by ministries or other specialized bodies of the central public administration, and the county has the quality of grantor for the public property of the county, being represented, in this sense, by the president of the county council. Also, the village, the city or the municipality, as the case may be, may have the quality of grantor for their public property, being represented, in this sense, by the mayor of the village, city or municipality, respectively by the general mayor of Bucharest (according to art. 303 of the Administrative Code).

1.2. The notion of royalty and its extent

According to the Romanian legal doctrine, the royalty represents the equivalent value of the right to exploit a good and the benefit, in principle, is of the owner of the exploited good (or granted or rented).

As for the commercial activities carried out in the **private sector**, art. 257 of the Fiscal Code defines the term “royalties” as payments of any kind received for the use or granting of any copyright on a literary, artistic or scientific work, including cinema and software movies, any patent, trademark, drawing or model, plan, secret formula or manufacturing process or for information concerning the experience in the industrial, commercial or scientific field.

So, payments for the use or right to use industrial, commercial or scientific equipment will be considered royalties. Generally speaking, the royalty is calculated according to the degree of use of the respective good (for example, the number of broadcasts of a musical piece) and is owed to the owner of the good to be used.

In the public sector, respectively regarding the goods belonging to the public domain of the state or of the administrative-territorial units, the royalty is paid for the right to use a good or a service, but only from the moment they are actually used. The royalty can also be paid as a percentage of the income made by those who exploit the respective resources. It is constituted as income to the state budget or to the local budgets, as the case may be.

According to art. 307, paragraph (2) of the Administrative Code, the royalty obtained by grant, from activities of exploitation of the surface resources of the state, is distributed as it follows:

- a) 40% to the local budget of the county on whose territory the exploitation activity exists;
- b) 40% to the local budget of the village, of the city or of the municipality, as the case may be, on the territory of which there is an exploitation activity;
- c) 20% to the state budget.

We mention the fact that this legal provision sometimes contradicts the provisions of other normative acts that regulate the exploitation royalties resulting from the grant of some natural resources of the state to various economic operators. We consider that the provisions of the Administrative Code in this matter represent a general law, and insofar as there are other legal provisions, they acquire the status of special laws, which apply mainly. Therefore, the legal provisions I previously referred to will apply in this form only to the extent that they do not undergo changes through special laws.

The royalty obtained by grant, from activities of exploitation of the surface resources of the administrative-territorial units, is constituted income to the budget of the granting administrative-territorial unit. The method of calculation and payment of the royalty is established by the line ministries or by other specialized bodies of the central public administration or by the local public administration authorities, according to the legal provisions.

Thus, we want to emphasize that the most important feature of the royalty is that it is paid for the right to exploit a good, but only from the moment this actually occurs and only in relation to the degree of its exploitation.

Article 307, paragraphs (4) and (5) of the Administrative Code, stipulates that, when initiating the procedures for determining the way the royalty is calculated, the line ministries, other specialized bodies of the central public administration or local public administration authorities, as appropriate, must take into account criteria such as the proportionality of the royalty with the benefits obtained from the exploitation of the good by the grantor, the market value of the good that is the object of the grant, or the correlation royalty – duration of the grant.

The difference between a royalty due to the State for the right to exploit a good belonging to the public domain or a public service, on the one hand, and a tax, on the other hand, consists in the fact that the royalty is paid when the good is used or the service in question brings a benefit, while the taxes are paid regardless of whether the good is used or not. So, owning a car or a home automatically generates a tax, regardless of whether the owner uses the car or lives at that address. The tax is owed for the ownership of a good, for the possession of a quality or for the performance of an activity, without receiving in return any good or service from the state or any other territorial administrative unit.

At the same time, the royalty should not be confused with the fees. The latter are paid in order to benefit from a public service and only if that one is requested

and provided by a public authority or institution or its intermediary (for example, sanitation fees). The fee may also be a “price” for the possibility of causing damage to third parties (e.g., car pollution fee). Unlike the fee that is paid to the state or administrative-territorial unit by the beneficiary of the public service, the royalty is paid by the public service provider for the right to provide such a service for profit and to obtain profits from this activity.

Therefore, we can see that although all three legal institutions subject to analysis are sources of budgetary revenue for the public budgets of the state or of the administrative-territorial units, they have different characteristics and are owed by different subjects, which makes it impossible to draw, in no form, a sign of equality between them.

In conclusion, as can be seen from a comparative analysis of the notion of royalty that manifests itself in the private sector compared to the public sector, we see an essential difference between the two notions. Thus, in the private sector, the royalty allows to exploit a good that does not consume its substance through that exploitation. In principle, in private law we encounter the royalty regarding the exploitation of an intellectual creation or work, often immaterial, meaning intangible. This makes the exploitation of that good external to that good itself. By paying the royalty owed to the owner of the property, he realizes an income, which from the point of view of the Romanian Fiscal Code is a taxable income.

In the public sector, on the contrary, the right to exploit that good refers to its very substance. Thus, the mining royalty, for instance, is not limited to a simple use of mineral resources external to those goods, but to an exploitation leading even to the appropriation of the goods resulting from the exploitation. Therefore, the ores resulting from the exploitation belong to the beneficiary of the exploitation right, circumstance in which, we consider that the royalty refers even to the equivalent value of the materials resulting from the exploitation activity of the goods belonging to the public domain of the state, or to the public domain of the administrative-territorial units. Under these conditions, **the level of the royalty must be dependent on the price charged on national or even international markets** for the goods resulting from the activity of exploitation of the Romanian state's natural resources.

2. EXPLOITATION ROYALTIES AND OTHER WAYS OF CAPITALIZING ON NATURAL RESOURCES

2.1. Introductory considerations concerning exploitation royalties

The exploitation royalties (they are also referred to in the literature of specialty as environmental royalties – see Onet, 2017, pp. 29-30) **are levies in pecuniary form owed to a public budget (in principle, the state budget or local budgets) definitively, obligatorily and regularly for the right to exploit,**

also regularly, the natural resources of the state (or of the administrative-territorial units), such as ores, hydrocarbons, agricultural lands, forest lands.

By exploitation we mean the specific activities of exploration, identification, harvesting and appropriation of goods of any kind resulting from these activities, usually to be used for economic purposes.

According to the Romanian legislation, there are mining royalties (Government Ordinance no. 6/2013 regarding the establishment of special measures for the taxation of the exploitation of natural resources, other than natural gas, approved by Law no. 261/2013, with subsequent amendments), royalties for the exploitation of some oil lands (Law no. 238/2004 on oil, with subsequent amendments) which are paid when the extraction is started and are calculated in relation to the quantity of extracted oil, royalties for the exploitation of the wood mass (Government Ordinance no. 6/2013 on the establishment of special measures for the taxation of the exploitation of natural resources, other than natural gas, approved by Law no. 261/2013, with subsequent amendments), which is paid according to the quantity of wood produced.

The mining royalty is owed to the state budget and is established at the end of the license or at the issuance of the exploitation permit of the natural resources of the subsoil, such as:

- logging;
- upper coal extraction;
- lower coal extraction
- extraction of crude oil;
- extraction of ferrous ores;
- extraction of uranium and thorium ores;
- extraction of other non-ferrous metal ores;
- mineral water extraction;
- other extractive activities.

Generally speaking, **the royalty** for mining or some oil fields is paid when the extraction begins. Also, **the oil royalty** is paid according to the amount of oil extracted, and **the forest royalty** is paid according to the amount of cubic meters of wood produced and exploited.

By comparison with the royalty, the tax for the grant of these lands is paid annually no matter whether oil has been extracted or not.

2.2. General regulations on other ways, than royalties, of capitalizing on natural resources

Along with royalties, the economic operators that carry out activities of exploitation of natural resources also support other categories of contributions to the public budgets. Thus, according to Government Ordinance no. 6/2013 regarding the establishment of some special measures for the taxation of the natural resources exploitation, other than natural gas approved by Law no.

261/2013 with subsequent amendments, the **incomes from the activities of natural resources exploitation**, other than natural gas **are taxed**. More specifically, these are activities such as: logging, upper coal mining, lower coal mining, crude oil extraction, iron ore extraction, uranium and thorium ore extraction, extraction of other non-ferrous metal ores and other extractive activities.

This tax is of 0.5% and applies to the income obtained by economic operators carrying out such activities. These revenues are calculated differently, as follows:

a) the economic operators who exploit natural resources and capitalize on them as such or following a process of processing, preparation or sorting without being used by them to obtain other types of products, owe a tax for the income obtained from their capitalization;

b) the economic operators who use natural resources exploited as raw materials in order to obtain other products (e.g. energy products) and whose price is quoted on the stock exchange, owe a tax for the part of the income resulting from the capitalization of finished products, corresponding to the value of the raw materials. The part of the income corresponding to the value of the raw materials is determined according to the following formula:

$$\text{VMP} = \text{QV} \times \text{K} \times \text{PMK} = \text{QC} / (\text{QO} + (\text{Delta}) \text{S}) \quad (1)$$

Where:

VMP = income resulting from the capitalization of finished products, corresponding to the value of the raw materials;

QV = total quantity of finished products sold in the month of reference (excluding goods representing similar products purchased from third parties);

K = average production coefficient;

PM = arithmetic average of the reference prices on assortments of natural resources, established by the competent authority in relation to the international quotations of these natural resources, valid for the month for which the tax is calculated;

QC = the amount of natural resources consumed in the production process in the reference month (without taking into account natural resources purchased from third parties);

QO = total quantity of finished products obtained in the reference month;

(Delta) S = net change in semi-finished products in the reference month (quantity of semi-finished products at the end of the reference month minus the quantity of semi-finished products at the beginning of the reference month).

c) in the case of economic operators who use the extracted natural resources as raw materials to obtain other products (for instance, brick, tile, cement, BCA, asphalt mixtures, concrete, etc.) and whose price is not quoted on the stock exchange, the tax is owed for the part of the income resulting from the

capitalization of the finished products, corresponding to the book value of the extracted natural resources used to obtain the finished products thus traded, value in which are included all the taxes paid for exploitation.

The part of the income resulting from the recovery of the finished products, corresponding to the book value of the extracted natural resources used to obtain the finished products thus marketed, shall be calculated according to the following formula:

$$\text{VMP} = \text{QV} \times \text{K} \times \text{CMEK} = \text{QC} / (\text{QO} + (\text{Delta}) \text{S}) \quad (2)$$

Where:

VMP = income resulting from the capitalization of finished products, corresponding to the value of the raw materials;

QV = total quantity of finished products sold in the reference month (excluding goods representing similar products purchased from third parties); K = average production coefficient;

CME = average cost of extracting natural resources for the reference month;

QC = the amount of natural resources consumed in the production process in the reference month (without taking into consideration natural resources purchased from third parties);

QO = total quantity of finished products obtained in the reference month;

(Delta) S = net change in semi-finished products in the reference month (quantity of semi-finished products at the end of the reference month minus the quantity of semi-finished products at the beginning of the reference month).

The sums representing the tax paid under the above-mentioned conditions, represent deductible expenses when establishing the taxable profit, according to the Romanian Fiscal Code.

The tax is paid to the state budget and is administered by the National Agency for Fiscal Administration, according to the provisions of the Fiscal Procedure Code.

It is important to note that this tax was originally introduced for 2013, but the provisions of this ordinance have been extended until December 31, 2021, included.

2.3. Royalties and other ways of capitalizing on natural resources in the mining field

The holders of mining licenses or permits are obliged to pay to the state budget **a fee for the activity of prospecting, exploration and exploitation of mineral resources**, as well as a **mining royalty**.

The **annual fee** for the prospecting activity is set at 341 lei/ square km, the one for the exploration activity is set at 1,367 lei/ square km; it doubles after 2 years and becomes 5 times higher after 4 years, and the annual fee for the

exploitation activity is set at 34,180 lei/ square km. These values were updated according to Government Decision no. 350/2015.

The amount of fees will be updated annually, at the proposal of the competent authority, by Government decision, depending on the inflation rate. They are owed annually and are paid in advance for the next year, until December 31 of the current year (according to art. 44 of the Mining Law no. 85/2003, updated), **the mining royalty is defined by law** (art. 3 point 31 of the Mining Law no. 85/2003) **as the sum of money owed to the state budget by the holder for the grant or administration of the activities of exploitation of mineral resources, goods of the public domain of the state.**

The mining royalty owed to the state budget is established, at the end of the license or at the issuance of the exploitation permit, as it follows:

- a. a percentage of 5% of the value of mining production for ferrous, non-ferrous, aluminum and aluminum ores, radioactive, rare and dispersed soils, precious and semi-precious stones, mining waste products, bituminous rocks, therapeutic mineral waters, thermo mineral waters, geothermal waters and their accompanying gases, non-combustible gases, therapeutic sludge and peats;
- b. a percentage of 4% of the value of coal mining production;
- c. a percentage of 6% of the value of mining production for noble metals;
- d. the equivalent in lei of 0.875 euro, per mining production unit, for non-metallic substances;
- e. the equivalent in lei of 0.4375 euro, per mining production unit, for igneous rocks, metamorphic rocks, industrial and construction limestone, dolomite, sandstone and industrial tuffs;
- f. the equivalent in lei of 0.50 Euros, per mining production unit, for clays, marls, loess, sand and gravel, sand and kaolin rocks;
- g. the equivalent in lei of 0.6875 euro, per mining production unit, for industrial blue, pumice stone, nepheline syenites, gypsum, chalk, siliceous sand, bentonite, kaolin sand, slate and diatomite;
- h. the equivalent in lei of 2.5 Euros, per mining production unit, for ornamental basalt, ornamental dacite, ornamental andesite, ornamental rhyolite, ornamental granite and ornamental granodiorite;
- i. the equivalent in lei of 3,125 Euros, per mining production unit, for ornamental blue, ornamental aragonite and ornamental siliconites;
- j. the equivalent in lei of 3.75 Euros, per mining production unit, for marble, ornamental limestone, ornamental tiles, travertine and ornamental tuffs;
- k. the equivalent in lei of 1.0 euro, per mining production unit, for haloids salts.

The mining royalty owed to the state budget for natural mineral waters is established at the source, in the RON equivalent of 4 euro/ 1,000 liters, at the exchange rate of the National Bank of Romania from the date of payment.

Mining royalties are calculated at the official lei/ euro exchange rate established on the first working day of October of the previous year, published in the Official Journal of the European Union.

They are owed from the day of production and are payable quarterly, maturing until the 25th of the first month of the following quarter (according to art. 45 of the Mining Law no. 85/2003, updated).

Licensees are required to provide the competent authority with the data and information necessary to calculate the mining royalty owed by law.

The verification of the accuracy of the data and information based on which the mining activity fee and the mining royalty are calculated is made by the competent authority, as well as by the fiscal bodies subordinated to the National Agency for Fiscal Administration.

The sums representing the mining activity fee and the mining royalty owed to the state budget are declared by the payer to the competent fiscal body until the payment term established by law.

For non-payment on time of the mining activity fees and of the mining royalty, interest and penalties of delay are owed, according to the fiscal legislation in force (according to art. 47 of the Mining Law no. 85/2003, updated).

For the documents issued in the exercise of its attributions: permits, exploration and exploitation permits, exploration and exploitation licenses, reserve registration documents, decisions to cease the mining activity, association approvals, license transfer, additional documents to licenses, certificates, authorizations or other similar acts, as well as for the consultation and use of documents and information related to mineral resources and the Mining Book, the competent authority charges **tariffs** established by order of the president of the competent authority.

The extra-budgetary revenues generated by the competent authority from the collection of these tariffs are used to finance the expenses for making data packets and launching public tenders, organizing rounds to present the conditions of participation in the public tender, holding auctions and developing studies, expertise and technical advice and other material expenses, as well as for endowments. The unused revenues, at the end of the budget year, shall be taken over as revenue in the following year at the disposal of the competent authority.

The categories of expenses that are financed from extra-budgetary revenues approved by the state budget law are established by order of the president of the competent authority (According to art. 48 of the Mining Law no. 85/2003, updated).

The payment of the fees, tariffs and royalties presented above does not exempt the holder of the license/permit from the payment of the budgetary obligations owed according to the fiscal legislation in force.

The holder of the mining license shall provide a **financial guarantee for the restoration of the environment**, in accordance with the technical instructions issued by the competent authority.

The financial guarantee for the restoration of the environment represents the obligation and, at the same time, the responsibility of the natural or legal persons who carry out mining activities based on a license or exploitation permit, to ensure the financial funds necessary for the restoration of the environment and it can be in bank deposit, irrevocable banking guarantee or other means provided by law.

In order to obtain the exploitation permit, the applicants are obliged to establish the financial guarantee for the restoration of the environment, as well as to pay the tax for the exploitation activity and the mining royalty, in accordance with the law. The establishment of the financial guarantee for the restoration of the environment and the payment of the tax will be made on the date of issuing the permit, and the payment of the mining royalty will be made gradually, during the validity of the exploitation permit.

The use of rocks usable in constructions, peat and mineral waters, located on land owned by individuals, is exempt from the payment of fees and legal royalties, provided that the competent authority is notified through its territorial bodies. Children's homes and old people's homes located on land owned by them also benefit from the same exemption.

2.4. Royalties and other ways of capitalizing on natural resources in the oil field and onshore natural gas exploitation

The European Commission calculated Romania's total energy dependence at 17%, while the European Union had to import more than half of the energy consumed. Only Estonia and Denmark have a lower energy dependence than Romania. As for the hydrocarbons, Romania provides from its own production 40% of the crude oil needs, compared to only 10% in the European Union, but also 90% of the natural gas needs, compared to 35% in the European Union. This is how Romania is the third least energy dependent country in the EU.

The holders of oil agreements are obliged to pay to the state budget an oil royalty. **The oil royalty** represents the sum owed by the holders of the oil agreements to the state budget, in accordance with the law, for the development of the oil operations, as well as for the use of the state public property goods within the oil operations.

The oil royalty is set as it follows:

a. a percentage of the value of the extracted gross production, for oil operations for the exploitation of oil fields, as it follows:

➤ **oil**

- 3.5% for deposits producing less than 10 tons/ quarter;

- 5% for deposits producing between 10 and 20 tons/ quarter;

- 7% for deposits producing between 20 and 100 tons/ quarter;
- 13.5% for deposits producing over 100 tons/ quarter.

➤ **natural gas**

- 3.5% for deposits producing less than 10 m³/ quarter;
- 7.5% for deposits that produce between 10 and 50 m³/ quarter;
- 9% for deposits that produce between 50 and 200 m³/ quarter;
- 13% for deposits that produce over 200 m³/ quarter.

b. a percentage of 10% of the value of the gross revenues realized from oil operations of oil transport and transit through the national oil transport systems, as well as from the oil operations carried out through the oil terminals in the public property of the state;

c. a percentage of the value of gross revenues from oil transport operations through transportation systems, other than the National Oil Transport System, as well as from oil operations carried out through oil terminals, other than those in state public ownership, percentage determined based on a methodology developed by the competent authority and approved by Government decision;

d. a percentage of 3% of the value of the gross income realized from the underground natural gas storage operations.

The oil royalty is owed from the day of the oil operations start and is payable quarterly, maturing on the 25th of the first month of the following quarter.

The calculation of the value of the oil royalty owed to the state budget by the holders of the oil development and exploitation agreements is made on the basis of the reference prices established by the competent authority (According to art. 49 of the Oil Law no. 238/2004, updated).

The reference price of oil represents the price established by the competent authority, based on a methodology founded on specialized studies, which is used to calculate the state budget revenues related to the oil royalty.

No fee shall be owed for:

- a) the quantities of oil destined to constitute the minimum safety stock;
- b) natural gas re-injected into the field deposit for technological purposes.

The gas extracted from wells simultaneously with crude oil, unused and not capitalized by the holder, shall be handed over to the competent authority, free of charge, and the holder is exempt from the payment of the oil royalty. The right to capitalize on these gases will be granted by the competent authority by oil agreement, the new holder bearing the costs of taking over, the risks of use, as well as the oil royalty related to the taken over quantities.

The verification of the accuracy of the data and information based on which the oil royalty is calculated is made by the competent authority, as well as by the fiscal bodies subordinated to the National Agency for Fiscal Administration.

The sums representing the oil royalty owed to the state budget are declared by the payer to the competent fiscal body until the payment term provided by law.

For non-payment on time of the oil royalty, interest and delay penalties are owed, according to the fiscal legislation in force.

If there are delays of more than 6 months in the payment of these obligations, the competent authority will cancel the oil granting (according to art. 51 of the Oil Law no. 238/2004, updated).

For the documents issued in the exercise of its attributions, the National Agency for Mineral Resources (approvals, exploration and exploitation permits, reserve registration documents, decisions to cease oil operations, association approvals, transfer of the oil agreement, certificates, authorizations or other such acts) charges **tariffs** established on the basis of related costs including salary expenses, social contributions related to salaries and material expenses.

For the consultation and use of some documents and information referring to oil resources, in order to participate in bidding competitions, as well as for the consultation of the Oil Book, **fees** are charged calculated based on the value of the use of documents and information.

Fees are calculated depending on the volume of the provided information, its quality, the method of investigation used to obtain the information and its age.

Both the above tariffs and fees constitute extra-budgetary revenues of the National Agency for Mineral Resources (according to art. 52 of the Oil Law no. 238/2004, updated).

2.5. Royalties and other ways of capitalizing on natural resources in the field of offshore natural gas exploitation

Compared to the legislation previously referred to and which is applicable in the onshore system, offshore operations in the Black Sea benefit from separate regulations (It is about Law no. 256/2018 concerning some measures necessary for the implementation of oil operations by the holders of oil agreements on offshore oil perimeters).

In this situation, the holders of oil agreements regarding offshore oil perimeters, including their subsidiaries and/or belonging to the same economic group of interest that actually carry out both extraction activities and activities of sale of natural gas extracted from these perimeters, are obliged to calculate, declare and pay an **additional offshore income tax** (according to art. 19, paragraph (1) of Law no. 256/2018 concerning some measures necessary for the implementation of oil operations by the holders of oil agreements on offshore oil perimeters).

Additional income means the difference between the weighted average price of natural gas sold from own domestic production in offshore perimeters and the purchase price of natural gas from domestic production for domestic and non-domestic customers in 2012, respectively 45.71 lei/ MWh, multiplied by volumes of gas sold from domestic production on offshore perimeters.

The tax on additional offshore revenues is calculated by applying one or more calculation percentages, as the case may be, on the additional revenues got from the sale of natural gas extracted from offshore perimeters, as they are determined according to annex no. 2 of Law no. 256/2018, tax from which the value of investments in the upstream segment is deducted.

The tax on additional offshore income takes into account **the reference price** established by ANRM for the calculation of royalties. The transactions carried out below the reference price are taxed at the reference price.

The tax calculation percentages are calculated based on the natural gas sales prices charged by the holders of oil agreements regarding offshore oil perimeters based on the price grid below, adjusted annually starting with January 1, 2019 with the annual consumer price index, as it follows:

- a) 30% of the additional income for prices up to 85 lei/ MWh included;
- b) 15% of the additional revenues obtained following the practice of prices higher than 85 lei/ MWh and lower or equal to 100 lei/ MWh;
- c) 30% of the additional revenues obtained following the practice of prices higher than 100 lei/ MWh and lower or equal to 115 lei/ MWh;
- d) 35% of the additional revenues obtained following the practice of prices higher than 115 lei/ MWh and lower or equal to 130 lei/ MWh;
- e) 40% of the additional revenues obtained following the practice of prices higher than 130 lei/ MWh and lower or equal to 145 lei/ MWh;
- f) 50% of the additional revenues obtained following the practice of prices higher than 145 lei/ MWh and lower or equal to 160 lei/ MWh;
- g) 55% of the additional revenues obtained following the practice of prices higher than 160 lei/ MWh and lower or equal to 175 lei/ MWh;
- h) 60% of the additional revenues obtained following the practice of prices higher than 175 lei/ MWh and lower or equal to 190 lei/ MWh;
- i) 70% of the additional revenues obtained following the practice of prices higher than 190 lei/ MWh.

The upper limit of the deduction of investments in the upstream segment may not exceed 30% of the total tax on additional offshore income.

The economic operators holding the tax liability calculate, declare and pay the additional offshore tax monthly, until the 25th of the month following the month for which they owe the tax. The sums owed by holders of oil agreements related to offshore perimeters as additional income tax are collected in a special account used to finance the establishment and expansion of natural gas distribution networks and connections to the national natural gas transmission system, as well as other investments established by Government decision. The distribution of the collected amounts of money is made by a decision of the Government. The collection of the tax on additional income is administered by the National Agency for Fiscal Administration, according to the Fiscal Procedure Code.

The cumulative value of investments in the upstream segment, recorded in the accounting records from the entry into force of the law until the month for which the tax on additional offshore income is calculated, as well as the value of investments in work programs made and approved by ANRM based on oil products agreements, which were recorded in the accounting records until the date of entry into force of the law, decrease monthly with the value of investments in the upstream segment deducted from the tax on additional offshore income. The deductions are applied until it is reached the cumulated value of the investments in the upstream segment, approved by ANRM and registered in the accounting records according to the laws in force. Therefore, the Romanian legislator looked for a way to recognize and capitalize in fiscal terms the investments made by some companies in order to achieve the exploitation of the natural gas deposit in the Black Sea Continental Platform.

In the case of alienation of investments for which the above-mentioned tax deduction was benefited, the deduction granted is deducted from the cumulative value of the investments in the upstream segment in proportion to the ratio between the value of the investments surrendered and the value of investments registered in the upstream segment during the reference period.

Of course, the investments taken into account for the deduction from income tax cannot be the subject of other deductions. In the same time, the investments considered in the calculation of the deduction from the additional income tax are not taken into consideration in the calculation of the fiscal result of the periods of payment of the profit tax, in the sense in which no tax reductions/ exemptions or cost deductions are accepted for them, these being considered non-deductible when calculating the profit tax (according to art. 19, paragraphs (2), (3), (4), (5), (8), (9), (10), (11) and (12) of Law no. 256/2018 concerning some measures necessary for the implementation of oil operations by the holders of oil agreements on offshore oil perimeters).

However, the new regulations we have referred to **do not apply to all companies** that wish to exploit natural gas from the Continental Black Sea Platform belonging to Romania, because the legislator states that holders of oil agreements referring to offshore oil perimeters in course of execution on the date of entry into force of the law, are applied, throughout their duration, the level of royalty, the percentages of oil royalty, the gross production thresholds related to these quotas and the specific fiscal regime applicable to exploration, development, operation and abandonment activities carried out on the basis of agreements existing at the date of its entry into force (according to art. 18 of Law no. 256/2018 concerning some measures necessary for the implementation of oil operations by the holders of oil agreements on offshore oil perimeters). It should also be noted that all grants in the Black Sea are made over a period of time, between 15 and 49 years. So, for the Black Sea gas operations that will be carried out by companies such as Black Sea Oil & Gas, Exxon and OMV Petrom, the new system of

royalties will not apply, but that system that was in force at the time of receiving the grants, years ago. LukOil and Romgaz could also be added to these companies. Given the estimated size of the submarine deposits, it is assumed that all companies involved will pay a royalty of 13%.

Such regulation is justified by the fact that these companies are the ones that have done exploration works of the subsoil of the continental platform of the Black Sea, meaning that they have made considerable investments. Also, the level of royalties established by law must be harmonized with the operating costs of the companies concerned, as the deposit is located 170 km from the shore and must drilling must be done to appreciable depths in order to be exploited.

In these circumstances, we believe that the legal provisions we referred to will make the Law no. 256/2018 become partially inapplicable for a significant part of the companies interested in exploiting this deposit, because they already have oil exploration agreements, validly drawn and prior to the entry into force of the law.

A particularly important clarification (according to art. 20 of Law no. 256/2018 concerning some measures necessary for the implementation of oil operations by the holders of oil agreements on offshore oil perimeters) and which represents a derogation from the provisions of art. 177 of the Law on electricity and natural gas no. 123/2012, with subsequent amendments and completions, the holders of oil agreements regarding offshore oil perimeters, including their subsidiaries and/ or belonging to the same economic interest group, starting with the date of entry into force of Law no. 256/2018, insofar as they contract the sale of natural gas on the wholesale market, in a calendar year, have the obligation to conclude, in the calendar year in which they deliver natural gas, transparent, public and non-discriminatory contracts on centralized markets, in accordance with the regulations issued by the National Energy Regulatory Authority (ANRE) for the sale of a minimum quantity of natural gas that cannot be lower than the one represented by a percentage of **50% of the quantity of natural gas from own production** contracted with delivery in the respective calendar year 20, as a seller (The quantity of natural gas contracted on the centralized markets, transparent, public and non-discriminatory, is sold based on a procedure approved by ANRE, so that the buyers of natural gas cannot be conditioned by the purchase of a minimum quantity imposed by the seller). This 50% share remains unchanged throughout the agreements.

It is also worth underlining that the non-resident subcontractors of the oil agreement holders are obliged, within 30 days from the date of concluding the first contract, to found and maintain, throughout the period of the contract, **a subsidiary or branch in Romania**, according to Fiscal Code provisions in force (according to art. 22 of Law no. 256/2018 concerning some measures necessary for the implementation of oil operations by the holders of oil agreements on offshore oil perimeters).

Last but not least, the law also establishes the fact that under equivalent technical and price conditions, the holders of oil agreements are **obliged to purchase goods and services from economic operators in Romania and the European Union**, under the conditions provided in art. 223 of Law no. 99/2016 on sector acquisitions, with subsequent amendments and completions (According to art. 23 of Law no. 256/2018 concerning some measures necessary for the implementation of oil operations by the holders of oil agreements on offshore oil perimeters), as well as the fact that the holders of the oil agreements regarding offshore oil perimeters have the obligation that at least **25% of the average annual number of employees** used for the development of the agreements are **Romanian citizens** with fiscal residence in Romania (according to art. 24 of Law no. 256/2018 concerning some measures necessary for the implementation of oil operations by the holders of oil agreements on offshore oil perimeters).

Taking into account the high costs and the long time for making and recovering the investments in the offshore sector and, at the same time, given the need for a competitive tax system that attracts investment, legislative adjustment measures are needed. Such a point of view is also embraced by the Romanian Government, which, in the explanatory memorandum for the promotion of such a normative act, referred to the elimination of additional income taxation for sales prices where investors do not make surpluses (between 45.71 lei/ MWh and 100 lei/ MWh). In the case of additional revenues obtained as a result of prices higher than 100 lei/ MWh, the tax grid should be maintained. Obtaining a normal level of profitability expected for the investor at a price of 100 lei/ MWh substantiates the introduction of the additional income tax starting with this threshold, while prices lower than this level do not generate additional profits.

It is also discussed upon eliminating the use of the reference price in determining the basis for calculating the additional income tax to bring the Offshore Law into line with the principles of Romanian taxation provided by the Fiscal Code with and international practice regarding the determination of upstream taxes based on accomplished prices. Additionally, it is necessary to mention the principles for determining the reference price in primary legislation in order to ensure the stability and predictability of the legislative environment.

Another element to be taken into account in the new regulations to be adopted refers to increasing the maximum level for deducting investments in the upstream segment in order to determine the additional offshore tax from 30% to 60%, to maintain the competitiveness of the offshore sector in Romania and to attract investment, given the high costs and risks and the long-term offshore investment in the Black Sea.

It is also wished for the elimination of the limitation of the investment deduction for the calculation of the profit tax taking into account the fact that this tax has a general character and all sectors of activity must be equally treated, in accordance with the provisions of the Fiscal Code. This will eliminate the

discrimination whose subject are the offshore operators, compared to other economic operators, as they owe a tax on an artificially increased tax base from which the costs of depreciation of all investments made by offshore operators are not deducted.

The main oil companies operating on the offshore natural gas market request the elimination of trading obligations on the centralized markets from Romania, in the medium and long term, to ensure the market for offshore natural gas and, consequently, the revenues necessary to recover major investments required by such projects, according to international practice in the field of natural resources.

Last but not least, it is also shown that the tax on profit the offshore supplementary income tax are two different taxes and that it is therefore necessary for the taxable base to be properly determined for both taxes. Given the existence of two different taxes, each with its own rules of determination, it is not justified to affect a right of deduction established by general rules applicable to the tax on profit, by the similar deduction applicable to offshore additional income tax, according to relevant international practice.

2.6. Royalties and other ways of capitalizing on natural resources in the forestry field

According to the Order of the Minister of Environment and Forests no. 367/2010 as approval of the value of the grant, the calculation method and the payment method of the royalty obtained from the granting of forest lands public property of the state, related to the assets sold by the National Forests Authority – Romsilva, as well as the model of the granting contract, modified by Order no. 172/2015.

As stated by the art. 11, paragraphs 1, 3 and 6 of Law no. 46/2008 on the Forestry Code, the forest fund owned by the state is managed by the National Forests Authority – Romsilva, an autonomous authority of national interest, under the authority of the state, through the central public authority responsible for forestry, as well as by state public research institutes or educational institutions with forest profile.

In principle, the state-owned forest fund cannot be granted, except for the lands related to the assets sold by the National Forests Authority – Romsilva, during the existence of the constructions, but not more than 49 years since the date the grant contract was drawn.

The lands acquired by the National Forests Authority – Romsilva from public funds and from the conservation and regeneration fund become forest fund public property of the state and are tabulated as such.

The royalty for the state-owned forest lands, related to some assets sold by the National Forests Authority – Romsilva, is established in the form of a fixed annual income of the grantor, equal to the value of the land granting, to which the

reference interest established by the National Bank of Romania is applied. The revenues from this royalty are set to feed the state budget.

The payment of the royalty is mandatory until the date on which the owner of the asset signs a selling – buying contract of the asset or until the date the ownership of the asset or part of the asset on the granted forest land is lost. For the year in which the grant contract was concluded, the royalty is calculated from the date of concluding the selling – buying contract of the asset until the end of the respective year.

The basis for calculating the forest royalty is given by the **value of the granting** for the forest lands related to the assets sold by the National Forests Authority – Romsilva, and this is calculated according to 2, paragraph 1 of the Order of the Minister of Environment and Forests no. 367/2010, amended by Order no. 172/2015, according to the formula:

$$VAC = S \times Cr \times PML \times (1 + N) \quad (3)$$

Where:

VAC = the value of the granting, expressed in lei;

S = the surface of the land that is granted, expressed in hectares, with 4 decimals;

Cr = average increase in exploitability, expressed in m³/ha, for birch, hornbeam and black and white poplar of the 5th class of production, depending on the phytoclimatic floor in which the land is located, according to annex no. 1, which is an integral part of this order;

PML = average price of one cubic meter of wood per foot, expressed in lei/ cubic meter, corrected with the coefficient 3.30 for birch and hornbeam species and 3.00 for black and white poplar;

N = the coefficient resulting from the sum of the points awarded, provided in annex no. 2 of the Order of the Minister of Environment and Forests no. 367/2010, amended by Order no. 172/2015, assigned to the land in question.

The same normative act states in art. 2, paragraphs (2) and (3) the fact that the value of the land granting is calculated annually by the National Forests Authority – Romsilva or by the units in its structure that sold the asset. Thus, the value of the royalty is recalculated annually, by an additional act to the contract, depending on the value of the granting, to which applies the reference interest rate established by the National Bank of Romania on January 1.

Also, through art. 3 of the Order of the Minister of Environment and Forests no. 367/2010, amended by Order no. 172/2015, it was established that within 180 days from the date of signing the granting contract, the grantor constitutes a guarantee in the amount of 5% of the amount of the royalty calculated for 12 months of forest land use. If the grantor does not submit the guarantee, in the amount and until the date provided in the granting contract, it terminates by right.

According to art. 4 of the Order of the Minister of Environment and Forests no. 367/2010, amended by Order no. 172/2015, the payment of the royalty is made every six months to the state budget, in the account opened for this purpose by the Ministry of Environment and Forests, as it follows:

- a) 40% by June 30;
- b) 60% by December 31st.

Failure to pay the total or partial royalty, obliges the grantor to pay the fee with delay penalties amounting to 0.2% of the total amount of the royalty/ day of delay.

Failure to pay the total or partial royalty with a delay of up to 60 days from the deadline leads to the full termination of the granting contract, without prior notice, as well as, as the case may be, to the payment of damages.

The owner of an asset located on forest land publicly owned by the state that he uses under the granting contract, has the obligation to notify the grantor of the intention to alienate the asset, 30 days before the start of legal proceedings on the sale.

Through the selling-buying contract of the asset, the new owner takes over:

- a) the obligations and tasks related to the asset, existing at the date of drawing the selling – buying contract with the National Forests Authority – Romsilva;
- b) the obligation to end the granting contract of the forest land strictly related to the purchased asset;
- c) the obligation to pay the royalty and to deposit the guarantee.

The payment of the royalty is charged from the date on which the asset was purchased (according to art. 5 of the Order of the Minister of Environment and Forests no. 367/2010, amended by Order no. 172/2015).

3. CONCLUDING REMARKS

This paper provides a comprehensive study of royalties and other categories of budget revenues that the Romanian state collects in exchange for its natural resources. Exactly, we present the way in which the royalties in mining, oil, exploitation of natural gas in both onshore and offshore systems are regulated, as well as the forestry royalty and other categories of taxes, duties and guarantees that the Romanian state charges for the exploitation of its natural resources and for the services related to these activities, or for the restoration of the environment affected by such activities. However, the sums collected in the state's budget from the exploitation of Romania's natural resources stay irrelevant in the share of budgetary incomes.

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THE TAXPAYER'S RIGHTS BETWEEN PROCLAMATION AND GUARANTEE

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Abstract

Taxpayer rights are a category of rights proclaimed both by the principles of tax law and by the legal rules in force, respectively even by European jurisprudence. From the simple proclamation to the effective guarantee and assurance of these rights is a long way. Administrative practice attests the fact that there are numerous violations of taxpayers' rights. In the context in which the taxpayer is the vulnerable person in the legal relationship, the state should pay more attention to the tax situation of the taxpayer and his rights. Among the taxpayer's rights, the ones that have the greatest importance and the immediate impact in terms of the tax situation of the person are: the right to defense in both administrative and judicial proceedings, the right to a fair trial in terms of access to court, respectively duration of proceedings. The breach of rights should be remedied with the help of Administrative Court, the only one in order to restore balance in the tax law relationship.

Keywords: *taxpayer rights; tax concepts; legal proceedings; jurisprudence.*

JEL Classification: K34

1. CONTEXT

The taxpayer is any natural or legal person or any other entity without legal personality that owes taxes, fees, contributions and other amounts of money to the state budget according to the law. This lax category called "taxpayer" includes a multitude of entities, some that have a formal-legal organization, for example the legal person or authorized natural person, but also entities that are factually organized in an entity that marks a certain degree of homogeneity. administrative and financial matters such as, for example, single tax groups on VAT.

From the perspective of the legal regime and the legal status of the taxpayer, it is governed by tax law, in the sense that all its rights and obligations are based on a general, impersonal legal provision, which applies to all taxpayers in a given tax category. Thus, the tax law determines the spectrum of rights and obligations that the taxpayer has at a given time, in the report of substantive law or in a certain procedure. Obviously, beyond the objective nature resulting from the specifics of the tax law, it must be taken into account in the tax law report and certain subjective elements that may at some point personalize or circumstance the tax

liability of the taxpayer, such as good faith that the law presumes it, but which could be overturned by the tax authority under exceptional conditions.

The taxpayer is in a double ungrateful position, in the sense that, on the one hand, from the perspective of reporting to the tax law, he has no choice but to submit to any changes in tax law during the tax year, he is not having a right of veto or opposition to the change of rules during the tax game. From another perspective, the taxpayer has an ungrateful position in the tax law report because he is exposed by the advantages that the tax authority has in this relationship, so that he will not be able to unilaterally impose his will as for example, the tax office can. This double position of inferiority places the taxpayer in an obvious area of vulnerability. That is why the rights that the law confers on it in an absolute manner must be ensured in concrete terms by the tax administration, and if not, as a last resort, by the tax court.

From the perspective of formal elements, the natural or legal person must go through the tax registration procedure as a condition of opposability in the relationship with the tax authorities. In a generous formula, the tax law obliges any person or entity that is the subject of the tax legal relationship to identify or register for tax purposes, obtaining a tax identification code. The fiscal identification code is for the natural persons the personal numerical code, respectively the fiscal identification code assigned by the competent fiscal body from the ANAF structure, and for the legal persons the fiscal identification code assigned by the competent fiscal body. Finally, the registration for VAT purposes attracts another formal element, namely the assignment of the prefix RO, which marks the fact that the person is registered for VAT purposes.

In a dynamic reflection, the taxpayer's rights could be viewed in connection with at least three procedures: the tax inspection, the tax administrative-jurisdictional procedure and the judicial procedure.

2. TAXPAYER'S RIGHTS IN THE TAX INSPECTION

The evolution over time of the quality of the person must be connected to the time chain of public revenues, in the sense that the natural or legal person has first the quality of taxpayer from the fiscal point of view, and then the quality of creditor or debtor of the material fiscal legal relationship. The tax code determines the sphere of persons obliged to pay taxes, it determines the categories of taxpayer, before the tax procedure law establishes the quality of creditor or debtor for the natural or legal person. Therefore, the natural or legal person is a taxpayer, then becomes a creditor or debtor of the tax legal relationship, related to the result of its activity and retains this quality including the procedure for recovering tax claims. Compared to this evolution of things, the positive law took into account the quality of taxpayer as the subject of the fiscal legal relationship seen as a proxy agent, and the quality of creditor or future as the subject of material and procedural legal relations (Niculeasa, 2014).

According to Order no. 713/2004 on the approval of the Charter of Taxpayers' Rights and Obligations during the fiscal inspection, the main obligation of taxpayers is the declaration and payment of taxes, fees and social contributions that they owe them to the general consolidated budget, administered by the National Agency for Fiscal Administration.

As a counterweight, the taxpayer has granted a number of rights specific to the tax inspection (Costea, 2018) [1]. For the result of the tax inspection to be legitimate and legal, the exercise of these rights is crucial. According to the provisions of the Charter, the taxpayer has the right to be notified of the tax inspection action, by communicating in advance a tax inspection notice highlighting the tax inspection body that will perform the tax inspection, the legal basis of the tax inspection, the start date of the inspection tax obligations, the tax obligations and the periods to be subject to the tax inspection and the possibility to request the postponement of the start date of the tax inspection.

The taxpayer is granted the right to be verified only for taxes, fees and social contributions within the limitation period, respectively the right to be verified only once for each tax, fee or social contribution and for each period subject to verification/taxation, unless the conditions for tax rechecking are met.

The taxpayer may request the legitimation of the fiscal inspection bodies, these being obliged to present to the taxpayer the fiscal inspection card and the service order.

At the same time, the desideratum should not be omitted so that the taxpayer's activity is affected as little as possible during the fiscal inspection, in accordance with the principle of minimum impairment.

The taxpayer has the right to be informed during the tax inspection on the findings resulting from the tax inspection, to be the first requested to provide information, to refuse to provide information, to benefit from specialized assistance, to be protected on the line the fiscal secret, to receive the written proof in case of retention of some documents by the fiscal inspection bodies, respectively to know the results of the fiscal inspection, being able to formulate a point of view compared to the findings of the fiscal inspectors.

According to art. 9 para. (1) Code on fiscal procedure (2015) *The right to be heard*: “Before taking the decision, the fiscal body is obliged to ensure the taxpayer/payer the possibility to express his point of view regarding the relevant facts and circumstances in making the decision”. The non-compliance of this vital right in the administrative procedure attracts the absolute nullity of the administrative-fiscal act in accordance with the provisions of art. 9 para. (4) of the same normative act, even in spite of the usual arguments of the fiscal bodies, in the sense that there would be no sanction for the lack of hearing.

Finally, the Charter recognizes the right to challenge in writing the tax decision issued following the tax inspection, by highlighting the identification

data, the object of the appeal, the factual and legal reasons, the evidence on which it is based, and the signature of the taxpayer or the authorized person.

Obviously, the primary text by which the right to file an appeal against the administrative-fiscal act is recognized is art. 268 Code on fiscal procedure (2015) which provides in par. (1) that: “An appeal may be filed against the title of claim, as well as against other fiscal administrative acts according to this title. The appeal is an administrative way of appeal and does not remove the right to action of the one who considers himself violated in his rights by a fiscal administrative act”.

Beyond the content of the Charter, in order to prepare the defense, as an inevitable projection of the substantive dispute, it is necessary to make available to the taxpayer the administrative file that was the basis of the tax inspection. Lack of access to the administrative file is one of the main causes of the violation of the right to defense in Romania. This is because a taxpayer who did not have access to the administrative file cannot formulate a complete tax appeal that takes into account the entire documentary spectrum, in which to capitalize on all possible arguments, in an attempt to relieve the tax burden.

The judgment in *Solvay v. The Commission* (CJEU, 2011), states that at a European level, it is recognized what we can call generic the right of access to the file [2]. The Court emphasized quite clearly that the individual concerned by a control of any kind must be allowed access to the administrative file. It has been shown that the infringement of this right cannot be considered excusable by ensuring the right of access to the file in a subsequent judicial procedure.

More recently, by the judgment in case C-298/16, *Teodor Ispas, Anduța Ispas vs DGFP Cluj*, The Court of Justice of the European Union has ruled as follows: “the general principle of Union law of respect for the rights of the defense must be interpreted as meaning that, in administrative procedures for inspection and the to the value added tax, an individual must be able to be provided, on request, with the information and documents contained in the administrative file and which have been taken into account by the public authority when adopting its decision, unless general interest justifies restricting access to that information and documents”.

Finally, by judgment of Case C-430/19, the Luxembourg Court has ruled, strengthening the traditional line on respect for the rights of the defense, that: “the general principle of Union law of respect for the rights of the defense that, in the context of the national administrative procedures for inspecting and determining the basis of value added tax, a taxable person has not been able to access the information contained in his administrative file and which has been taken into account in the adoption of an administrative decision imposing additional tax obligations on it, and the court seised finds that, in the absence of that irregularity, the procedure could have had a different outcome, that principle requires that that decision be annulled.

Therefore, the CJEU pays special attention to the right to defense, which it categorizes as a subjective capital tax right, its violation entailing a radical solution – the annulment of the administrative-fiscal act.

3. THE TAXPAYER'S RIGHTS IN THE ADMINISTRATIVE-JURISDICTIONAL PROCEDURE

After completing the tax inspection and communicating the debt title, the taxpayer has 45 days to file a tax appeal. The administrative-jurisdictional procedure is a fiscal procedure that gives the taxpayer certain legal guarantees.

In accordance with the provisions of art. 276 para. (3) Code on fiscal procedure (2015): “by solving the appeal, a more difficult situation cannot be created for the appellant in his own appeal”. Thus, *non reformatio in peius*, a classical procedural principle of Roman law was enshrined in the administrative-jurisdictional procedure in tax matters. The principle must be understood in the sense that the activation of the tax appeal cannot create for the taxpayer a worse situation than that of the taxation decision. The legal-fiscal situation highlighted in the taxation decision can be reformed only in favor of the taxpayer (*in melius*) and not at all against him (*in peius*). The logical-legal significance of the principle is clearer in the fiscal procedure, since the fiscal inspection bodies and the ones for solving the fiscal appeal are part of the same structure – ANAF.

Alin. (4) in art. 276 Code on fiscal procedure (2015) states that: “The appellant, the interveners or their proxies may submit new evidence in support of the case. In this situation, the fiscal body issuing the contested fiscal administrative act or the body that performed the control activity, as the case may be, is offered the possibility to decide on them”.

The taxpayer must use this prerogative whenever he takes possession of evidence that was not taken into account in the tax inspection and which is likely to change its tax result. This evidence could also be the documents resulting from another tax or criminal procedure relating to its contracting partners, in particular in the field of tax fraud, where there is a tendency to extend the fault and to the taxable persons in the VAT circuit who are not actually at fault, being “innocent parties” [3], in the sense that they did not actually know that they were part of a fraudulent mechanism. Very often, the tax authority activates the theory of “poisoned apple” in the sense that it blames all parts of a VAT circuit, if one of the taxpayers has been classified as a “ghost company”, without insisting on proving the actual involvement of all people.

According to the provisions of par. (5) in art. 276 Code on fiscal procedure (2015): “The appellant may request to the competent settlement body the oral support of the appeal. In this case, the settlement body sets a deadline for which the appellant, the interveners or their proxies are summoned. This request may be addressed to the competent settlement body within a maximum of 30 days from the date of registration of the appeal, under the sanction of revocation”.

Unfortunately, the practice of tax authorities in resolving the appeals shows that oral support of the appeal does not provide effective benefits to taxpayers. This is because in most tax inspection situations, the conclusions of the tax inspectors are received and appropriated as such by the body for resolving the appeal. That is why the dice are rolled regardless of the oral or exclusively written support of the tax appeal.

4. ACCESS TO A TAX COURT. TAXPAYER RIGHTS IN LEGAL PROCEEDINGS

Art. 6 regarding the right to a fair trial [4] and Article 13 on the right to an effective remedy under the Convention for the Protection of Human Rights and Fundamental Freedoms are the two European procedural rights. In the absence of procedural rules to ensure effective safeguards in the event of their infringement, material rights would be unsupported.

In accordance with the authentic meaning, subsequently decrypted by jurisprudence, art. 6 of the Convention concerns violations of the rights and obligations with “civil character” and “accusations in criminal matters” (Doroga, 2020). Traditionally, it has been considered that tax disputes do not concern civil rights and obligations, being excluded from the scope of the Convention.

However, in its judgment in *Bendenoun v. France* [5], the European Court of Human Rights ruled that an administrative procedure relating to a tax increase imposed by the tax authorities falls within the scope of the criminal matter (*Costaș*, 2019). The surcharge imposed was not only compensation for damages, but had both a punitive and a preventive purpose. At the same time, it was found that the amount of the surcharges was substantial, so that, if he had not paid his debt, the applicant was liable to imprisonment.

As it was stated in the specialized doctrine, three criteria must be taken into account, detected and decanted in the jurisprudence of the European Court of Human Rights, in particular by the *Engle* and *Ozturk* judgments. The three criteria for extending the notion of criminal prosecution are:

- the national law qualification of the state concerned. The autonomy of the notion of “criminal matters” operates in one sense only: if the measure is considered criminal under the domestic law of the state concerned, the application of the other criteria is no longer necessary. The qualification given by national law has only a “formal and relative” value, to be analyzed in the light of a “common denominator” of the relevant laws of the various contracting states. The fact that the criminal law of a contracting state provides that a measure of a certain degree of coercion may be taken against a person does not in itself mean that it falls within the scope of article 6 (1).

- the nature of the act is the criterion with the greatest weight in the Court's assessment. It contains two sub-criteria: the scope of the rule – to whom the rule is addressed – and the gravity of the act committed. If the norm is addressed to the

entire population, then we are in the presence of the criminal, if it is addressed only to a certain category (lawyers, doctors, military), in general, we are in the disciplinary sphere. However, this sub-criterion alone does not provide an answer. Even if the deed is of a disciplinary nature, the gravity of the imposed sanction may lead to the retention of the criminal qualification.

- the nature and severity of the sanction. This criterion often provides the decisive argument for “criminal matters”. The most important indication of the existence of criminal matter is the severity of the sanction. First of all, any custodial sentence falls into the criminal field. On the other hand, the lack of a deprivation of liberty does not necessarily imply the non-application of art. 6 para. (1) of the Convention from a criminal point of view, since those pecuniary sanctions of exorbitant value which, in case of non-payment, can be transformed into custodial sanctions, regardless of whether the transformation took place or not, are considered to be criminal in nature (Bufan, 2016).

In addition to these rights, the Code of Civil Procedure guarantees the recognition of the litigation rights to the litigants [6], but not as tax rights, but as civil procedural rights, recognized in any court proceedings. Obviously, a taxpayer who has the quality of plaintiff will exercise the same subjective procedural rights that any natural or legal person who has the same quality in a civil litigation has.

5. THE ACTUAL VALUATION OF THE TAXPAYER’S RIGHTS

Despite generous regulations regarding all subjective taxpayers' rights, administrative practice distorts the substance and importance of taxpayers' rights. They are formally recognized, but are interpreted flexibly, as if they had a volatile content, not an imperative one. For example, it is well known in the local tax reality that the tax authority does not make available to the inspected taxpayer, not even upon request, all parts of the administrative file, using pretexts related to either tax secrecy, or the existence of a criminal complaint or the existence of an ongoing criminal proceedings. The use of indefinite phrases, such as “carousel operations” or “can operations”, but which are frequently found in tax inspection reports and tax decisions and annihilate, formally or implicitly, some of the taxpayers' rights, has the same notoriety.

The situation is not fundamentally different with regard to legal proceedings. This is because, except for meteoric judicial appearances [7], the courts have become accustomed to not appreciating the complaints of the plaintiffs-taxpayers regarding the violation of tax rights. The position of the fiscal body that seeks to achieve taxation at any cost is preferred, to the detriment of the circulation of rights that, in the context of the need to ensure budget collection, seem subsidiary. At the same time, the tax contentious court is more concerned with the substance of the tax law report than with the guarantees given to taxpayers.

6. CONCLUSIONS

Proclaiming the rights of taxpayers is not sufficient, if not accompanied by effective assurance, for their recognition by the competent state bodies. Further efforts are needed to change the mentalities, prejudices and approach that both the tax authorities and the courts have had regarding the observance of the legal-fiscal regime of the taxpayers. Assuming the specific requirements of the principle of legality, preserving the original meaning of the tax rules, respecting good faith, ensuring the collection of evidence through lawful mechanisms, are just a few elements that will secure the rights of taxpayers.

NOTES

- [1] To highlight the rights of taxpayers in the tax inspection, see Costea (2018, p. 307).
- [2] The information and documents that fall within the scope of the notion of “administrative file” come from three sources: the taxpayer's tax file, the tax inspection file and the tax appeal file.
- [3] Developed by the judgment of the Court of Justice of the European Union (Grand Chamber) of 21 February 2006 in Case C-255/02 Halifax plc, Leeds Permanent Development Services Ltd and County Wide Property Investments Ltd v Commissioners of Customs & Excise, published in the electronic repertoire under no. ECLI:EU:C:2006:121.
- [4] “Everyone has the right to a fair and public hearing within a reasonable time, by an independent and impartial tribunal established by law, which shall decide whether violation of his civil rights and obligations, or on the merits of any criminal charge against him.”
- [5] Judgment of 24 February 1994.
- [6] Right of defense, to invoke exceptions, to propose evidence, the right to an appeal.
- [7] For example, as a valorization of the criticisms regarding the violation of the right to defense, the Cluj Court of Appeal ruled by the civil Sentence no. 385/6.12.2017 unpublished, the following: “Cancels the decision to resolve the appeal no. 148/28.02.2017 issued by DGRFP CJ-N. Obliges the defendant DGRFP C-N to resolve the appeal filed by the plaintiff against the Tax Decision no. F-CJ no. 148/28.02.2017 respecting her right to defense, meaning that she will make available to the applicant all relevant documents that formed the basis for issuing the tax inspection report and the taxation decision, will give the applicant a period to file defenses with regard to these documents and will analyze in the decision to settle the appeal and these defenses, insofar as they will be formulated.

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THE VALUE-RELEVANCE OF CASH HOLDING DURING THE GLOBAL FINANCIAL CRISIS: ROMANIAN FINANCIAL MARKET CASE

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Abstract

Financial crises are a major economic phenomenon with a significant impact on the economy at national and international level, but especially on the decision-making process of investors. The most recent financial crisis that affected the global economy was the financial crisis of 2008-2010. Among the countries affected by the global financial crisis of 2008-2010 we can also list Romania, whose financial market has been affected. Thus, the study aims to analyze how cash holdings and cash equivalents influenced the decision-making process of investors during the global financial crisis of 2008-2010. The study also considers the link between cash holdings and operational cash flow, analyzed as a tool for presenting the origin of liquidity. The analyzed period was divided into: Pre-Crisis Phase (2006-2008) and Post-Crisis Phase (2009-2011). The results of the study concluded that holdings of cash and cash equivalents have an explanatory power superior to the operational cash flow. Also, cash holding data can be used in the decision-making process only in the Pre-Crisis Phase.

Keywords: *accounting quality; financial information; value relevance; cash holding; financial crisis.*

JEL Classification: C10, C58, M41

1. INTRODUCTION

Cash holdings and cash equivalents are an important resource for listed companies, due to their ability to settle certain financial obligations, but also to increase the level of investor confidence. Financial crises are major economic events that can contribute to lower liquidity by employing expenses (cash outflows) to create new projects or investing cash in assets that can give companies a comparative advantage over other companies on the market (Alzoubi, 2016). Cash holdings and cash equivalents, regarded as financial information taken from companies' financial statements, must be relevant

information for the investment environment. Through the value relevance of accounting information, the literature presents the impact it can have on the management decisions of companies based on financial statements (Apak *et al.*, 2016). The elements presented in the financial statements that refer to the cash holding and the operational cash flow indicate that they are closely related by the character of the last element to explain the formation of the first element. Financial crises are periods that can pose major problems for companies with a delicate financial situation (Robu and Istrate, 2014). Also, the period of a major economic event can be presented as a period with a low level of bank lending, with cash holdings bearing the full pressure on financial obligations. Depending on the life cycle of the company, management can make a series of decisions depending on the size of revenues, debts and growth opportunities which may affect cash holdings and cash equivalents.

This study is a development of the previous research on the effects of the financial crisis on cash flows, a study that initially analyzed the superiority of cash flows over the earnings obtained by companies. Continuing the research approach, the study aims to analyze cash holdings and cash equivalents analyzed as a tool that can influence the decision-making process of investors. Operating cash flow will be analyzed as a tool for determining the origin of cash holdings and cash equivalents. Thus, to determine this hypothesis, a series of econometric models are proposed to determine the influence of cash holdings and cash equivalents and operational cash flow on the stock market. The analyzed period is divided into Pre-Crisis (2006-2008) and Post-Crisis (2009-2011). The target population that showed interest in the current analysis consists of the main component companies of the national BET index at the level of 2008. Based on the available data related to the stock market price and financial data, a sample of 6 companies was established. The results of the study concluded that cash holdings and cash equivalents and operational cash flow have a significant influence on the stock market, but the superiority in terms of explanatory power is represented by cash holdings and cash equivalents. Moreover, the influence of other factors determines an insignificant influence of cash holdings and cash equivalents in the Post-Crisis period.

The study is structured as follows: in the first part, the study will focus on the review of the literature on the concept of value-relevance, the definition of the term cash holding and financial crisis, and in the second part, the research methodology is presented which will make it possible to obtain results. The last part of the study will focus on explaining the main results and how they influence each other, and finally the final conclusions of the study are formulated.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

In the current section, the study aims to present the main research ideas from the literature and the results obtained by other researchers on the concept of the

value relevance of accounting information, the concept of liquidity and the influence that cash holdings and cash equivalents have on the accounting information. It is also desired through the current section to present a detail of the concept of financial crisis and how it influences the liquidity of companies.

2.1. The value-relevance concept

The financial market is the “place”, where listed companies are looking for new means of financing by issuing a number of shares to current and potential investors who want to increase their holdings in the capital of companies or increase equity through sale or purchase transactions of shares in order to obtain a profit (Robu and Dănilă, 2019). In the decision-making process, investors use different methods to assess a company's performance and its ability to generate profit in the coming periods. But, in order to make the most efficient decisions and to help investors, financial information must meet certain qualitative characteristics: relevance and faithful representation (Toma, 2018).

The value relevance of financial information represents the first step for the academic environment through which the relationships between a company's stock market price and the elements reported in the financial statements can be statistically assessed. A financial information becomes relevant if at the moment of publishing the financial statements it significantly influences the decision-making process of the investors, respectively the stock market price. The analysis of the value relevance of financial information is performed based on the relationship between the stock market price of companies and published financial statements (Barth, Beaver and Landsman, 2001). Eugenio *et. al* (2019) specified that the value relevance of financial information can be analyzed through two aspects (incremental and relative), each aspect aimed at providing an answer and whose analysis requires specific statistical tests. Starting from the efficient market theory, the relevance of financial information can be analyzed through the investment behavior of investors. According to the mentioned theory, the stock market price reflects the existing information in the market, based on a financial evaluation as significant as possible. When new financial information appears, the stock market price is corrected, ensuring again a faithful representation between the reported elements and the stock market price of the financial instruments. Therefore, negative financial information can have an impact two to six times greater than in the case of positive information (Basu, 1997).

Mirza, Malek and Abdul-Hamid (2019) have conducted a study on the financial markets in Malaysia and they analyzed the relevance of the results, the book value and the operational cash flow on the stock market price after the adoption of IFRS. The results of the study concluded the increase of investors' interest in the operational cash flow, more precisely, the interest given to liquidity analysis to determine the possibility for the company to operate in the long term. Eugenio *et al.* (2019) analyzed the relevance of the financial information of listed

companies in Asia, namely Hong Kong, Indonesia, Malaysia, Philippines, Singapore and Taiwan, in the period 2000-2016. The analyzed period was divided into Pre-crisis Phase (2000-2007), In crisis Phase (2008-2009) and Post-crisis Phase (2010-2016). The influence of the analyzed variables (earnings, operational cash flow and book value) on the stock price indicated that earnings and the book value significantly influence the stock price in the post-crisis period, while only the book value significantly influences the stock price in the pre-crisis period. Analyzed separately, the book value and earnings are significant in all three periods, but the superiority in explaining the change in the stock price is given by the book value (88.12%, compared to the earnings – 84.55%). Khan, Bradbury and Courtenay (2017) documented the effect that the comprehensive income has on the stock market price compared to the earnings that companies report. Based on a sample of 92 New Zealand companies in the period 2003-2010, the results of the study indicated the superiority of the comprehensive income over the earnings reported in explaining the stock price changes. Bepari, Rahman and Mollik (2013) studied the relevance of financial information on listed companies in Australia in the period 2004-2009. The results of the study concluded that the operating cash flow and earnings significantly influence the stock market price. Also, during the financial crisis of 2008, the superiority of the earnings in terms of relevance increased, while the relevance of operational cash flow decreased. Robu and Dănilă (2019) analyzed the relevance of the earnings and the cash flow on the companies listed on the Bucharest Stock Exchange in the period 2006-2011. The analyzed period was divided into Pre-crisis Phase (2006-2008) and Post-crisis Phase (2009-2011). The conclusions of the study presented the relevance of operational cash flow and net cash flow as an alternative tool for analyzing companies, as well as their superiority in explaining the changes in the stock market evolution.

2.2. The concept of cash holding and its effects on the value relevance

Liquidity is a component of interest to investors, as it has predictive value in terms of a company's future directions. The presence of liquidity can be presented in two aspects: first, the presence of liquidity in the market entails a low cost of lending, but also an opportunity to attract new investors. Second, liquidity helps firms in the event of a more difficult financial period, such as financial crises (OICU-IOSCO, 2007). Liquidity gives investors an image of the ability of companies to meet the financial obligations arised from the trade credit, bank loans and more.

Breuer *et. al* (2012) highlight the presence of performance in the company's activity through the presence of liquidity, more precisely through the presence of cash or cash equivalents. Cash equivalents can take the form of: treasury notes, short-term bank deposits, commercial bills, etc. Thus, a high value of the balance sheet element can give investors the confidence that the company can meet the

financial obligations and can finance its own development projects. An indicator that is closely related to cash holdings and cash equivalents is operational cash flow. Thus, liquidity provides investors with information on the ability of companies to stay in the market, while operational cash flow provides information on liquidity obtained from the activity. A low cost of liquidity generates for the firm an increase in value, a high rating from authorized companies, as well as an increase in the results obtained by the firm (Oduol, 2010).

Baki Billah, Yakob and McGowan (2015) highlight the need for companies to have sufficient liquidity, due to the unexpected nature of the various events that occur in the market. Their unavailability can cause companies, especially those with seasonal activities, problems with short-term debt payments. Thus, the decrease of liquidity, followed by an important economic event with a negative impact on the company may generate a higher cost or the impossibility of accessing external resources. Oduol (2010) emphasizes the link between liquidity and working capital by streamlining the cash conversion process. More precisely, in order to improve the processes, respectively the level of liquidity, companies must thus avoid certain blockages in the cash conversion process.

Das (2016) defines the cash conversion cycle as the period between the time of purchase of raw materials and the time of actual collection of receivables from debtors. Also, the positive sign of the aforementioned indicator highlights an efficient liquidity management. A significant example for this situation could be the term of collection of receivables. Receivables represent the right of companies to collect a certain amount of money at a certain term, a component of current assets. Thus, a decrease in the collection period could improve the liquidity of companies by collecting receivables faster and investing the related cash in goods or fixed-income securities. Goods, another important component of current assets, should be valued and used to raise capital. Thus, a high level of goods may signal a problem with the trading process, hence a blockage of cash that could have been used in other ways.

Cash is another component of current assets that could significantly affect liquidity, especially in times of crisis. Al-Amarnah (2015) analyzed the behavior that companies listed on the Ammam Stock Exchange have in terms of cash holdings during financial crises. The results of the empirical study conclude that companies recorded increases in cash holdings by increasing debt, decreasing investment and reducing payments to shareholders. Thus, companies increase their liquidity in order to remain liquid during and after the financial crisis.

Vintilă and Nenu (2016) analyzed the link between liquidity and financial performance of companies listed on the Bucharest Stock Exchange during 2005-2014. The study used as dependent variables, the return on equity and the return on assets. The results of the study showed that a decrease in liquidity combined with an increase in the return on assets is not a risk factor, but a more efficient use of resources to increase the financial performance of companies. The study also

considers the cash conversion cycle that has a negative impact on financial performance, a sign that liquidity is stuck in unsold current assets or as a result of declining trading volume. Following a study of non-financial companies listed on the Nairobi Stock Exchange, Sanghani (2014) highlighted liquidity as an indicator that positively influences financial performance. Also, the operating cash flow and equity debts positively influence the financial performance of companies listed on the Nairobi Stock Exchange.

2.3. The effects of financial crisis cash holding

In the process of evaluating listed companies, investors are looking for tools that can faithfully present the economic situation of the company at a given time. The literature presents two aspects that investors should pursue: fundamental value and market value. Thus, the fundamental value is defined as the value calculated on the basis of future cash flows adjusted through the interest rate (Devika and Poornima, 2015), while the real value represents the value of a financial instrument, value established through the supply and demand mechanism. A market value higher than the fundamental value can be an indication of the overvaluation of the respective financial instrument, more precisely, a possible existence of speculative bubbles, an economic phenomenon known as a form of financial crises. Rosser (1997) classifies the term speculative bubble into two categories: rational bubble and irrational bubble. Thus, an investor informed of the existence of a speculative bubble that seeks to increase capital through sale-purchase transactions of securities can make risk adjustment decisions, this being a rational speculative bubble. In the case of irrational speculative bubbles, investors trade financial instruments on a sentimental basis, disregarding the fundamental value of financial information.

Campello, Graham and Campbell (2010) analyzed the reactions of various companies during the financial crisis based on the answers provided by 1,050 CFOs from 39 countries (Europe, Asia and the US). The results of the study showed an unequal effect of the financial crisis. Thus, there was a significant decrease in investments, technology, marketing and staffing costs compared to companies that do not face financial constraints. Also, companies financially constrained in order to increase liquidity are indebted by withdrawing large sums of money from credit lines so as not to be restricted by banks. The assets of the companies represent resources held for the development of the activity, but they are sold by the companies financially constrained to increase the liquidity. Given the above, companies that do not face financial problems do not exhibit such investment behavior.

Financial crises are defined as periods of massive declines caused by the loss by an asset or asset class of a significant portion of their value. Claessens and Kose (2013) present the phenomenon of financial crisis as an association of one or more phenomena such as: a significant change in the structure of the volume of credit

or in the structure of the market price of listed assets, a decrease in the efficiency of financial intermediation and lending to various actors (companies, population, etc.), financial problems among companies, etc. The most recent financial crisis with an international impact was the global financial crisis of 2008. The causes that led to its emergence were caused by the speculative bubble in the real estate sector, which also affected important financial areas, including insurance (Belesis, Sorros and Karagiorgos, 2016).

The most recent major financial crisis began to emerge at the end of the fourth quarter of 2008, in the form of declining exports, after years of record economic growth (Goschin and Danciu, 2011). The global financial crisis has also affected foreign direct investment (FDI), which has led to declines in unsustainable areas. The causes that led to the financial crisis and the presence of the effects lie in the internal problems that existed at that time. These causes can be attributed to the unsustainable growth recorded in the period 2004-2008, related to areas such as: real estate, car trade and home appliance trade. More precisely, Romania finances the consumption from imports through short-term loans expressed in foreign currency (Goschin and Danciu, 2011). The national currency has suffered, affecting the population and companies with loans in the national currency and in foreign currency.

2.4. Development of the main research hypotheses

The capability of companies to pay their debts at maturity is an important element for investors, due to the possibility of analyzing the liquidity of companies. Financial crises are periods that can lead to a low level of lending and therefore companies may face problems in meeting their financial obligations. Also, major economic phenomena can affect companies by decreasing the sales volume, more precisely the revenues obtained from the activity. Based on this hypothesis, the study aims to analyze the relevance of cash holdings and cash equivalents before and after the financial crisis of 2008, taking into account the level of turnover and the fiscal impact on liquidity.

H1: Cash Holding and Operating Cash Flow have a significant influence over the stock market price.

Each financial element reported by companies may have a lower or higher relevance depending on how it is perceived by the decision-makers. Therefore, another aspect that will be analysed by this study is the superiority of explaining the variation of the stock market price.

H2: Cash Holding offers an explanatory value higher than the value of the operational cash flow in terms of explaining the change in the stock price.

The financial market is constantly evolving, and this evolution can be characterized in some cases by increases or decreases in some areas of activity, generating blockages. Thus, the study proposes the analysis of cash holdings and

cash equivalents taking into account the change in other economic factors, the analyzed variable being seen as an alternative tool for management decisions.

H3: Taking into account the particularities of the analyzed companies, during the financial crisis, Cash Holding can be used as an alternative analysis tool.

3. RESEARCH METHODOLOGY

The main objective of this paper is to analyze the impact that cash holdings and cash equivalents have on investor decision-making and its ability to be used as an alternative analysis tool during the 2008 global financial crisis. The period is divided into Pre-Crisis Phase (2006-2008) and Post-Crisis Phase (2009-2011). In order to provide an answer to the hypotheses formulated above, this chapter presents the empirical ways of estimating the relevance of financial information, population and sample selection criteria and concludes by presenting the constructed econometric models.

3.1. Estimating the influence of financial information on the stock market price and cash holding

The relevance of financial information is a topic of interest to academia, due to its ability to present the relationship between a company's stock market price and the information reported by companies. Also, the relevance of financial information should be understood in terms of the relative power between two pieces of information and the additional power that information can generate at a given time. Among the most important models for analyzing the relevance of financial information is the Olhson model (1995):

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

Where:

P_t – represents the stock price at the end of the financial year;

$ANCPSt$ – represents the book value per share at time t ;

EPS_t – represents the earnings per share at a given time;

$\beta_i = \overline{1,3}$ – represents the parameters of the econometric model;

ε_t – represents the error variable.

The value relevance of the Olhson (1995) econometric model is measured using the determination ratio R^2 , and the variables $ANCPSt$ și EPS_t are used to analyze the stock market price variation.

Alzoubi (2019) analyzed the decision-making process regarding cash holdings according to the life cycle of companies. The study looked at a sample of 141 companies in the non-financial sector, listed on the Amman Stock Exchange. Thus, the study determined on the basis of econometric data that cash holdings are not of significant importance in the decision-making process in the

launch and development stages, because the companies in these stages use their cash in the development activity. Also, in the maturity stages, companies do not give significant importance to decisions about cash holdings, because with the growth of companies, the need for financing will be higher and thus, companies will focus less on cash holdings and will focus on external financing. In the downturn, companies will focus on increasing cash holdings to meet financial obligations and recover economically.

$$CASH_{i,t} = B_1 I_{i,t} + B_2 G_{i,t} + B_3 M_{i,t} + B_4 D_{i,t} + B_5 SIZE_{i,t} + B_6 PROF_{i,t} + B_7 LEV_{i,t} + B_8 DIV_{i,t} + \varepsilon_{i,t}(2)$$

Where:

$CASH_{i,t}$ – represents the ratio between cash and total assets;

$I_{i,t}$ – represents the launch cycle of the analyzed companies;

$G_{i,t}$ – represents the growth cycle of the analyzed companies;

$M_{i,t}$ – represents the maturity cycle of the analyzed companies;

$D_{i,t}$ – represents the decline cycle of the analyzed companies;

$SIZE_{i,t}$ – natural logarithm of the firm's total assets;

$PROF_{i,t}$ – represents the ratio between net earnings and total assets;

$LEV_{i,t}$ – represents the ratio between total debt and total assets;

$DIV_{i,t}$ – represents the ratio between total cash dividends and total assets;

$\beta_i = \overline{1,8}$ – represents the parameters of the econometric model;

ε_t – represents the error variable.

3.2. Population, sample and data source

The total population analyzed in the present study consists of companies listed on the Bucharest Stock Exchange, the component companies of the national index BET (Bucharest Exchange Trading) in 2008. The criteria for selecting the sample were represented by the availability of the stock market price and financial statements during 2006-2011, as well as companies operating in the non-financial sectors. Thus, from the total population of 10 companies resulted a sample of 6 companies. The analyzed period was divided into: Pre-Crisis Phase (2006-2008) and Post-Crisis Phase (2009-2011). The financial data extracted from the financial statements of the companies were analyzed and processed in the SPSS 23.0 program. Also, the items that showed interest were: Total Assets, Total Equity, Turnover, Net Income, Operating Income, Operating Cash Flow, Current Assets, Total Liabilities and the stock market price at the end of the financial years 2006-2011, taken from the website www.investing.com. In order to ensure comparability between companies, we used to scale some of the variables analyzed, by dividing the variables to the number of shares issued.

3.3. Econometric models used in the present study

The present study aims to analyze the influence that cash holdings have on companies, more precisely, their ability to influence the decision-making process of investors. The variables used to validate the formulated assumptions take into account: the stock market price of the companies at the end of the fiscal year, cash holdings and cash equivalents, operating cash flow, return on equity, return on assets, financial leverage and net income. Also, in order to provide a more detailed image, the study proposes for analysis equation no. 3 to identify the influence that turnover per share and fiscal impact have on cash holdings and cash equivalents.

Model no. 3

$$CashHolding_t = \beta_0 + \beta_1 Size_t + \beta_2 FiscalEffect_t + \varepsilon_t \quad (3)$$

Where:

CashHolding_t – represents the ratio between cash holdings and cash equivalents and the number of shares issued;

Size_t – represents the ratio between the turnover and the number of shares issued;

FiscalEffect_t – represents the ratio between the operating result and the net income.

Standardization of equation no. 3 will allow us to analyze the influence of cash holdings and cash equivalents on the stock market price taking into account the turnover of companies and the fiscal impact. In order to determine the usefulness of cash holdings and cash equivalents, the study proposes for analysis model no. 4, in which the influence of the operational cash flow and of the standardized CashHolding on the stock market price is presented. Model no. 5 and no. 6 presents the individual influence of the operational cash flow and of the CashHolding in order to determine the superiority in explaining the variation of the stock exchange rate. Model no. 7 considers in addition to the influence of the operational cash flow and the standardized CashHolding, the influence of the financial leverage, the net income and the turnover rate of the total assets on the stock market price. Thus, through model no. 7 also wants a more detailed analysis regarding the correlations established between the analyzed variables.

Model no. 4

$$P_t = \beta_0 + \beta_1 Standard_{CashHolding} + \beta_2 CFO + \varepsilon_t \quad (4)$$

Model no. 5

$$P_t = \beta_0 + \beta_1 Standard_CashHolding + \varepsilon_t \quad (5)$$

Model no. 6

$$P_t = \beta_0 + \beta_1 CFO + \varepsilon_t \quad (6)$$

Model no. 7

$$P_t = \beta_0 + \beta_1 \text{Standard_CashHolding} + \beta_2 \text{CFO} + \beta_3 \text{NetIncome} + \beta_4 \text{LEVERAGE} + \beta_5 \text{TAT} + \varepsilon_t \quad (7)$$

Where:

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

CashHolding – represents cash holdings and cash equivalents per share;

Standard_CashHolding – represents the standardized equation of model no. 3;

CFO – represents the operational cash flow;

Leverage – represents the financial leverage;

NetIncome – represents the net income per share;

TAT – represents the turnover rate of total assets;

$\beta_i = \overline{1,3}$ – represents the parameters of the econometric model;

ε_t – represents the error variable.

4. RESULTS AND DISCUSSIONS

Financial crises seen as a major economic phenomenon directly and indirectly affect companies. Therefore, company management must understand and have as many tools as possible to overcome critical moments and improve financial position and performance. This chapter presents the results obtained from the empirical study that will provide an answer regarding the validation or invalidation of the formulated hypotheses.

4.1. Descriptive statistics

Table no. 1 presents the descriptive statistics of model no. 7, which are analyzed in addition to the main variables, financial leverage, turnover of total assets and net income. According to the data presented, the stock market price decreased in the Post-Crisis period due to the higher volume of sales transactions, determined by investors' sense of uncertainty about the potential losses they may incur.

Table 1. Descriptive statistics of model no. 7

Pre-Crisis Phase (2006-2008)				Post-Crisis Phase (2009-2011)			
	Mean	Std. Deviation	N		Mean	Std. Deviation	N
Price	5,46	11,68	18	Price	3,04	6,43	18
LEVERAGE	0,60	0,43	18	LEVERAGE	-1,64	12,11	18
NetIncome	0,293	0,892	18	NetIncome	0,08	0.295	18
CFO	0,51	1,51	18	CFO	0,90	2,13	18

Pre-Crisis Phase (2006-2008)				Post-Crisis Phase (2009-2011)			
CashHolding_Standard	0,59	1,27	18	CashHolding_Standard	0,34	0,75	18
TotalAssetsTurnover	0,71	0,45	18	TotalAssetsTurnover	0,59	0,39	18

Source: custom preparation in the program SPSS 23.0

CashHolding decreases between the two periods, while the operating cash flow increases. A possible explanation could be the use of cash for investing in new projects that will cause an increase in turnover, while the operating cash flow records the increases in cash as a result of ongoing projects. The result is a decline in the Post-Crisis period, driven by declining revenues, while the turnover of total assets is declining as a result of investments in new technologies to ensure a comparative advantage.

4.2. Results regarding the standardization of the CashHolding variable

The current section presents the influence of turnover and the tax effect on cash holdings and cash equivalents. Table no. 2 shows the direct and strong link between the independent variables and the dependent variable, CashHolding. Also, the variation of CashHolding is explained in proportion of 91.5% of the turnover and of the fiscal effect, in Pre-Crisis Phase. In the Post-Crisis Phase, the connection between the analyzed variables increases, and the variation of CashHolding can be explained by the turnover and the fiscal effect in proportion of 95.9%.

Table 2. Statistics regarding model no. 3

Pre-Crisis Phase (2006-2008)					Post-Crisis Phase (2009-2011)				
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	0,957 ^a	0,915	0,904	0,41	1	0,979 ^a	0,959	0,953	0,17
a. Predictors: (Constant), Turnover, FiscalEffect					a. Predictors: (Constant), FiscalEffect, Turnover				
b. Dependent Variable: CashHolding					b. Dependent Variable: CashHolding				

Source: own processing in SPSS 23.0

Table no. 3 presents the results regarding the parameters of the analyzed model. Thus, during the Pre-Crisis period, the turnover contributes significantly to the increase of cash, while the fiscal effect erodes its level.

Table 3. Parameters assesment of model no. 3

		Pre-Crisis Phase (2006-2008)				Post-Crisis Phase (2009-2011)					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			B	Std. Error	Beta			
1	(Constant)	0,247	0,147		1,683	0,113	-0,003	0,045		-0,062	0,952
	FiscalEffect	-0,188	0,086	-0,194	-2,195	0,044*	0,001	0,002	0,020	0,391	0,701
	Turnover	0,103	0,009	1,044	11,796	0,000*	0,053	0,003	0,978	18,654	0,000*
a. Dependent Variable: CashHolding						a. Dependent Variable: CashHolding					
b. Statistically significant at 0.05*,0.10**						b. Statistically significant at 0.05*,0.10**					

Source: own processing in SPSS 23.0

In the Post-Crisis period, the influence of turnover is significant through the transactions carried out by the companies in the activity, while the fiscal effect is not statistically significant. A possible explanation can be the financial incentives granted to companies for economic recovery.

4.3. The influence of CashHolding and Operational Cash flow on the stock market price and their relative strength

The results obtained and presented in this section aims to present the influence of CashHolding and operational Cash flow on the stock market price, as well as the analysis of the explanatory power between the two variables. Table no. 4 presents the statistics regarding the model no. 4.

Table 4. Statistics regarding model no. 4

Pre-Crisis Phase (2006-2008)					Post-Crisis Phase (2009-2011)				
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	0.931 ^a	0,867	0,849	4,538	1	0.986 ^a	0,971	0,968	1,156
a. Predictors: (Constant), CashHolding_Standard, CFO					a. Predictors: (Constant), CFO, CashHolding_Standard				
b. Dependent Variable: Price					b. Dependent Variable: Price				

Source: own processing in SPSS 23.0

In the Pre-Crisis period, the independent variables could explain the change in the stock price in the proportion of 86.7%, while in the Post-Crisis period, the change in the market price is explained in the proportion of 97.1%. In both periods, the connection between the variables is strong.

Table no. 5 presents the econometric analysis of the parameters of model no. 4. According to the table, in the Pre-Crisis period, both variables are significant, while in the Post-Crisis period, only the variable obtained following the standardization of equation no. 3 is significant.

Table 5. Parameters assesment of model no. 4

Pre-Crisis Phase (2006-2008)					Post-Crisis Phase (2009-2011)					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta			B	Std. Error	Beta		
(Constant)	0,611	1,186		0,515	0,614	0,184	0,302		0,609	0,551
CFO	-4,865	1,203	-0,629	-4,043	0,001*	0,413	0,623	0,136	0,662	0,518
CashHolding_Standard	12,460	1,435	1,350	8,680	0,000*	7,342	1,775	0,852	4,137	0,001*
a. Dependent Variable: Price						a. Dependent Variable: Price				
b. Statistically significant at 0.05*,0.10**						b. Statistically significant at 0.05*,0.10**				

Source: own processing in SPSS 23.0

One possible explanation for the results could be investors' interest in cash holdings and cash equivalents that can be used in the event of a major economic event to keep the company on good terms with its economic partners and to meet all obligations in a timely manner. Instead, the operational cash flow, considered as a tool for analyzing the origin, contributes to the decrease of the stock market price, through the expenses that appear in its structure, more precisely, of the cash outflows. Also, during a major economic event, investors are also interested in the analysis of the operational cash flow, to see if the companies obtain sufficient liquidity from the activity.

In the Post-Crisis period, cash holdings and cash equivalents are statistically significant. One possible explanation could be the interest of investors to invest in liquid companies, which can honor their financial obligations. Regarding the operational cash flow, economic events may cause certain changes in the structure of receipts and payments, more precisely, an uncertainty is created regarding the future cash flows. Based on the results presented in Table no. 5, the hypothesis formulated is half validated, because cash holdings are statistically significant in both periods, while the operational cash flow is significant only in the Pre-Crisis Phase.

Table 6. Statistics regarding model no. 5 and model no. 6

Pre-Crisis Phase (2006-2008)					Post-Crisis Phase (2009-2011)				
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	0.850 ^a	0,722	0,705	6,35	1	0.985 ^a	0,971	0,969	1,14
a. Predictors: (Constant), CashHolding_Standard					a. Predictors: (Constant), CashHolding_Standard				
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	0.446 ^a	0,198	0,148	10,78	1	0.969 ^a	0,939	0,935	1,64
a. Predictors: (Constant), CFO					a. Predictors: (Constant), CFO				

Source: own processing in SPSS 23.0

Table no. 6 shows the intensity of the connection between the analyzed variables and their determination ratio. Thus, we can observe that in both periods, the superiority in explaining the variation of the stock market price is represented by cash holdings and cash equivalents, which validates the second hypothesis formulated.

Also, between cash holdings and cash equivalents and the market price, the link between variables is significant, while operating cash flow shows an increase in intensity from one period to another. Thus, the results presented in Table no. 6 validates the hypothesis, confirming that cash holdings and cash equivalents have an explanatory power superior to the operational cash flow.

Table 7. Parameters assesment of model no. 5 and model no. 6

Pre-Crisis Phase (2006-2008)					Post-Crisis Phase (2009-2011)					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta			B	Std. Error	Beta		
(Constant)	0,863	1,658		0,520	0,610	0,165	0,295		0,558	0,584
1 CashHolding_Standard	7,841	1,217	0,850	6,445	0,000*	8,491	0,369	0,985	22,998	0,000*
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Unstandardized Coefficients		Standardized Coefficients	t	Sig.

Pre-Crisis Phase (2006-2008)						Post-Crisis Phase (2009-2011)					
	B	Std. Error	Beta			B	Std. Error	Beta			
1	(Constant)	3,719	2,688		1,384	0,185	0,412	0,421		0,980	0,342
	CFO	3,447	1,732	0,446	1,991	0,064**	2,933	0,187	0,969	15,682	0,000*
a. Dependent Variable: Price						a. Dependent Variable: Price					
b. Statistically significant at 0.05*,0.10**						b. Statistically significant at 0.05*,0.10**					

Source: own processing in SPSS 23.0

According to the results presented in Table no. 7, operating cash flow and cash holdings and cash equivalents significantly influence the stock market price in both periods. Also, the increase of the stock market price by 1% determines an increase of cash holdings, due to the increase of the turnover level that contributes to an increase of the liquidity, but also of the possibility of dividends distribution. Operating cash flow increases in case of stock market increase by 1%, due to cash outflows generated by various operations necessary to carry out the activity, operations that contribute to increasing investor confidence in the company's activity and revenues.

4.4. Analysis of internal factors on the stock market price

In the present subchapter, the study aims to analyze the parameters of the econometric model by adding variables that capture the contribution of assets to the formation of turnover, net income and financial leverage.

Table 8. Statistics regarding model no. 7

Pre-Crisis Phase (2006-2008)					Post-Crisis Phase (2009-2011)				
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	0.988 ^a	0,975	0,965	2,18	1	0.998 ^a	0,997	0,995	0,45
a. Predictors: (Constant), TotalAssetsTurnover, CashHolding_Standard, LEVERAGE, NetIncome, CFO					a. Predictors: (Constant), TotalAssetsTurnover, CFO, LEVERAGE, NetIncome, CashHolding_Standard				

Source: own processing in SPSS 23.0

Table no. 8 shows the significant intensity link between the variables analyzed in both analyzed periods. Also, the econometric model explains the stock market price variation in proportion of 97.5% in Pre-Crisis Phase, respectively 99.7% in Post-Crisis Phase.

Table 9. Parameters assesment of model no. 7

Pre-Crisis Phase (2006-2008)						Post-Crisis Phase (2009-2011)				
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta			B	Std. Error	Beta		
(Constant)	2,743	1,053		2,605	0,023	0,208	0,217		0,957	0,357
LEVERAGE	3,345	1,485	0,124	2,253	0,044**	0,006	0,011	0,012	0,585	0,570
NetIncome	5,219	0,907	0,399	5,756	0,000*	-8,219	0,880	-0,377	-9,339	0,000*
CFO	-5,824	0,594	-0,753	-9,801	0,000*	3,449	0,405	1,140	8,521	0,000*
CashHolding Standard	10,477	0,775	1,135	13,515	0,000*	1,192	0,952	0,138	1,252	0,235
TotalAssets Turnover	-5,682	1,432	-0,216	-3,969	0,002*	0,011	0,331	0,001	0,032	0,975
	a. Dependent Variable: Price b. Statistically significant at 0.05*,0.10**					a. Dependent Variable: Price b. Statistically significant at 0.05*,0.10**				

Source: own processing in SPSS 23.0

According to the results presented in Table no. 9, in the Pre-Crisis period, the analyzed variables are significant. Based on the results, we can say that the net income, cash holdings and financial leverage positively influence the stock market price, while the turnover of total assets and the operational cash flow have a negative influence on the stock market price. A possible explanation could be given by investors' interest in the size of dividends, which can be distributed if the company makes a profit. Investors also consider the level of indebtedness in order to analyze its ability to borrow in the event of a possible expansion or to invest in a new project. Operating cash flow negatively influences the stock market price due to cash outflows that may be higher than cash inflows, thus eroding the volume of cash.

In the Post-Crisis period, the operating result and cash flow are statistically significant. Taking into account the presence of the major economic phenomenon, investors are interested in the company's ability to generate liquidity from the activity, as well as the net income obtained to obtain additional income from dividends. Cash holdings and cash equivalents are not statistically significant, thus validating half of the last hypothesis of the study.

5. CONCLUSIONS

The international financial market is constantly evolving, with new and diversified tools being introduced to help companies. The management of companies in the decision-making process wants to use the most efficient methods to establish the causes and financial effects that could affect the company and solutions to minimize these effects. A high-performing company may go into insolvency due to poor cash management, thus entering into an inability to pay the financial obligations. Financial crises are major economic phenomena that can cause a company to go bankrupt. Therefore, the main objective of the study was to analyze how cash holdings and cash equivalents can influence the decision-making process of investors and to help companies recover financially faster. CashHolding analysis was performed in comparison with the operational cash flow, analyzed as a liquidity analysis tool. The analyzed period was divided as follows: Pre-Crisis Phase (2006-2008) and Post-Crisis Phase (2009-2011).

The results of the study concluded that CashHolding has an explanatory power superior to operational cash flow. CashHolding is also becoming relevant for investors in the Pre-Crisis period, due to the level of confidence it creates in investors regarding the fulfillment of financial obligations and the maintenance of business relations. The limitations of the present study were represented by the relatively small sample and the analyzed period of only six years. In the future, the study could be continued by analyzing the stock market price to identify the financial cycles of increase and decrease and the analysis of how CashHolding has contributed to minimizing, or as appropriate, maximizing the effects.

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THE IMPACT OF FISCAL POLICY ON ECONOMIC GROWTH

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Abstract

This paper investigates the importance of economic policy on financial stability of a country. We use data for 28 countries over the period of 2008 to 2019. The sample regards the countries which are members of European Union. Our results show that control for corruption is a statistically significant variable toward financial stability. On the other hand, variables such as number of taxes and consumption can straighten on a short period of time but on the long run can drive uncertainty from the point of view of fiscal policy efficiency. As fiscal policy represents a driver for economic growth this reflects the importance of public finance sustainability which in turn can act as a cousin for any economic or financial shock. Our results show that countries which have low computer commutations skills as well as low control of corruption register negative impact on economic growth. For our models we used panel data. The regression models results are robust as we run regressions with fixed effects and we controlled for heteroscedasticity.

Keywords: *fiscal policy; government expenditure; EU 28.*

JEL Classification: E62, H5

1. INTRODUCTION – FISCAL POLICY BACKGROUND

The present paper analyses the impact of fiscal policy on GDP annual growth on EU 28 countries during the period 2008-2019. The key indicators used for fiscal policy are the number of tax paid by individuals within an economy, taxation receipts and government expenditure. In the literature there is a growing tendency debate toward the impact of fiscal policy on countries' economies and whether necessary or not such a policy is.

However, most theory underline that there is an inequality in tax paid by citizens while other countries in order to enhances their economies cuts tax as a good/harmful for growth (Aristei and Perugini, 2010; Furman, 2019) In order to understand the fiscal policy is important to comprehend the determinants of growth and their implementation.

Gunasinghe *et al.* (2020) showed that fiscal policy has shifted respectively to a reduced amount of progressive direct and indirect tax. In order to analyse economic growth and fiscal policy empirically their interdependence needs to be allowed.

The rest of the paper is organised as follows. Section 2 describes the methodology of the paper and discusses the empirical findings. Section 3 presents the concluding remarks of the paper.

2. EMPIRICAL METHODOLOGY. ECONOMETRIC OUTCOMES AND DISCUSSION

The present paper examines the relation between fiscal policy and economic growth using two methods, respectively pooled OLS and in order to check for robustness we run the same models with fixed effects. The analysed sample is EU 28 for 2008-2019 periods. Table 1 describes the variables considered in all the models and their acronyms as they will be referred in the rest of the paper.

Table 1. Description of the variables

Variables	Description	Unit
Gov deficit/surplus	GD/S	% of GDP
Net external debt	NED	%
Total general government expenditures	TGGE	%
Inflation rate	HICP	%
Total unemployment rate	TU	%
Population	logpop	log
Expenditure on social protection	ESP	%
Control of corruption	CC	Number
Trade	Tr	%of GDP
Foreign direct investment net inflow	FDI	%
Real interest rate	RI	%
Employment	Emp	%
National income	NI	%
Gov expedu	Gexpedu	%of GDP
GDPgrowth annual	GDP	%
Compulsory education duration years	Com Edu	Number
Computer communications	CompC	%
Final consumption expenditure	C	%
Life expectancy at birth total	Life	%
Tax revenue	TR	% of GDP
Taxes on goods and services	TGS	% of GDP
Tax paid	TaxNo	Number

Source: authors' own work

Table 2. Summary statistics (raw data)

	Obs	Mean	Std. Dev.	Min	Max
GD/S	336	-2.80	3.68	-32.10	4.20
NED	322	-63.90	440.42	-2972.40	586.30
TGGE	336	45.36	6.59	24.80	65.10
HICP	336	1.83	1.96	-1.70	15.30
TU	336	8.89	4.59	2.00	27.50
Population	336	18097895.66	22984669.59	407832.00	83019213.00
logpop	336	6.89	0.61	5.61	7.92
ESP	280	23.53	5.77	12.10	34.50
CC	308	1.00	0.79	-0.27	2.45
Tr	308	125.06	69.95	45.42	408.36
FDI	308	11.46	32.76	-41.46	280.13
RI	74	4.04	3.09	-2.93	12.67
Emp	280	8231.06	10793.14	163.80	45057.20
NI	280	1732.34	5075.58	5.40	35932.70
Gexpedu	168	5.29	1.16	2.95	8.56
GDP	252	2.15	2.91	-9.13	25.16
Com Edu	258	10.50	1.32	8.00	13.00
CompC	252	41.90	16.63	10.30	78.87
C	308	75.13	8.57	42.92	91.67
Life	280	79.08	2.93	71.81	83.33
TR	282	21.22	4.96	11.11	46.05
TGS	282	33.47	6.51	20.62	48.89
TaxNo	308	16.67	10.03	1.00	27.00

Source: authors' own work

Table 2 presents the statistics descriptive. Thus, the number of observation range from 336 to 78. Therefore, because of the lack of data for some variables, the number of observations is not the same in all the regressions models, respectively will drop.

Table 3. Correlation matrix of selected variables

	GD/S	NED	TGGE	HICP	TU	Population	logpop	ESP	CC	Tr	FDI	RI
GD/S	1											
NED	-0.20***	1										
TGGE	-0.35***	0.13*	1									
HICP	0	-0.02	-0.14**	1								
TU	-0.47***	0.22***	0.17**	-0.21***	1							
Population	-0.11*	0.16**	0.18***	-0.05	0	1						
logpop	-0.19***	0.39***	0.28***	-0.04	0.07	0.84***	1					
ESP	-0.07	0.07	0.81***	-0.21***	-0.05	0.44***	0.48***	1				
CC	0.19***	-0.29***	0.34***	-0.12*	-0.36***	0.1	-0.01	0.62***	1			
Tr	0.28***	-0.73***	-0.34***	-0.02	-0.27***	-0.48***	-0.70***	-0.35***	0.14*	1		
FDI	-0.04	-0.07	-0.16**	-0.02	-0.01	-0.19***	-0.39***	-0.16**	0.07	0.24***	1	
RI	-0.43***	0.22	-0.09	0.1	0.56***	-0.12	-0.03	-0.27*	-0.41***	-0.33**	-0.15	1
Emp	-0.12*	0.19**	0.42***	0.02	0.09	0.46***	0.49***	0.36***	-0.02	-0.36***	-0.12	-0.34**
NI	-0.08	0.14*	0.23***	-0.13*	0.50***	-0.03	0.07	0.14*	-0.24***	-0.24***	-0.01	-0.09
Gexpedu	0.1	0.02	0.19*	-0.02	-0.19*	-0.33***	-0.30***	0.06	0.27***	0.16*	-0.1	-0.03
GDP	0.24***	-0.13*	-0.32***	-0.19**	-0.11	-0.30***	-0.29***	-0.28***	-0.03	0.30***	0.12	-0.19
Com Edu	0.02	-0.22***	0.21***	-0.04	0.12	0.06	0.12	0.22***	-0.11	0.14*	-0.09	-0.48***
CompC	-0.01	0.1	0.05	-0.04	0.01	-0.26***	-0.13*	0.04	0.18**	0.1	0.1	-0.26*
C	-0.22***	0	0.05	0.06	0.19***	-0.05	0.11	0	0	-0.28***	0	0.25*
Life	0.08	0.37***	0.36***	-0.12*	-0.04	0.37***	0.39***	0.43***	0.17**	-0.37***	-0.01	-0.41***
TR	0.04	0.14*	0.1	0.02	-0.14*	-0.16**	-0.08	0.12*	0.1	0.05	0.14*	-0.56***
TGS	0.12*	0.01	-0.24***	-0.02	0.03	-0.37***	-0.16**	-0.22***	-0.03	0.1	0.02	-0.04
TaxNo	-0.04	0.31***	0.08	0.08	0.01	0.31***	0.31***	0.04	-0.14*	-0.40***	-0.09	0
	Emp	NI	Gexpedu	GDP	Com Edu	CompC	C	Life	TR	TGS	TaxNo	
Emp	1											
NI	0.04	1										
Gexpedu	-0.18*	-0.1	1									
GDP	-0.11	0.03	-0.05	1								

	GD/S	NED	TGGE	HICP	TU	Population	logpop	ESP	CC	Tr	FDI	RI
Com Edu	0.34***	0.28***	-0.14	-0.01	1							
CompC	0.22***	0.15*	0.16*	0.27***	0.18**	1						
C	-0.11	0.33***	-0.29***	-0.16*	-0.12	-0.20**	1					
Life	0.43***	0.21**	0.17*	-0.06	0.14*	0.27***	-0.19**	1				
TR	0.09	0.12	-0.13	0.23***	0.1	0.30***	-0.04	0.30***	1			
TGS	-0.17*	-0.05	0.05	0.07	-0.26***	0	0.16**	-0.40***	-0.04	1		
TaxNo	0.38***	0.26***	0.03	-0.12	-0.01	0.12	0.01	0.27***	-0.15*	0.01	1	

Source: authors' own work

Table 3 presents the correlation metrics for variables used in the regression models. In this paper we consider variables to be correlated if there is a coefficient higher than 0.7. Thus, variables with such values were not considered together in the same models, but one by one.

Table 4 shows the results for pooled regression models. From the outcome of 11 models, only models 8, 9 and 11 have an R2 from 0.40 and above. From models 1 to 6, the expenses made by the government are statistically significant, but if they increase the GDP decrease. An explanation of these results can be the crowing in/out effects. In the literature is underlined (Mankiw, 2018) that whenever the governments increases their expenses with investments, the firm may feels a crowing effects since their economic activities are no longer required by their clients since the government infuse a lot investments in an economy. Along with TGGE, inflation confirms the negative effects on GDP as a lot of macroeconomics theories stated. In all models a variables of corruption was considered. Only in the model 9, 10 and 11 became statistically significant. Taxes have a negative and statistically significance on GDP as well as social protection expense. These results are in line with Aristei and Perugini (2010), Furman (2019) and Gunasinghe *et al.* (2020). We interpret these results as a tax burden on the citizens. Although, there are many studies in the literature that proved a positive a statistically significance of consumption on GDP, our study found a negative relation.

Table 4. The outcomes of pooled regressions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
GD/S	0.08 (1.40)	0.05 (0.84)	0.08 (1.35)	0.10 [†] (1.85)	0.09 (1.63)	0.09 [†] (1.72)	0.26 (1.20)	0.14 (0.51)			
TGGE	-0.09** (-2.81)	-0.12*** (-3.61)	-0.10** (-2.91)	-0.08* (-2.41)	-0.08* (-2.38)	-0.09* (-2.55)	-0.06 (-0.74)	-0.19 (-1.43)			
HICP	-0.39** (-3.25)	-0.39** (-3.14)	-0.40*** (-3.42)	-0.37** (-3.33)	-0.38** (-3.30)	-0.37** (-3.31)	-0.45* (-2.66)	-0.51** (-2.71)	-0.44 [†] (-1.88)	-0.27* (-2.00)	-0.47* (-2.08)
TU	-0.00 (-0.07)	-0.03 (-0.62)			-0.02 (-0.36)						
CC	-0.03 (-0.11)	0.07 (0.25)	0.00 (0.01)	-0.26 (-1.00)	-0.30 (-1.10)	-0.19 (-0.69)	0.14 (0.21)	0.19 (0.24)	2.26 [†] (1.72)	2.11*** (4.42)	2.89* (2.26)
TradeofGDP	0.01** (2.92)		0.01** (3.13)	0.01** (2.83)	0.01** (2.75)	0.01 (1.30)					
FDI	0.00 (0.72)	0.01 (1.06)	0.00 (0.66)	0.00 (0.37)	0.00 (0.42)	0.00 (0.05)	-0.02 (-0.89)	-0.03 (-1.40)	-0.01 (-0.65)	-0.00 (-0.56)	-0.02 (-1.29)
NED		-0.00 (-1.16)									
Emp			0.00 (1.47)	0.00 (0.37)							
Com Edu			-0.06 (-0.41)	-0.14 (-0.98)	-0.12 (-0.87)	-0.07 (-0.47)	-0.73 (-1.59)	-0.17 (-0.27)			
CompC				0.05*** (4.48)	0.05*** (4.73)	0.05*** (4.47)	0.06* (2.65)	0.01 (0.27)	-0.05 (-0.82)	-0.00 (-0.16)	-0.02 (-0.36)
logpop						-0.40 (-0.93)	-1.11 (-1.55)	-1.76* (-2.02)			
RI							-0.09	-0.02	-0.09		0.09

EU ACCOUNTING AND TAXATION

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
							(-0.71)	(-0.09)	(-0.52)		(0.52)
TaxNo								0.03	0.04	-0.01	0.08
								(0.52)	(0.88)	(-0.66)	(1.56)
Life								0.33			
								(1.00)			
TGS									-0.20 [†]	-0.04	-0.06
									(-1.83)	(-1.09)	(-0.54)
ESP									-0.37 ^{**}	-0.30 ^{***}	-0.44 ^{***}
									(-3.14)	(-5.66)	(-3.80)
Gexpedu									-0.34	-0.54 ^{**}	-0.40
									(-0.87)	(-2.74)	(-1.09)
TR										0.04	
										(0.76)	
NI										0.00 ^{**}	
										(3.35)	
C										-0.11 ^{***}	-0.10 [*]
										(-3.79)	(-2.14)
cons	6.07 ^{***}	8.50 ^{***}	6.89 ^{***}	5.47 ^{**}	5.33 ^{**}	8.10 [*]	19.29 ^{***}	-1.72	19.66 [*]	19.30 ^{***}	21.01 [*]
	(3.94)	(6.01)	(3.78)	(3.07)	(3.17)	(2.31)	(3.89)	(-0.07)	(2.06)	(4.94)	(2.32)
F statistic	8.35 ^{***}	6.56 ^{***}	7.61 ^{***}	9.53 ^{***}	9.53 ^{***}	9.64 ^{***}	3.65 ^{**}	2.84 ^{**}	2.23 [*]	5.47 ^{***}	2.71 [*]
R-sq within	0.19	0.16	0.20	0.26	0.26	0.26	0.41	0.43	0.40	0.28	0.48
Obs.	252.00	243.00	252.00	252.00	252.00	252.00	58.00	53.00	40.00	168.00	40.00

Notes: t statistics is provided in parentheses.

[†] p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001

Source: authors' own work

Table 5. The outcomes of panel data fixed-effects regression models

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
GD/S	-0.03	-0.03	-0.02	-0.01	-0.01	-0.01	-0.05	-0.21			
	(-0.25)	(-0.28)	(-0.16)	(-0.09)	(-0.09)	(-0.04)	(-0.20)	(-0.64)			
TGGE	-0.30 ^{**}	-0.30 ^{**}	-0.35 ^{**}	-0.35 ^{**}	-0.30 ^{**}	-0.34 ^{**}	-0.24	-0.30			
	(-2.79)	(-2.72)	(-3.25)	(-3.24)	(-2.73)	(-3.12)	(-1.11)	(-1.13)			
HICP	-0.34 ^{**}	-0.33 ^{**}	-0.32 ^{**}	-0.33 ^{**}	-0.36 ^{**}	-0.33 ^{**}	-0.45 ^{***}	-0.44 [†]	-0.35	-0.21	-0.18
	(-3.07)	(-2.83)	(-2.87)	(-2.92)	(-3.17)	(-2.89)	(-2.78)	(-1.86)	(-1.52)	(-1.34)	(-0.70)
TU	-0.14 [†]	-0.15 [*]			-0.15 [*]						
	(-1.93)	(-2.04)			(-2.08)						
CC	1.30	0.99	1.59	1.87	1.59	2.07	11.72 ^{***}	11.74 ^{**}	8.45 [*]	0.85	9.26 [*]
	(0.90)	(0.66)	(1.08)	(1.22)	(1.08)	(1.36)	(4.28)	(3.28)	(2.11)	(0.42)	(2.34)
Tr	0.01		0.01	0.01	0.01	0.01					
	(0.38)		(0.40)	(0.42)	(0.44)	(0.38)					
FDI	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	-0.01	0.00	-0.01
	(1.23)	(1.41)	(1.01)	(0.86)	(1.03)	(0.86)	(0.22)	(0.45)	(-0.50)	(0.04)	(-0.33)
NED		0.00									
		(1.07)									
Emp			-0.00	-0.00							
			(-0.51)	(-0.25)							
Com Edu			0.02	0.06	-0.01	0.06	-0.34	-0.60			
			(0.04)	(0.13)	(-0.02)	(0.13)	(-0.38)	(-0.55)			
CompC				-0.03	-0.05	-0.04	0.02	0.01	-0.20	-0.09	-0.14
				(-0.67)	(-1.11)	(-0.83)	(0.14)	(0.05)	(-1.48)	(-1.47)	(-0.99)
logpop						4.31	6.96	-0.39			

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
						(0.24)	(0.10)	(-0.00)			
RI							-0.20	-0.12	0.19		0.28
							(-1.11)	(-0.53)	(0.73)		(1.06)
TaxNo								0.03	0.04	0.02	0.04
								(0.45)	(0.75)	(0.38)	(0.73)
Life								0.76			
								(0.73)			
TGS									-0.29	-0.13	-0.25
									(-0.78)	(-0.77)	(-0.68)
ESP									-1.09*	-1.20***	-1.46*
									(-2.09)	(-6.65)	(-2.54)
Gexpedu									-1.18	-0.53	-0.86
									(-1.16)	(-1.08)	(-0.84)
TR										0.08	
										(0.31)	
NI										0.00	
										(0.35)	
C										-0.11	-0.13
										(-1.18)	(-1.41)
cons	15.51**	16.78***	17.44*	17.41*	17.41*	-13.18	-35.59	-40.14	46.07*	47.54***	56.81*
	(2.95)	(3.39)	(2.29)	(2.28)	(2.53)	(-0.11)	(-0.07)	(-0.06)	(2.35)	(5.18)	(2.75)
F statistic	10.24***	9.45***	8.35***	7.46***	8.08***	7.46***	5.77***	4.11***	2.86*	6.74***	2.88*
R-sq within	0.25	0.24	0.24	0.24	0.25	0.24	0.56	0.57	0.53	0.36	0.57
Obs.	252.00	243.00	252.00	252.00	252.00	252.00	58.00	53.00	40.00	168.00	40.00

Notes: t statistics id provided in parentheses

† p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001

Source: authors' own work

In order to check for the results robustness, we run the same regressions with fix effects as well. In these models, government expenditure, continues to be negative and statistically significant, inflation maintains its significant as well as social protection expenses. The higher R² is 0.57.

3. CONCLUDING REMARKS

This paper analyzed the relation between fiscal policy and GDP for EU 28 for the period 2008-2019. We underline in this research that the number of taxes as well as their quota are excessive. Moreover, government expenditure, especially with social protection leads to a decrease of GDP. In this sense, we aim to analyse in our next paper the types of social protection expenditure that influence GDP. For this research, this type of expenditure was considered at aggregate level, namely all categories. Although, UK is no longer a member of the European Union, further studies can be made on EU 27 in order to compare the results. Thus, a better understanding with respect to fiscal policy as well as the impact of UK on EU budget represents a future direction of research.

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REGULATION FOR SOCIAL INSURANCE CONTRIBUTIONS IN EU – WHAT CHANGES AFTER GLOBAL PANDEMIC CRISES?

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Abstract

Social security contributions are an important source of income for public budget, and an efficient tool for implementing state fiscal policy, with medium and long-term results. In the current complex context of reinforcing the regulatory framework, this research aims to identify both common issues and the different specific features in the regulation of social security contributions for EU Member States. The paper presents a brief overview of the economic theory of social security contributions, with reference to the categories of taxpayers, mandatory requirements and legislation on exemption schemes. The comparative analysis covers the categories of social contributions, the elements related to the rigor of taxation of residents' incomes and the jurisprudential novelties with an impact on the delimitation of the mandatory and optional payments. We note the flexibility of tax regulations in our country, relatively low rates of taxation compared to other states in the same geographical area and the pressure on public spending that is exacerbated during periods of global pandemic, such as the one we are going through. The idea of harmonizing EU tax regulations is addressed in the field of social security contributions, with some pros and cons. The principles governing the European single market have a notable influence on the social security system and on the rights provided to the European citizen, a fact that is proven not only theoretically, but also presented in the case law, both at national and at EU level. The research generated two proposals to reinforce the EU regulation in this respect.

Overcoming the various forms of contemporary crises requires deeper harmonization in the field of taxation, including in the area of regulation of social security contributions. The sooner states reach a consensus on this, the more European citizens will be prepared to successfully manage future global challenges.

Keywords: *social security contributions; EU regulation.*

JEL Classification: K10, K29, K34

1. SOCIAL SECURITY IN THE CONTEXT OF THE GLOBAL PANDEMIC CRISIS

The current issue of most concern to the European Union authorities is the identification of effective mechanisms and methods in the fight against COVID-19. The EU and its Member States are constantly adopting new rules, imposing measures to take action against the spread of COVID-19, to eliminate or at least to diminish its effect and to prohibit the activities that cause its massive spread.

The EU seeks to ensure the protection and safety of citizens, as well as mitigating the socio-economic impact of the pandemic. EU leaders agreed that the Union's priorities in the fight against the pandemic are:

- Limiting the spread of the virus;
- Providing the necessary medical equipment;
- Encouraging citizens to obtain treatments and vaccines;
- Supporting the economy, jobs and businesses.

The EU and Member States have taken measures to limit and slow down the pandemic (e.g. travel restrictions, restrictions on the movement of citizens, etc.) and they are also looking for solutions to recover and revitalize their societies and economies. For the safety of its citizens, EU seeks to provide adequate protective equipment, and a medical dispatch office against COVID-19 has been set up for this purpose (Figure 3). Research has been promoted and boosted, including financially, with the view to obtain treatments and vaccines.

The EU and Member States have begun to take steps to reduce the negative socio-economic impact of the pandemic in order to return to sustainable economic growth, taking steps to redirect EU funds to help Member States. The EU has made tax rules more flexible to help authorities support the health system, businesses and jobs, and it even has set a priority line for the transport of goods. The EU is preparing a recovery plan, based on an amended proposal for the next long-term budget. This includes facilitating the double transition to a digital and greener society, as well as capitalizing on the lessons learned from the current crisis to improve preparedness and resilience. Last but not least, financial-budgetary mechanisms and resource allocations for economic recovery are considered.

In this context, the issue of regulating social security contributions benefits for policyholders and cross-border cooperation within the EU has become an important and topical issue for research in the field of legal sciences and beyond.

2. THE SYSTEM FOR REGULATING SOCIAL SECURITY CONTRIBUTION IN THE EU

The concept of social security is regulated in Article 22 of the Universal Declaration of Human Rights, according to which each member of a state has the right to social security in accordance with the resources available in the state to which he belongs and in the organization of the social security system.

The International Labour Organization (ILO) pays special attention to the regulation of the social security system, identifying criteria such as:

- The constitutional establishment of social security rights for all citizens of a state (ILO, 2016);
- Protection of social security rights (ILO, 2012);
- Setting minimum standards for the nine branches of social security, namely: health care, health benefits, unemployment benefits, old-age

pensions, work-related benefits, family benefits, maternity benefits, invalidity benefits, survivor's pension (ILO, 2011).

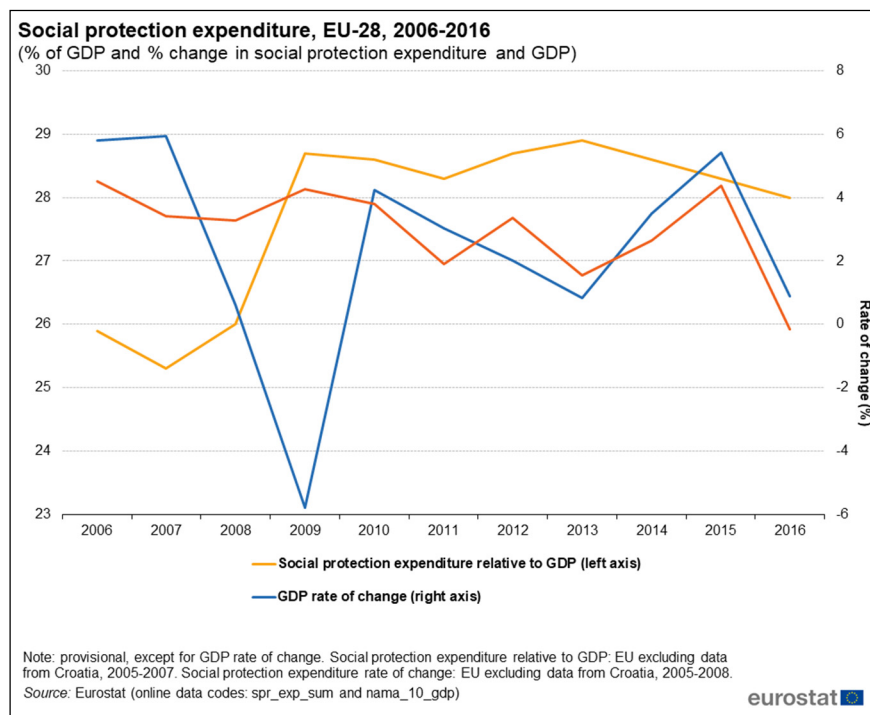
All these aspects require each state to build an adequate social security system, so that, by organizing the system and by training and allocating resources, to guarantee its citizens the rights to social protection and security.

The studies and research identified in the literature, as well as the experience of the states of the world, emphasize that, in establishing the social security system and implicitly in the way of settling and collecting social security contributions, the following should be taken into account:

- Significant differences between activities carried out in urban and rural areas (Chen, LeGates and Chenhao, 2019);
- The relationship between state social insurance and private social insurance (Ahmed, Barber and Odean, 2016);
- Compliance exactly with the benefits provided, regardless of the type of beneficiary (Hemmeter and Stegman, 2013);
- The relationship between social security, economic growth (Bruce and Turnovsky, 2013) and well-being (Saguna and Tofan, 2010);
- The impact of social security benefits on young people and the unemployed (Altman, Mokomane and Wright, 2014);
- Impact on the labor market (Cuesta and Olivera, 2014) and on public health (Massuda *et al.*, 2018);
- The effect on income redistribution (Moura *et al.*, 2013) and access to social security benefits and services (Tofan, Bercu and Roman, 2016);
- Impact on demographic indicators (Bercu, Tofan and Cigu, 2015);
- The changes that can occur in awarding social security benefits, especially in the case of local counties public expenditure (Bilan *et al.*, 2016).

Contributions to social insurance funds are among the tax obligations of taxpayers, being mandatory payments that give the taxpayer the right to receive social benefits in the future, respectively old-age pension, survivor's pension, benefits for temporary or permanent disability, allowances family, health insurance and hospital services (Costaş, 2019).

The key distinction between social contributions and taxes is that they involve the creation of specific funds, managed by central government bodies or public institutions with responsibilities in this area, while taxes are used to cover public needs as a whole (Tofan and Cigu, 2017).



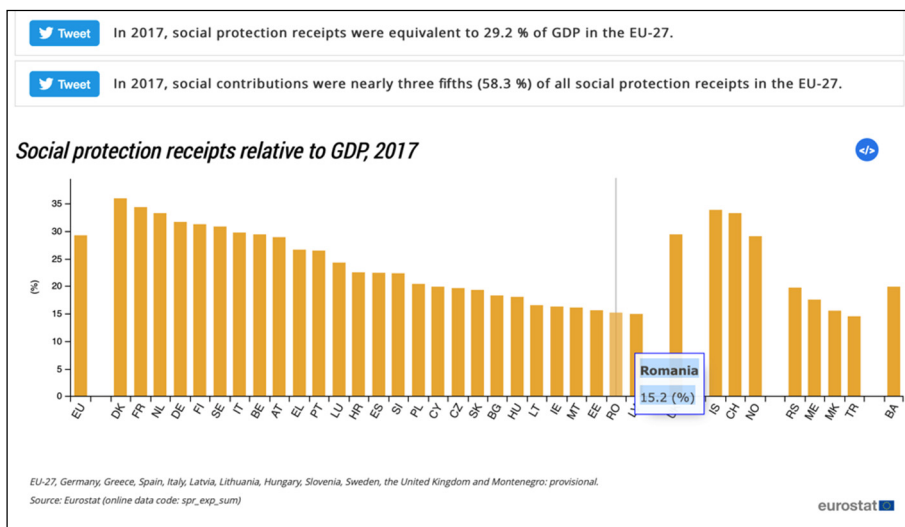
Source: (European Commission, 2020a)

Figure 1. The social protection expenditure in GDP for EU member states

The importance of the social and economic impact of collecting contributions for social security budgets, as it is proved by the statistical data, and, implicitly, the impact of social security benefits, have determined the states of the world to give special importance to these fiscal obligations. The fact that they have a significant share of total public financial resources and GDP is another argument. Thus, according to the available and presented statistical data, the following can be observed:

1. The share of social contributions as a share of income is very different in EU Member States, with average values below 30% for the whole area of the Union and maximums over 40% in the Czech Republic, France, Germany and Poland, as can be seen from Figure 1;

2. Each EU country has its own social security regulations (Figure 2). The obligations and rights provided by these laws are the same for all workers in the country, whether local or foreign (Tofan, 2019).



Source: (European Commission, 2020b)

Figure 2. Social Protection expenditure, % of GDP, in EU states 2017

However, EU rules coordinate national systems to ensure that people moving to another EU country do not lose their social security benefits (e.g. pension and healthcare rights) and always know what national laws are applicable for their particular situation in a certain time, in respect to the social security liability and rights (European Commission, 2018).

According to the rules of European law, a person can only be subject to the social security laws of a certain state at a certain time, so he only has to pay social security contributions in that country (Tofan, 2019). The main goal of the regulation for social contribution has to protect the citizen, so the employer's premises cannot be a decisive criterion for determining the applicable law. As a general rule, laws of the country where the person actually works (as an employee or self-employed) rule the social security contributions mandatory obligations and benefits and the contributions must be paid in that particular state. It is not very important where the person lives; in the context of the free movement of workers within the UE, scenarios such as those in which a taxpayer commutes between two states are not only possible, but frequent. There is an exception for workers who have been posted abroad for less than 2 years: they can remain insured even if they pay contributions in the country from which they are posted. For people who work simultaneously in more than one country, the specific rules set out which laws apply and where they should pay contributions.

3. COORDINATION OF EU MEMBER STATES' SOCIAL SECURITY REGULATION

European law includes harmonized rules for beneficiaries of social security rights when travelling in Europe. These rules apply to EU nationals, but also to those from Iceland, Liechtenstein, Norway, Switzerland and the United Kingdom who are or have been insured in one of these countries and their family members. Citizens, as well as stateless persons or refugees resident in the EU, Iceland, Liechtenstein, Norway, Switzerland or the United Kingdom, who are or have been insured in one of these countries, as well as their family members, are considered. At the same time, citizens of non-EU countries with legal residence in the EU who have moved between these countries and their family members can invoke these provisions. However, the rules on social security coordination do not replace national systems with a single European system. All EU Member States are free to decide who will be insured under their legislation, what benefits are provided and under what conditions.

Regulation (EC) no. 883/2004 of the European Parliament and of the Council on the coordination of social security systems, also relevant to the EEA and Switzerland, lays down rules for the coordination of national social security systems in the free movement of persons and how Member States can contribute to improving their level living conditions and working conditions. Uniform regulations at EU level take into account four main principles that must be observed when analyzing the regulation of social contribution in the EU:

1. **Single payment principle:** European citizens owe contributions to the social security budget of a particular state, so they are subject to the legislation of a single country at a given time. The tax authorities of the eligible Member States make the determination of this state, being impossible for the citizen to choose.
2. **The principle of equal treatment or non-discrimination** establishes that the European citizens insured in the social security system of a EU Member State enjoy the same rights and obligations as nationals of the country in which they travel.
3. **Principle of continuity in social protection or aggregation of periods:** implies that, when claiming a benefit for which it is important to calculate a certain period, previous periods of insurance, work or residence may be taken into account, if necessary, even if they have been carried out in another EU Member State.
4. **The principle of exportability** means that, as a general rule, if another European citizen is entitled to a cash benefit from a Member State, then the amount of money can be collected even if he lives in another country.

It is necessary to respect the special characteristics of national social security legislation and to develop a system of coordination, and in such coordination it is important to guarantee within the European Union equal treatment in accordance

with different national legislation for the persons concerned. The close link between social security legislation and those contractual provisions which supplement or replace such legislation and which have been the subject of a decision by public authorities obliging them or extending their scope, may require similar protection as regards the application of these provisions. As a first step, the experience of Member States that have notified such schemes can be assessed (Rogers and Philippe, 2019).

Due to the major differences between national laws regarding the categories of taxpayers for social security funds, the European Framework Regulation established the principle that its provisions apply to nationals of a Member State, stateless persons and refugees residing in the territory of a Member State who are or have been subject to the social security legislation of one or more Member States, as well as to family members and their survivors (Nistor, 2011).

The general principle of equal treatment has particular importance for workers who are not resident in the country where they work, including for workers in border areas who are more prone to commuting to another state. On several occasions, the Court of Justice of the European Union has given directions on ensuring equal treatment in the application of benefits, income and tax rates. In the opinion of the CJEU, this principle should be explicitly adopted and developed in the text of the framework regulation, while respecting the substance and spirit of legal decisions.

However, the principle of treating certain facts or events which take place in the territory of another Member State, as if they took place in the territory of the Member State whose legislation is applicable, should not interfere with the principle of aggregation of insurance periods, also in the case of self-employment, when periods completed in accordance with the legislation of one Member State will be added to those completed in accordance with the legislation of another Member State. The assimilation of facts or events, which have taken place in one Member State, may in no way confer jurisdiction on the assessment of rights acquired under the law of another Member State. Considering the effect of the proportionality principle in European law, the principle of assimilation/aggregation of periods does not lead to objectively unjustified results or the overlapping of benefits of the same kind for the same period.

The rules of fiscal coordination in the field of social security contributions must be designed to ensure that people moving within the European area, as well as their dependents and survivors, retain their rights and benefits legally acquired in the territory of any other EU Member State. These objectives must be met, in particular, by combining all the periods taken into account in accordance with the various national laws, in order to acquire and retain the right to benefits and to calculate the amount of benefits, to provide benefits to different categories of persons within the scope of the regulation.

People moving within the EU are to be subject to the social security system of a sole Member State, in order to avoid overlapping on the applicable provisions of national law and the complications that could result from these situations. In principle, there is no justification for social security rights to depend on the person's place of residence within the EU; however, in specific cases, in particular with regards to special benefits related to the economic and social context of the certain person, the place of residence may be taken into account.

In order to guarantee equal treatment for all persons pursuing an activity within the boarder of a Member State as efficiently as possible, it is necessary to establish the general rule that the applicable law is that of the Member State where the person pursues the activity, employed or independently.

From the 1st of May 2010, regulations on the coordination of the regulations on social contributions of the EU Member States, namely Regulations 883/2004 and 987/2009, apply. When nationals of EU Member States travel to the EU, Iceland, Liechtenstein, Norway, Switzerland or the United Kingdom, they are subjects to sole state legislation. Institutions of public authorities with responsibilities in the field of social security assess the impact of the provisions of the legislation of the country in which the person is located, in accordance with EU rules. As a basic rule, citizens are the beneficiaries of the legislation of the country where they actually work, employee or self-employed, and it does not matter where the person performing the work lives or where the employer is located (i.e. its registered office or places of work where the work is actually performed).

If a person works in a EU country other than the one in which he/she actually resides, and that person returns daily to the country of residence or at least once a week, in accordance with European law, the person concerned is considered a cross-border worker or "border worker". In this case, the country where the work is performed is responsible for social security benefits, stating that special rules apply to health and unemployment.

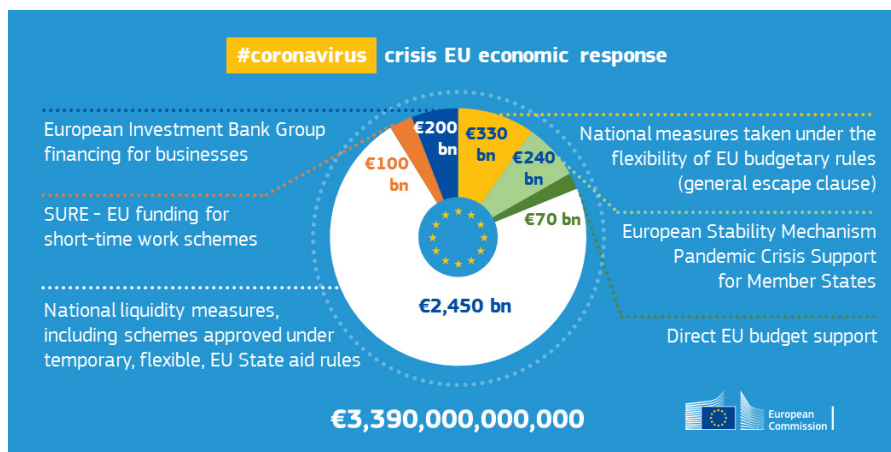
If a person is sent to work in another country for maximum 24 months by the employer (or by himself, if he falls into the category of self-employed) the insured privileges in the country of origin are maintained. This is the case for so-called "posted workers" to whom specific conditions apply.

There is also the situation where a worker works in several countries simultaneously. In these cases, it is important to determine the country where the most important part of the work takes place. If a substantial part of the activity, at least 25%, takes place in the country of residence, then the rules of the legislation of that country are incidental. If, on the other hand, it is not possible to identify a state which hosts a substantial part of the activity, then the legislation of the country in which the place of work or where the work is performed in favour of the employer will be incidental. If the work is for more than one employer, based in different countries, the law of the country of the worker's residence will apply,

even if a substantial part of the business is not carried out there. If a person is self-employed and does not carry out a substantial part the activity in the country of residence, the law of the country where the centre of interest of the activities performed is located will govern social security contributions. However, if the worker is employed and self-employed in different countries, the status of insured person in the public social security system will be valid in the country where the work is performed as an employee. We note that in this area, too, priority is given to the quality of employee, over the work performed as a self-employed person.

Another scenario is that in which a citizen does not work, a situation in which the rules of European law are still incidental. Each Member State is obliged, by its own legislation, to lay down the scheme for granting social security benefits to the unemployed.

Last but not least, it should be noted that, in the context of leaving the United Kingdom, all EU legislation, in all areas of social life, would still be applicable in the United Kingdom for the entire transition period. It is currently expected that the transition period will end on 31 December 2020, but it is possible and even necessary that this term be extended.



Source: (European Union Fiscal Council, 2020)

Figure 3. EU economic response to COVID-19 crisis

4. HOW TO EFFECTIVELY MANAGE PANDEMICS IN THE EU – THE FIRST PROPOSAL

There are several existing draft regulations, which may include in the proposals already considered a proposal for a mechanism for the cooperation of EU Member States, in order to act in a synchronized and efficient manner in the face of a future pandemic event.

Firstly, there is the proposal to extend cooperation between Member States in the regulation of social security. The proposal is in the process of being adopted and it is possible to extend its scope at this time. On 13 December 2016, the Commission proposed a revision of EU legislation on social security coordination and the European Parliament and the EU Council are currently discussing the topic. It is part of the Commission's 2016 work program and the Commission's efforts to facilitate labour mobility, to ensure equity for commuters and taxpayers, and to provide better tools for cooperation of the Member States' authorities.

The proposal modernizes the current rules to ensure that they are fair, clear and easier to apply, acknowledging that the free movement of people within the EU would not be possible without the rules on social security coordination. These rules ensure that social security protection is not lost when workers move to another Member State. These discussions between decision-makers at the level of the European institutions have existed since 1959 and are regularly resumed, through regulatory proposals that respond to the social and economic reality of the EU (Lupu *et al.*, 2018). The project we are considering now reflects the Commission's political commitment to a fair and truly pan-European labor market, a balanced proposal that:

- Facilitates the free movement of workers and protects their rights. At the same time, it strengthens the tools for national authorities to combat abuse or fraud.
- It makes a closer link between where contributions are paid and where benefits are claimed, ensuring a fair financial distribution of tasks between Member States.

The proposal updates EU rules in the following four areas:

1. Unemployment benefits: Jobseekers can export their unemployment benefits from the current minimum period of 3 months to at least 6 months. This will give them a better chance to find jobs and help fight unemployment and mismatch at EU level.

For frontier workers (who live in one country, work in another country and go home at least once a week), the Member State in which they worked for the last 12 months would become responsible for paying unemployment benefits. This reflects the principle that the Member State that received contributions should pay benefits. Member States may require that someone has worked in their territory for at least 3 months before a person who becomes unemployed can draw on previous experience in another Member State to claim unemployment benefits.

2. Long-term care benefits. This proposal clarifies what long-term care benefits are and where mobile citizens can claim such benefits. This will provide more legal security to a growing group of citizens in our aging societies, relying on long-term care. The proposal does not change the existing rules on the export of child benefits. The legislative proposal does not take into account special provisions on child benefits: the parents' country of work remains responsible for

the payment of child allowance, and this amount cannot be adjusted if the child is elsewhere. In this context, the figures show that less than 1% of child benefits in the EU are exported from one Member State to another.

3. Access of economically inactive citizens to social benefits. Based on the case law of the European Union Court of Justice, the proposal clarifies that Member States may decide not to grant social benefits to mobile citizens, who are economically inactive citizens – this means those who do not work and are not actively looking for a job and do not they have the legal right to reside on their territory. Economically inactive citizens do not have the legal right to reside only when they have a means of subsistence and full health coverage.

4. Coordination of social security for posted workers. The Commission proposes to strengthen the administrative rules on the coordination of social security for posted workers. It seeks to ensure that national authorities have the appropriate tools to verify the social security status of these workers and establishes clearer procedures for cooperation between Member States' authorities to address potentially unfair practices or abuses.

In general, the proposal aims at improving transparency, legal certainty, and equity for the benefit of mobile citizens, public authorities, employers and taxpayers. Following the analysis of the text of this legislative proposal, we consider that the proposal on the response to pandemic crises affecting the EU could be explicitly inserted in this legislation, setting out how Member States should coordinate their response to possible threats. The approach would be useful and efficient, the negotiation procedure on the content of the normative act being already in an advanced stage.

5. SECOND REGULATORY PROPOSAL FOR EFFICIENT AND COORDINATED PANDEMIC CRISIS MANAGEMENT IN THE EU

Our second proposal is to use the European Social Fund, which has been under evaluation since 2019. The EU is supporting Member States in reducing unemployment rates, in line with the broader EU 2020 target of achieving an employment rate of 75 % for the working age population. In the 2014-2020 programming period, the European Structural and Investment Funds support 11 investment priorities, also known as thematic objectives. Thematic objective 8 refers to the promotion of sustainable and quality workforce and to support labour mobility. This is one of the main objectives supported by the European Social Fund (ESF), with a budget of EUR 30.8 billion, representing around 36% of total EU funding for that period.

Under thematic objective 8, the ESF supports the following:

- Access to employment for jobseekers and the inactive, including the long-term unemployed and those far from the labour market, also through local employment and support initiatives for labour mobility;

- Sustainable integration of young people into the labour market, especially those not in employment, education or training, including young people at risk of social exclusion and young people from marginalized communities, including through the implementation of the youth guarantee;
- Employment, entrepreneurship and business creation, including innovative micro, small and medium-sized enterprises;
- Equality between men and women in all areas, including access to employment, career advancement, reconciliation of work and private life, and the promotion of equal pay for equal work;
- Adapting works, enterprises and entrepreneurs to change;
- Active and healthy aging;
- Modernization of labour market institutions, such as public and private employment services and
- Improving the matching of labour market needs, including through actions that improve transnational labour mobility, as well as through mobility schemes and better cooperation between institutions and relevant stakeholders.

The current pandemic crises have had massive effects on unemployment rates and have severely hampered the free movement of human capital. The use of the European Social Fund in response to these requirements is easy to justify and to regulate. The assessment of the results of the EU support provided in the current programming period, based in particular on the evaluations carried out by the Member States up to February 2019, led to specific conclusions and should be used for the implementation of the rest of the period 2014-2020. They could also fuel preparation for the next programming period, as the evaluation will provide lessons, in particular on cost-effectiveness, disclosure and target groups that are most in need, thus supporting the negotiation of European Social Fund operational programs, but also the design of operations by Member States. It will also pave the way for the Commission's ex post evaluation of the European Social Fund by December 2024.

The effectiveness, efficiency, relevance and EU added value of actions funded by the European Social Fund's actions in 2014-2018 are the starting point for consultation activities for the general public, including a targeted direction for relevant stakeholders and organizations involved in managing operational programs (such as: Member States, managing authorities/intermediate bodies, social partners and other partners represented on the monitoring committee). The consultation should address in particular the visibility, awareness, usefulness, relevance and effectiveness of ESF support. The open public consultation will take place in parallel with the stakeholder consultation. The Commission will be actively promoted through public consultation through the EU website and social media. Additional consultation tasks, especially in the form of interviews, case

studies will take place during the data collection and analysis phases of the work carried out by external contractors. All these investigations are under evaluation procedure and slightly expand the scope of research with the mechanism and possibilities to use the fund to strengthen the cooperation of states in the field of social security. Finally, the Commission will use the events and forums in the related fields to formulate the precise legislative proposal.

6. CONCLUSIONS

The idea of harmonizing EU taxation is also addressed in this area of taxation, with some pros and cons. The principles governing the European single market have an influence on the social security system of the European citizen, which is proven not only theoretically, but is also present in the courts, both at national and EU level. The current crises require deeper harmonization in the tax field, including the regulation of social security contributions. The more states reach a consensus on this, the more European states will be prepared for future challenges, for the benefit of citizens in June.

Among the normative projects already underway, we focused on two projects whose stage of progress justifies the extension of their regulatory area on the already identified priority, namely the provision of a harmonized regulatory response to the response to a pandemic crisis on a large scale. If our analytical approach aims to identify a course of action, in order to recommend a course of action between the two, at the end of our paper we stop for the simultaneous use of both mechanisms: both better coordination of social security policy between Member States, with precise rules of uniform action in cases of extended pandemic, as well as the use of an emergency financial support mechanism, at the disposal of the Member States proving the need for financial assistance, through the European social fund.

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EXPLORATORY STUDY ON THE DISCLOSURES OF INTANGIBLE ASSETS BY THE ROMANIAN COMPANIES LISTED ON THE BUCHAREST STOCK EXCHANGE

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Abstract

The issue of reporting intangible assets and reviewing the mandatory disclosed information on them is constantly on the agenda of international regulatory bodies. Following this line, our paper aims to investigate the reporting of intangible capital, which is a significant source of competitive advantage, and, implicitly, the degree of investment in this category of economic resources, in the case of companies listed on main segment of the Bucharest Stock Exchange. The study relies on the content analysis of the consolidated or individual financial statements and the directors' reports, between 2012-2018, based on the provisions of the IAS 38 "Intangible assets". The information derived from the content analysis is used to substantiate an intangible assets disclosure score, which reveals the most intangible-intensive companies. The findings confirm the adequacy of the intangible assets reporting with the core activities of the companies, which leads to a mosaic of reported information about intangibles across industries. Thus, the ubiquitous information in the reports of the analyzed entities, regardless of their industry or legal form, is the one referring to software and software licenses; a low level of quantitative and qualitative information is presented about the research and development (R&D) activity, only entities from the telecommunications, aeronautical and pharmaceutical industries providing detailed information about the capitalized and/or expensed R&D expenditures; manufacturing, financial and real estate groups disclose information on goodwill that is the most consistent with the IAS 38 requirements. There is also an improvement in the quality of the information about intangibles over the analyzed period. However, the disclosures of intangible assets are generally modest, revealing the low degree of investment in these economic resources, as a result of a poor understanding of

their potential to generate future economic benefits and to add market value to the entities owning them.

Keywords: *intangible assets; financial reporting; R&D expenditures; goodwill; information disclosure.*

JEL Classification: M41

1. INTRODUCTION

Nowadays, intangibles are prime value-creators (Lev, 2018) for companies in all business fields, which base their success and survival more and more on assets such as brands, trademarks, patents, computer software and licenses, new product development (R&D) and the like. Such elements offer undeniable competitive advantages and generate income that separates successful companies from the laggards (Dumay, 2016; Mironiuc, 2002), becoming more important than tangible assets (Madhani, 2015).

The transition from the traditional industrial business model (dependent on tangible assets) towards the knowledge-based economy, in which the exchange and manipulation of intangible assets play a crucial role in creating value (Bohusova and Svoboda, 2018), has also changed the information needs of the stakeholders. These new needs must be met by the information provided through corporate financial or non-financial reporting. Many authors (Canibano, 2018; Lev, 2018) question the ability of the current financial reporting model to meet these requirements, with severe consequences which include: devaluation of companies, reduced accuracy of analysts' predictions or deteriorated usefulness of reported information. Lev (2018) states that many managers see financial reporting as a burdensome compliance exercise rather than an effort to inform stakeholders. In this context, the accounting standard-setters are obliged to improve the nature, meaning and quality of the disclosed information on intangible assets. *IAS 38 "Intangible Assets"*, issued by the International Accounting Standards Board (IASB) in 1998, has been amended several times to meet the new requirements.

The scope of this paper is to study the intangible assets reporting through the substantiation of a *disclosure score* and an *intangible intensity reporting score* for the Romanian companies listed on the main segment of the Bucharest Stock Exchange (BSE). This study investigates, through content analysis, both the *mandatory disclosed information*, based on the requirements of IAS 38, from the financial statements and explanatory notes, and *the level of voluntary disclosures*, from the directors' report.

The paper intends to answer the following research questions:

RQ₁: How have the content and the structure of the intangible assets reporting changed over time?

RQ₂: Are we witnessing a progress or an intensification of the reporting of intangible assets since 2012, the year in which the analyzed companies adopted IFRS for the first time, until now?

*RQ*₃: Which are the most intangible-intensive companies and in which industries do they operate?

Most literature on intangible asset reporting, which uses content analysis to investigate financial and non-financial reports, has been conducted in continental European countries (Italy, Spain, Germany and the Netherlands) and Australia (Cuozzo *et al.*, 2017). These studies show that in the traditional market economies the importance of intangible assets is recognized, but in the emerging countries it remains to be demonstrated (Bohusova and Svoboda, 2018). Our paper *completes the panel of emerging countries with the case of Romania and brings more recent evidence*. It also calculates an *intangibles intensity reporting score* that, to our knowledge, has not been used in other papers.

The rest of the paper is organized as follows: section 2 includes the literature review, section 3 shows the data source and explains the framework chosen to assess the quality and quantity of intangibles disclosures. Section 4 comprises the research methodology from the application of which the results illustrated and discussed in section 5 appear. Section 6 concludes the paper.

2. LITERATURE REVIEW

2.3. Stages in the research of the intangibles reporting

Over the last forty years, there have been substantial developments in the academic literature on the interactions between measuring, managing and reporting intangible capital. Within this research flow several major stages and themes can be identified.

Dumay and Garanina (2013) designate as the first stage in intangible research the period between the late '80s and '90s, when awareness of the importance of intangible capital in “creating and managing sustainable competitive advantage” increased. The research reveals, at this stage, the concern for the development of the conceptual framework of intangible capital (mostly points of view on the differentiation or interchangeable use of the concepts of intangible assets and intellectual capital and their structuring). Petty and Guthrie (2000) pointed out that “the purpose of the first stage was to make the invisible visible”, referring to “invisible intangible resources” (components of the intangible asset) that do not meet the recognition and accounting criteria established by the IFRS.

Motivated by the desire to assign monetary value to the intangible capital, the researchers focused, in the second stage, on measuring and reporting it (Castilla-Polo and Sánchez-Hernández, 2020). As a consequence, Dumay and Garanina (2013) document the existence, in the mid-2000s, of over 50 models for measuring intangibles. In the context of a decreasing relevance of financial information partially due to ignoring intangible elements when determining company value, there is a flow of literature that analyzes the relevance of reporting intangible assets and their influence on financial performance and value creation (Bontis, 2001; Chen, Cheng and Hwang, 2005; Coluccia, Fontana and Solimene,

2017; Garanina and Dumay, 2017; Mezghani, Ellouze and Mezghani, 2007; Richardson and Welker, 2001).

Studies on reporting intangible assets, exclusively through the content analysis of annual reports, in different contexts or countries, appeared as an effect of the interest of accounting regulators in responding to the challenges of the knowledge-based economy by developing frameworks and standards for disclosing information about intangible assets (Abdolmohammadi, 2005; Bozzolan, Favotto and Ricceri, 2003; Dumay and Cai, 2014; Giacosa, Ferraris and Bresciani, 2017; Guthrie and Petty, 2000; Mehrotra and Malhotra, 2019; Mezghani, Ellouze and Mezghani, 2007; Oliveira, Rodrigues and Craig, 2006; Parshakov and Shakina, 2020; Steenkamp and Northcott, 2007). *Our work is part of this research direction.* Reporting intangible assets according to the correlation between information asymmetry theory and informational expectations of stakeholders has caught the attention of researchers over time. Some studies focused either on the bias disclosure hypothesis for the external stakeholders (“corporate propaganda”) or on revealing the internal benefits of intangible management (Collison, 2003; Coluccia, Fontana and Solimene, 2017; Dumay, 2016; Dumay and Guthrie, 2019; Giacosa, Ferraris and Bresciani, 2017; Schaper, Nielsen and Roslender, 2017; Vanini and Rieg, 2019).

A more recent research theme is the integrated reporting perceived as a new opportunity to understand how intellectual capital combines with tangible economic resources to create value in line with the requirements of sustainable development (Abhayawansa, Guthrie and Bernardi, 2019; Dumay, 2016; Guthrie, Manes-Rossi and Orelli, 2017; Melloni, 2015).

The debates regarding the reporting of intangibles and the portfolio of intangible economic benefits of companies remain open. Fădur and Rusu (2012) opine that although the evolution towards an intangible knowledge economy imperatively requires changes in financial reporting, abandoning the current accounting model is not plausible because some of the information included in traditional financial statements is relevant in the decision-making process and the costs associated with the radical change of the traditional reporting system cannot be accepted. Voluntary submission through the preparation of special reports for intangible capital reporting could be a solution.

In Romania, Fădur, Ciotină and Mironiuc (2011) state that there is a low degree of dissemination of information on intangible assets, the differences between the market value and the accounting value of companies are not explained by intangible assets, but starting from extra-financial factors related to investor confidence. Munteanu, Zuca and Andrei (Danaila) (2012) reach a similar conclusion: firms meet only the minimum reporting requirements, without displaying the contribution of intangible assets to the cash flow of the entity.

2.4. Theories on which the practice of intangible reporting is based

The growing gap between the company's market value and its carrying amount has led to an awareness of the low adequacy of the information provided

by the existing financial reporting model in the decision-making of both management and stakeholders.

The literature reveals that the rationality behind the reporting of intangible assets is based on the positivist current of accounting and on the theories of legitimacy, agency and signal. According to *the positivist accounting current*, companies are motivated to continuously improve the quality of the information disclosed in order to reduce uncertainty, strengthen their position and attractiveness in relation to stakeholders (Parshakov and Shakina, 2020). According to the *theory of legitimacy*, a company must convince society that its activities are in line with society's expectations. Due to the importance of intangibles for the economic success of companies, they should voluntarily disclose information about intangible assets to meet these expectations (Vanini and Rieg, 2019). Mezghani, Ellouze and Mezghani (2007) emphasize the role of voluntary reporting on intangibles in increasing the legitimacy of the reporting entity in relation to its stakeholders, in reducing the risks of contract termination and the trading costs.

Assuming the information asymmetry between manager and shareholder, according to the *agency theory*, the entity's objective is to maximize value creation for shareholders. Or an insufficient and irrelevant information about intangible assets equates with an erroneous market valuation of the entity, which increases the cost of capital and limits its future development (Coluccia, Fontana and Solimene, 2017; Giacosa, Ferraris and Bresciani, 2017; Mezghani, Ellouze and Mezghani, 2007; Parshakov and Shakina, 2020; White *et al.*, 2010). Voluntary disclosure of intangibles may clarify the perception of investors interested in the real value of the traded entity and may explain the deviation between the book value and its market value. Information about the components of intangibles provides clues about the factors that are likely to create value and about the potential of the entity that trades securities (Mezghani, Ellouze and Mezghani, 2007).

According to *the signal theory*, by disclosing intangibles, the managers signal to the financial market the profitability prospects and the quality of their enterprise (An, Davey and Eggleton, 2011; Mehrotra and Malhotra, 2019). Investors perceive, on the basis of the reported information, the managers' ability to anticipate changes in the economic environment and to adjust the activity of their entity accordingly (Mezghani, Ellouze and Mezghani, 2007). Thus, investors correctly assess the return on their investment, the financial market favorably reacts to the publication of information on intangible assets (especially information on research and development projects) and the reporting entity reduces its cash flow uncertainty. (Deng, Lev and Narin, 1999; Parshakov and Shakina, 2020).

Castilla-Polo and Ruiz-Rodríguez (2017) reveal several ways through which companies can respond to the challenges of reporting intangibles: i) firms can

increase investor awareness of intangible assets by increasing the disclosure of information and by making the company more transparent and more attractive to investors; ii) companies can avoid overloading reports with information about intangible assets by selectively disclosing only relevant information that does not expose the reporting company to risk; iii) companies can design their intangibles reporting model according to the legislation, without voluntarily disclosing any information about intangibles, except those in the balance sheet.

Dumay (2016) notes that corporate disclosure appears to be more regulated in developed countries with representative capital markets, which explains the low interest in these countries for voluntary disclosures about intangibles, as companies disclose significant amounts of information through annual corporate social responsibility reports (CSR) and GRI standards, but not through an independent reporting framework for intangible assets. Schaper, Nielsen and Roslender (2017) state that firms are more likely to retain valuable information about intangible assets than to report them, but may be less reluctant if necessary in their regulatory context (Dumay and Tull, 2007). Cuozzo *et al.* (2017) and Dumay and Guthrie (2017), based on the asymmetry of information associated with agency theory, reinforce the view that managers will normally keep away valuable information about intangibles, unless their disclosure benefits them economically.

3. DATA SOURCE AND THE FRAMEWORK ON THE INTANGIBLES DISCLOSURES

Given that providing information about intangibles has the investors as its main recipients and focuses on creating value from a financial perspective, it is not surprising to find that most studies of this type focus on "publicly listed companies" (Cuozzo *et al.*, 2017). Following this stream of literature, we analyzed *all Romanian companies* listed on the main segment of the Bucharest Stock Exchange (BSE) for a period of 7 years (2012-2018). We used their individual or consolidated financial statements (FS) and directors' reports (DR). We investigated 81 entities which had published annual reports for 2018 at the initiation of our research, but as some of them were not listed for the entire analyzed period, the number of reports was different from one year to another. The final sample consisted of 533 annual FSs and 533 DRs and was unbalanced. All reports were downloaded from the BSE website. If the English version of the reports was available, we used it (61% of all reports), if not, we analyzed the Romanian version.

Starting from the existing literature and adding our own understanding of the intangibles reporting, according to IAS 38 "Intangible assets", we developed a framework for the assessment of the quality and quantity of intangibles disclosures. We defined several groups of items (criteria) structured according to the *nature of intangibles* (development costs, goodwill, patents, computer

software, licenses and other intangibles, which included customer lists, trademarks, brands, concessions, franchise rights, exploration assets, etc.) and to the *source of intangible assets* (separate purchase or as part of a business combination and self-creation or internal generation). We also focused on the *R&D activities* and *the accounting treatment of subsequent expenditures* (capitalization or recognition as expenses in profit or loss when incurred).

Because we combine the analysis of mandatory disclosures with voluntary ones, we base our content analysis on codification instrument that contains not only elements taken from the IAS 38, related to research and development, internally generated assets or the treatment of subsequent expenses, but also potentially voluntary information disclosed by the directors' reports on the structure of intangible assets and the R&D activities.

4. RESEARCH METHODOLOGY

We used *content analysis of the consolidated or individual financial statements (FS)* and of *the directors' reports (DR)*. Contents analysis is extensively used to inquire into intangibles reporting (Dumay and Guthrie, 2017; Parshakov and Shakina, 2020). Dumay and Guthrie (2017) virulently criticize the use of content analysis to understand intangible reporting, inter alia because of the questionable robustness of results, although they recognize it as a methodology with a long tradition. Krippendorff (2018) considers content analysis particularly suitable for finding hidden meanings in the text of reports and making relevant inferences from them (Steenkamp and Northcott, 2007).

The content analysis process consisted of several steps considered by the literature (Weber, 1985) to provide a satisfactory level of reliability and validity of the findings. In the first step, we defined the intangibles framework which initially consisted of 16 criteria. In the 2nd step, each researcher read 1/3 of the reports twice (with no significant differences between the two reads) and then reports were switched among researchers. In the end, each report was read by two different researchers. When differences appeared, the 3rd researcher intervened to solve the discrepancy. In the 3rd step, based on the initial findings, we refined the criteria, by eliminating two items from the FSs framework and seven items from the DRs framework, as they were poorly reported and therefore, provided information of little usefulness. The final framework consisted of 14 criteria for the FSs disclosures and 9 for the DRs disclosures.

For further analysis, these criteria were grouped into four categories for the FSs reporting (R&D-related terms, intangibles classified by nature, intangibles classified by source and the accounting treatment of subsequent expenditures) and two categories for the DRs reporting (R&D-related terms and intangibles classified by nature).

Information derived from the content analysis was used to calculate:

a) *an intangible assets disclosure score (DS)*;

b) *an intangibles intensity reporting score (IRS)*, which reveals the most intangible-intensive companies.

The disclosure index/score most commonly used in international studies is calculated by comparing the number of items of disclosure applied by individual companies to the total number of applicable items (André, Dionysiou and Tsalavoutas, 2017; Azevedo, Oliveira and Couto, 2019; Cooke, 1989). We followed this model. For each FS and DR, we applied a dichotomous approach: each criterion was coded 1 if it was disclosed and 0 if not disclosed. This created an unweighted score (NR_{jk} or NC_{ik}) that assumed each criterion was of equal importance for the average users of annual reports (André, Dionysiou and Tsalavoutas, 2017; Devalle, Rizzato and Busso, 2016). This score was subsequently divided by the total number of reports issued in one year (TNR_k) (Eq. 1 and 2) or total number of criteria analyzed per year (TNCK) (Eq. 3 and 4). Intangible assets disclosure scores (DS) were calculated for each separate criterion and for the defined groups of criteria (Eq. 5 and 6). This analysis was repeated at both sample level and company level, yearly and for the entire period.

The intangibles intensity reporting score (IRS) was calculated by multiplying the intangible assets disclosure scores by the frequency of appearance of each criteria. To determine the frequency of appearance we initially counted the number of times each criterion appeared in the FS and DR, separately. Then, we classified the results on an interval scale for which we followed 3 steps: 1) we performed the operation of data sorting and concentration; 2) we determined the length of an interval by dividing the difference between the largest and smallest amplitude of the data set by the number of class intervals; 3) each interval was awarded a score, on a scale from 1 to 10.

A frequency reporting score (FR) resulted. FR was then multiplied by DS to determine the IRS by criterion (Eq. 7 and 8), for each group of criteria (Eq. 9) and for each company (Eq. 10, 11 and 12).

All equations are presented and explained in Table 1.

We consider the intensity reporting score to be more relevant than the disclosure score for 2 reasons:

- it better shows the quality of the disclosures as intangibles are better detailed and explained (which increases the information usefulness);
- it sheds a better lights on whether companies actually own the intangible assets or they simply report them as part of a standardized financial statements template.

Table 1. Equations used in the calculation of DS and IRS

Title	Formula	Explanations
Yearly DS by criterion (DS _{jk})	Eq. 1 $DS_{jk} = \frac{NR_{jk}}{TNR_k}$	k = year (7 years in the period 2012-2018) j = each criterion from the intangibles framework (16 criteria for FS, 9 for DR) NR _{jk} = number of reports in which the criterion j appears in year k TNR _k = total number of reports issued in one year
Total DS by criterion (DS _{jT})	Eq. 2 $DS_{jT} = \frac{\sum_{k=1}^7 NR_{jk}}{\sum_{k=1}^7 TNR_k}$	
Yearly DS by criteria and by company (DS _{ik})	Eq. 3 $DS_{ik} = \frac{NC_{ik}}{TNC_{ik}}$	NC _{ik} = number of criteria reported by company i in year k TNC _k = total number of criteria in year k (16 for FS and 9 for DR) i = company (there are 67 companies in 2012, 71 in 2013, 78 in 2014, 2015 and 2016, 80 in 2017 and 81 in 2018)
Total DS by criteria and by company (DS _{iT})	Eq. 4 $DS_{iT} = \frac{\sum_{k=1}^7 NC_{ik}}{\sum_{k=1}^7 TNC_{ik}}$	
Total DS by groups of criteria (DS _{jgk})	Eq. 5 $DS_{jgk} = \frac{\sum_{j=1}^m NR_{jk}}{m * TNR_k}$	g = group of criteria (4 groups in the FS framework, 2 in the DR framework) m = number of criteria included in each group g (for FS: 5 in group "R&D-related terms", 4 in group "Intangibles by nature", 2 in group "Intangibles by source" and 2 in group "Accounting treatment of subsequent expenditures"; for DR: 4 in group "R&D-related terms" and 3 in group "Intangibles by source")
Total DS by groups of criteria and by company (DS _{igk})	Eq. 6 $DS_{igk} = \frac{\sum_{j=1}^m NC_{jk}}{TNR_i}$	TNR _i = total number of reports of company i in the analyzed period (minimum 2, maximum 7)
Yearly IRS by criterion (IRS _{jk})	Eq. 7 $IRS_{jk} = DS_{jk} * TNR_{jk} * FR_{jk}$	DS _{jk} = yearly DS by criterion FR _{jk} = frequency reporting score by criterion
Total IRS by criterion (IRS _{jT})	Eq. 8 $IRS_{jT} = DS_{jT} * FR_{jT}$	DS _{jT} = total DS by criterion FR _{jT} = total frequency reporting score by criterion

Yearly IRS by groups of criteria (IRS_{jgk})	Eq. 9 $IRS_{jgk} = DS_{jgk} * FR_{jgk}$	DS_{jgk} = total DS by groups of criteria FR_{jgk} = total frequency reporting score by groups of criteria
Yearly IRS by company (IRS_{ik})	Eq. 10 $IRS_{ik} = DS_{ik} * FR_{ik}$	DS_{ik} = yearly DS by criteria and by company FR_{ik} = frequency reporting score by criteria and by company
Total IRS by company (IRS_{iT})	Eq. 11 $IRS_{iT} = DS_{iT} * FR_{iT}$	DS_{iT} = total DS by criterion FR_{iT} = frequency reporting score by criteria and by company
Yearly IRS by groups of criteria and by company (IRS_{igk})	Eq. 12 $IRS_{igk} = DS_{igk} * FR_{igk}$	DS_{igk} = total DS by groups of criteria and by company FR_{igk} = total frequency reporting score by groups of criteria and by company

Source: authors' compilation

Sometimes, DRs and FSs simply state that, for example, the company does not have any R&D activity or any internally generated intangibles, which is enough to create a non-zero disclosure score (for each criterion or company). But if these assets are really used or created by the company, they should be more intensely disclosed. This is not necessarily true in all cases, but it is a better indicator of the intangible-intensive companies than the disclosure score. A very low IRS usually indicates that the company does not use or create many intangibles.

5. RESULTS AND DISCUSSIONS

Intangible assets disclosure scores by criteria for the financial statements (FS), based on Eq. 1, 2 and 5, are presented in Table 2.

Table 2. Disclosure scores by criterion and groups of criteria – financial statements

Criteria	2012	2013	2014	2015	2016	2017	2018	Sample
1. Research and development/R&D	0.33	0.30	0.45	0.44	0.47	0.46	0.46	0.41
2. Software development	0.00	0.00	0.14	0.14	0.15	0.15	0.14	0.10
3. Development phase/activity	0.04	0.04	0.17	0.18	0.18	0.18	0.17	0.14
4. Research phase/activity	0.03	0.03	0.17	0.17	0.21	0.19	0.19	0.14
5. Technical and commercial Feasibility	0.01	0.00	0.08	0.10	0.14	0.16	0.16	0.09
6. Patents	0.06	0.06	0.21	0.23	0.29	0.30	0.33	0.21
7. Goodwill	0.43	0.37	0.76	0.68	0.74	0.71	0.70	0.63
8. Licenses and other intangibles	0.76	0.73	0.82	0.83	0.82	0.83	0.83	0.80
9. Software	0.81	0.86	0.82	0.88	0.85	0.84	0.84	0.84

Criteria	2012	2013	2014	2015	2016	2017	2018	Sample
10. Intangible assets/ intangibles	0.91	0.90	0.99	0.97	0.99	0.99	0.99	0.96
11. Intangible assets purchased	0.21	0.24	0.79	0.81	0.82	0.86	0.88	0.66
12. Intangible assets internally Created	0.09	0.13	0.53	0.53	0.63	0.63	0.62	0.45
13. Intangible expenditure capitalized	0.09	0.11	0.60	0.63	0.62	0.68	0.68	0.49
14. Intangible expenditure Expensed	0.06	0.04	0.51	0.56	0.55	0.61	0.60	0.42
R&D-related terms (1-5)	0.08	0.07	0.20	0.21	0.23	0.23	0.22	0.18
Intangibles by nature (6-9)	0.51	0.50	0.65	0.66	0.68	0.67	0.68	0.62
Intangibles by source (11 and 12)	0.15	0.18	0.66	0.67	0.72	0.74	0.75	0.55
Accounting treatment of Subsequent expenditures (13 and 14)	0.07	0.08	0.56	0.60	0.58	0.64	0.64	0.45

Source: compiled by the authors based on research results

The maximum score should be 1, but it never reached the maximum level. 0.99 is the highest score calculated. According to Table 2, the criterion that appears in most reports, almost all of them, is, as expected, the one regarding intangible assets, in general (DS = 0.96). It is not 1, as in a small number of FSs, intangibles are disclosed directly by nature (software, licenses, etc.). It is closely followed by 2 types of intangibles (the most used intangibles by Romanian companies): software (DS = 0.84) and licenses plus other intangibles (concessions, trademarks, customer lists, franchise right, exploration assets, etc.) (DS = 0.80). These results confirm other findings from studies on the Eastern-European countries (Spasić and Vorina, 2018; Bohusoa and Svoboda, 2018). Goodwill is mostly disclosed in consolidated FSs. Intangibles acquired by purchase are disclosed in a greater number of FSs than those internally generated (DS = 0.66 vs DS = 0.45).

R&D-related terms are the least disclosed (which contradicts previous studies conducted on emergent countries – Spasić and Vorina, 2018; Bohusoa and Svoboda, 2018), but their reporting improves significantly over time, which is not the case with the most disclosed criteria (criterion no. 10, criterion no. 9 and no. 8). Three groups of criteria show a significant improvement of disclosure scores over time (R&D-related terms, intangibles by source and subsequent expenditures). 2014 was the year with the highest jump of the DS from one year to another. After that, the scores remained pretty constant (for 2014-2018).

Intangible assets disclosure scores by criteria for the directors' report (DR), based on Eq. 1, 2 and 5, are shown in Table 3.

Table 3. Disclosure scores by criterion and groups of criteria – directors’ reports

Criteria	2012	2013	2014	2015	2016	2017	2018	Sample
1. Research and development/R&D	0.37	0.37	0.63	0.69	0.68	0.69	0.63	0.58
2. Product development/ Technology development	0.13	0.06	0.27	0.27	0.33	0.43	0.37	0.27
3. New technology/ New technologies	0.07	0.06	0.10	0.12	0.14	0.15	0.16	0.11
4. Research phase/activity	0.04	0.03	0.13	0.14	0.22	0.23	0.22	0.14
5. Goodwill	0.07	0.10	0.10	0.09	0.12	0.15	0.17	0.11
6. Licenses and other intangibles	0.16	0.08	0.40	0.37	0.47	0.45	0.44	0.34
7. Software	0.13	0.07	0.36	0.41	0.42	0.45	0.35	0.31
8. Intangible assets/intangibles	0.82	0.80	0.71	0.73	0.74	0.76	0.72	0.75
9. Intangible assets purchased	0.04	0.04	0.17	0.22	0.27	0.25	0.26	0.18
R&D-related terms (1-4)	0.16	0.13	0.28	0.30	0.34	0.37	0.35	0.28
Intangibles by nature (5-7)	0.12	0.08	0.29	0.29	0.34	0.35	0.32	0.26

Source: compiled by the authors based on research results

According to Table 3, there are two criteria only met in the DRs (product development and new technology), but they have relatively low scores. The criterion that appears in most DRs, as in the case of FSs, is the one regarding intangible assets, in general (DS = 0.75). However, the score decreases in time as the number of reports in which the criterion appears is approximately constant but the total number of published reports is increasing from one year to another. This criterion is followed, at a considerable distance, by R&D (DS = 0.58), which is more disclosed than in the FSs. Unlike financial statements, R&D is addressed in a greater number of DRs than software, licenses or goodwill. When aggregated by groups, the DSs for the 2 groups are almost equal. For both groups, there is an important improvement of disclosure over the analyzed period.

Intangible assets disclosure scores by company, based on Eq. 3, 4 and 6, are presented in Table 4.

Table 4. Disclosure scores by company

Criteria	2012	2013	2014	2015	2016	2017	2018	Sample
Financial statements (FS)								
Sample average DS (all criteria)	0.27	0.27	0.50	0.51	0.53	0.54	0.54	0.46
R&D-related terms (1-5)	0.08	0.08	0.20	0.21	0.23	0.23	0.22	0.18
Intangibles by nature (6-9)	0.51	0.50	0.65	0.66	0.68	0.67	0.68	0.63
Intangibles by source (11 and 12)	0.15	0.18	0.66	0.67	0.72	0.74	0.75	0.57
Accounting treatment of subsequent expenditures (13 and 14)	0.07	0.08	0.56	0.60	0.58	0.64	0.64	0.48
Directors’ report (DR)								

Criteria	2012	2013	2014	2015	2016	2017	2018	Sample
Sample average DS (all criteria)	0.22	0.20	0.35	0.36	0.40	0.40	0.39	0.32
R&D-related terms (1-4)	0.16	0.13	0.28	0.30	0.34	0.37	0.35	0.28
Intangibles by nature (5-7)	0.12	0.08	0.29	0.29	0.34	0.35	0.32	0.26

Source: compiled by the authors based on research results

On average, in 46% of the financial statements issued by listed Romanian companies (Table 4) there are references on the intangibles criteria included in the FS framework selected in this paper. The criteria that mostly appear in the company FSs are related to intangibles classified by nature (mean DS is 0.63) and by source (mean DS = 0.57), so more than half of companies report this information. The average DS for the R&D-related terms is quite small (0.18) showing that many FSs do not contain any reference to R&D activities and costs (less than 25%). Directors' reports (Table 4) show a lower level of intangibles reporting than FSs, as expected, only 32% of them mentioning these assets. There is not a significant difference between disclosing level of the R&D-related terms and intangibles grouped according to their nature (DS = 0.28 and 0.26).

Based on industries, manufacturing companies are the ones with the best DS, which is not surprising, as they represent half of the sampled companies. We mention especially those companies manufacturing pharmaceutical products and preparations, other transport equipment (such as air-crafts, spaceships, ships), machinery and equipment, basic metals and those providing repair and installation of machinery and equipment. These results are validated by other similar findings (Bohusova and Svoboda, 2018). Other sectors with good or great scores are energy, constructions, transports, but as they are represented by very few companies in the overall sample (3-5 companies) and only 1 or 2 of those have scores above the sample median, these scores are difficult to extrapolate to the whole sector/industry. On the contrary, companies from the financial and insurance activities, accommodation and food service activities and wholesale and retail trade have the worst DS, overall (even though a few of them have scores above the median of the sample). In terms of R&D activities, pharmaceutical companies, the ones manufacturing air-crafts and spaceships, those exploiting natural and energy resources, construction companies and transportation ones are the most active.

Intangible intensity reporting scores by criteria for the financial statements (FS), based on Eq. 7, 8 and 9, are shown in Table 5. Maximum IRS is 10.

Table 5. Intensity reporting scores by criteria – financial statements

Criteria	2012	2013	2014	2015	2016	2017	2018	Sample
1. Research and development/ R&D	0.66	0.59	4.49	4.36	4.74	2.78	2.74	2.72
2. Software development	0.00	0.00	1.13	1.13	1.54	0.90	0.81	0.62
3. Development phase/activity	0.09	0.08	1.00	1.08	1.44	1.75	1.73	0.86
4. Research phase/activity	0.06	0.06	1.00	1.00	1.64	1.88	1.85	0.87
5. Technical and commercial Feasibility	0.03	0.00	0.31	1.03	1.13	1.63	1.60	0.62
6. Patents	0.12	0.11	1.23	1.85	2.36	2.40	3.33	1.33
7. Goodwill	0.87	0.73	6.05	5.44	5.95	7.13	7.04	4.31
8. Licenses and other intangibles	1.52	1.46	6.56	6.67	6.56	8.25	8.27	5.51
9. Software	1.61	1.72	4.92	7.08	8.46	8.38	8.40	5.77
10. Intangible assets/ Intangibles	1.82	1.80	7.90	9.74	9.87	9.88	9.88	7.15
11. Intangible assets purchased	0.42	0.48	4.77	6.46	6.56	8.63	8.77	4.33
12. Intangible assets internally Created	0.18	0.25	4.21	4.21	6.28	6.25	6.17	3.20
13. Intangible expenditure capitalized	0.18	0.23	4.82	5.03	6.15	6.75	6.79	3.47
14. Intangible expenditure Expensed	0.12	0.08	4.10	4.51	4.41	6.13	6.05	2.89
R&D-related terms (1-5)	0.17	0.15	2.00	2.05	2.31	2.28	2.22	1.37
Intangibles by nature (6-9)	1.03	1.01	5.21	5.26	5.41	6.69	6.76	4.26
Intangibles by source (11 and 12)	0.30	0.37	5.28	5.33	5.79	7.44	7.47	3.80
Accounting treatment of subsequent expenditures (13 and 14)	0.15	0.15	4.46	4.77	5.83	6.44	6.42	3.24

Source: compiled by the authors based on research results

The criterion most intensely reported in the FSs is the one regarding intangible assets, in general (IRS = 7.15). It is followed by 2 types of intangibles (the most used intangibles by Romanian companies): software (IRS=5.77) and licenses plus other intangibles (concessions, trademarks, customer lists, franchise right, exploration assets, etc.) (IRS = 5.51). Goodwill is more frequently disclosed in consolidated FSs. Intangibles acquired by purchase are more intensely disclosed in the FSs than those internally generated (IRS = 4.33 vs IRS = 3.20). R&D-related terms are disclosed with the least intensity. *All four groups of criteria show a significant improvement of IRS over time.* 8 of the 14 criteria show a slightly decrease in 2018 when compared to 2017.

For the R&D terms the peak year was 2016, while for intangibles classified by nature and by source the intensity experienced a steady increase from one year to another, with a huge jump in 2014 (which is applicable to all groups and

criteria). In the first two years of the IFRS application, companies tentatively reported intangibles, which was no longer the case when they accumulated enough experience (by 2014).

Intangible intensity reporting scores by criteria for the directors' reports (DR), based on Eq. 7, 8, 9, are presented in Table 6.

Table 6. Intensity reporting scores by criteria – Directors' reports

Criteria	2012	2013	2014	2015	2016	2017	2018	Sample
1.Research and development/R&D	0.75	0.73	3.77	5.54	6.79	5.50	5.04	3.64
2.Product development/ Technology development	0.54	0.11	1.62	2.15	2.67	4.25	3.70	1.82
3.New technology/ New technologies	0.15	0.11	0.41	0.46	0.85	1.50	0.96	0.56
4.Research phase/activity	0.09	0.06	0.77	0.85	1.74	2.25	1.78	0.86
5.Goodwill	0.15	0.20	0.41	0.36	0.23	1.20	1.73	0.52
6.Licenses and other intangibles	0.33	0.17	3.97	3.72	4.74	4.50	4.44	2.63
7.Software	0.27	0.14	2.87	3.28	3.38	4.50	2.77	2.06
8.Intangible assets/intangibles	1.64	1.61	5.64	7.31	7.44	7.63	7.16	5.61
9.Intangible assets purchased	0.09	0.08	1.00	1.74	2.15	2.50	2.07	1.12
R&D-related terms (1-4)	0.31	0.25	2.26	2.44	3.43	3.72	3.46	1.97
Intangibles by nature (5-7)	0.25	0.17	2.29	2.91	3.38	3.50	3.21	1.90

Source: compiled by the authors based on research results

As expected, all IRS in the directors' reports have a lower value than the corresponding scores from the FSs (Table 6). The criterion that appears more frequently in the DRs, as in the case of FSs, is the one regarding intangible assets, in general (IRS = 5.61). It is followed, at a considerable distance, by R&D (DS = 3.64), which is more intensely disclosed than in the FSs. Unlike financial statements, R&D is better addressed in the DRs than software, licenses or goodwill. When aggregated by groups, the IRS for the 2 groups are almost equal (1.97 vs. 1.90). For both groups, there is an important improvement of disclosure over the analyzed period.

Intangible intensity reporting scores by company, based on Eq. 10, 11, 12, are shown in Table 7.

Table 7. Intensity reporting scores by company

Criteria	2012	2013	2014	2015	2016	2017	2018	Sample
Financial statements (FS)								
Sample average DS (all criteria)	1.02	1.10	1.87	1.86	2.13	2.10	2.08	1.91
R&D-related terms (1-5)	0.70	0.84	1.32	1.49	1.61	1.80	1.85	0.97
Intangibles by nature (6-9)	1.75	1.57	1.83	1.84	1.85	1.86	1.85	1.78

Criteria	2012	2013	2014	2015	2016	2017	2018	Sample
Intangibles by source (11 and 12)	0.55	0.6	2.01	2.88	3	3.07	3.12	2.18
Accounting treatment of subsequent expenditures (13 and 14)	0.22	0.46	1.82	2.17	2.35	2.47	2.72	1.75
Directors' report (DR)								
Sample average DS (all criteria)	0.56	0.51	0.79	0.80	0.93	0.91	0.92	0.75
R&D-related terms (1-4)	0.45	0.42	0.79	0.88	0.94	0.97	0.98	0.78
Intangibles by nature (5-7)	0.28	0.31	0.66	0.66	0.69	0.74	0.7	0.58

Source: compiled by the authors based on research results

Results from Table 7 are very heterogeneous and therefore difficult to interpret and generalize. We cannot unequivocally identify the most intangible intensive industries, with the exception of pharmaceuticals and those manufacturing air-crafts, spaceships and ships. Rather, we can talk about companies that are intangibly intensive (Mecanica Fină; Societatea de Construcții Napoca; OMV Petrom; Zentiva; Patria Bank; Compa; Biofarm; Cemacon; Aerostar; Nuclearelectrica), about companies that report intensively throughout the analyzed period, with consistently high scores, about companies that significantly improved their scores compared since the beginning of the period or about companies with consistently low scores.

The results change significantly at company level in the case of the IRS (when compared to the DS). For example, only 5 of the companies in the Top 10 at DS are still in the Top 10 for the IRS, in quite different positions from the previous top (the top 10 for IRS comprises DIGI Communication; OMV Petrom; Cemacon; Bursa de Valori București; Electrica; Zentiva; Transgas; Compa; TMK-Artrom; Aerostar).

6. CONCLUSIONS

The results show a heterogeneous understanding, by the managers of the BSE-listed companies, of the importance of properly reporting information on the intangibles held. The competitive advantages they bring by creating value are either underestimated or cause companies to be cautious in providing details about the intangibles held.

The financial reporting is deficient both in terms of quantity and quality of the information disclosed. It is noticeable, in an unexpected large number of cases, that much of the information takes the form of accounting policies presented in the explanatory notes. These are often only theoretical aspects resulting from copying paragraphs from IAS 38, without any details or other subsequent explanations and without correspondence in the figures reported on the balance sheet and the income statement about intangible assets. In some cases, intangible assets are not presented as separate balance sheet structures, but included in "Other assets". At other times, the accounting policies refer to intangible assets

that the entity either does not hold (they do not appear in the balance sheet or in the explanatory note regarding intangibles) or does not detail (all being included in the “Other intangible assets” category).

The level of voluntary reporting is lower in the directors’ reports, which refutes the tendency from the developed economies of providing more information about intangibles through complementary reports, which are gaining ground in the face of mandatory disclosures from the financial statements and the explanatory notes.

We can also make some remarks about the general aspect of the analyzed financial statements and directors' reports, which are very different in size and structure from one company to another and even from one year to another, within the same company. They sometimes provide redundant information, by repeating it in different parts of the reports. Also, the English translation of the original version of the directors' reports and financial statements leaves much to be desired in some cases. Sometimes, even the physical form of the files created difficulties, as some documents were scanned pdf files, often encrypted, impossible to convert into an editable format that would allow the use of a dedicated content analysis software.

Overall, the findings show that Romanian listed companies do not provide a high level of disclosures on intangible assets because they either do not invest in them or are reluctant to highlight them, due to accounting, legal, economic or political reasons.

Limits of the research, which are to be addressed in future research, refer to the subjectivity of manual content analysis, lack of integration with quantitative information on intangibles and disclosures impact on company market value.

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Section IV

EU BUSINESS AND CHALLENGES OF THE DIGITAL ERA

TRANSFORMATION OF THE DIGITAL ECONOMY. CASE STUDY FOR ROMANIA

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Abstract

The research focuses on the digital economy taking into account the case of Romania country based on its strategy and implementation mechanism for transformation in accord with the vision of the European Union. Firstly, we highlight the state of digital economy in the world, especially in the European Union and then, we intend to evaluate the state of digital economy for the case of Romania, especially by the indispensable involvement of the public system according to which the correct or incorrect framework for implementation and manifestation can be created. The main finding is the interactive effect of digital economy of the European Union and a right Romanian policies will determine a positive evolution of Romanian digital economy.

Keywords: *digital economy; public policies; economic growth.*

JEL Classification: F41, O57, P16

1. INTRODUCTION

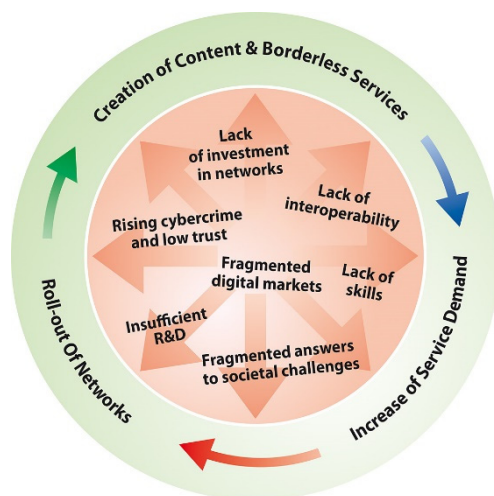
Digital economy differs from the traditional economy and it is very obvious that it will not replace the traditional economy totally, but it will become a key instrument that help to define economic component of sustainable development. A large number of businesses and public institutions all over the world are geared towards Internet-based systems for efficiency gains, lower operating costs and real-time capabilities across different platforms. In this context, the European Union tries to facilitate the transition to digital economy in each member state, developing and implementing strategies and creating the legal framework for regulation.

The research focuses on the digital economy taking into account the case of Romania country as a member state of the European Union based on its Government strategy and implementation mechanism for transformation in accord with the vision of the EU 2020 Strategy.

The paper is structured as follows: section 2 provides a general context of the digital economy; section 3 summarizes the state of economy in Romania; and section 4 describes the state of digital economy in Romania. The research ends with conclusions and references.

2. GENERAL CONTEXT OF THE DIGITAL ECONOMY

The digital economy refers in particular to the current transformations of economic activities as a result of the use of digital technologies that provide access, processing and storage of information in a cheaper and easier way. However, the digital economy has its challenges stemming from the interdependence of some of its own features and, on the other hand, what the global societal ensemble, based also on a properly created public environment, can do for its realization (see Figure 1).



Source: (European Commission, 2019a)

Figure 1. Virtuous cycle of the digital economy

The digital economy generates many benefits on the one hand for citizens, public institutions, public administration, national and subnational governments and, on the other hand, for businesses. The digital economy implies the creation of a new business model (e-commerce, e-business, e-banking, etc.) through the intranet and the internet, radically changing their efficiency, reducing costs based on the relationship business-to-business (B2B), business-to-customer (B2C),

business-to-employee (B2E), business-to-administration (B2A), Consumer-to-administration (C2A) (Romanian Academy, 2019, Ghilic-Micu, 2002).

Business-to-business (B2B) consists all transactions that are carried out between business partners and is based usually on extranet systems. In this category of electronic commerce can enter any organization that uses the Internet to order from suppliers, receive invoices and make payments.

Business-to-consumer (B2C) refers to the relationship between the trader and the final consumer, being considered retail and this category has expanded because of the World Wide Web.

Business-to-employee (B2E) refers to transactions within an organization, intended for employees and performed through their own intranet system.

Business-to-administration (B2A) covers all transactions between organizations and local or central administrative authorities.

Consumer-to-administration (C2A) should be launched by governments, especially in the field of social welfare payments or compensations regarding the global income tax.

The digital economy is characterized by increased knowledge in new products and services, increasing the importance of learning and innovation, globalization and sustainable development. The enormous amount of information changes the way markets function, making it possible to restructure businesses and create new opportunities to create value by exploiting the information available (Nicoara, 2019).

Digital economy requires certain features to a society (Duhăneanu and Marin, 2014), such as: i) an inclination for intensive innovation; ii) a tendency to use more new sources of finance, such as venture capital, multi-financing, etc.; iii) emphasis on the importance of intangible assets rather than fixed (traditional) assets, e.g. patents, trademarks, copyrights, franchises, licenses etc., in value creation and electronic services as final products; iv) based their business model on network effects, user generated content, the collection and exploitation of personal data, etc.; and v) significant cross-border e-commerce, including the delivery of traditional forms of commerce through new channels.

The intensification of certain types of digital activities (many digital businesses have customers and generate economic value, income mainly from intangible assets, and they do not pay the profit tax from these activities) has become a growing challenge for existing tax systems, as in some cases no taxes are paid in countries where economic value is created. In this context, the European Union institutions are working to adapt Member States' tax systems to optimize them for the digital age.

The advantages of new technologies for e-business (Ghilic-Micu, 2002) are considered as following:

- i. to attract new clients;
- ii. the expansion of local business markets at national or even global level;

- iii. the emergence of new business opportunities globally;
- iv. to improve customer satisfaction;
- v. to acquire customer loyalty;
- vi. to understand the behavior of buyers as best as possible; and
- vii. to develop products and services that address specific categories of clients.

3. THE STATE OF ECONOMY IN ROMANIA

Romania is the seventh largest European Union country with more than 19 million inhabitants (NIS, 2020). Between 1990 and 2018, the Romanian economy was fluctuating, caused by the multiple factors, such as lack of knowledge of market economy mechanisms, demographic crises, continuous Romanian political crises, internal economic problems, global economic crises, etc. Especially, over the period of time 2001-2008, the economy of Romania grew on average by 6.3% per year, this being one of the fastest growth rates in the European Union. Between 2009 and 2012, Gross Domestic Product (GDP) had an oscillating trend, because of 2009 year when the economy registered a severe contraction (Ministry for Information Society, 2015). In 2013, Romania's GDP grew by 3.5% compared to 2012, placing Romania on the first place among the European Union member states, the European Union average being 1.0% (Ministry of European Funds, 2014).

In 2018, Romania's economy evolve on an upward trend (+4.1% of GDP in real terms), but there was a significant slowdown in economic growth compared to the 7% growth recorded in 2017. Inflation reaches in the year 2018 the level of 3.3%. At the same time, the price advance of the entire economy, measured by the deflator of GDP, was at the level of 5.9%. On the other hand, the current account deficit continued to widen from 3.2% of GDP in 2017 to 4.5% in 2018, partly funded by foreign direct investment (Fiscal Council, 2018). Even the context of Romanian economy looks good especially over the period 2001 and 2018, the GDP per capita is very low in Romania, about 12,301 current US\$. Luxembourg has the highest GDP per capita, ie 11,440 GDP per capita in 2018, among the European Union member states and the world countries.

The Romanian Information and Communication Technology (ICT) sector, which accounts for 6% of GDP, is expanding and constituting a major growth driver of Romania's economy. The low labor costs, the presence of a competent human resource and a favorable business environment make Romania an attractive destination for the Information Technology (IT) sector (The Embassy of France, 2019).

4. THE STATE OF DIGITAL ECONOMY IN ROMANIA

In order to ensure sustainable development, smart growth, to promote social inclusion in Europe and to exit the crises, the European Union has launched the

Europe 2020 Strategy in March 2010. One of the seven flagship initiatives of the Europe 2020 Strategy (European Commission, 2010a) is A Digital Agenda for Europe that covers more areas such as: I) Single Digital Market, which allows cross-border free access to online services and entertainment; II) Interoperability and Standards that allows the integration of the devices, applications, data and services required for cross-border interaction; III) Trust and Security that increase the confidence of Internet users in electronic services and online transactions in order to stimulate the consumption of ICT services; IV) Fast and ultra fast Internet access that aims at investing in broadband infrastructure in order to benefit from the latest electronic technologies and services; V) Research and Innovation that stimulates adequate funding to increase the competitive advantage in ICT; VI) Enhancing digital literacy, skills and inclusion that creates a bridge to the digital divide for all consumers so that they can benefit equally and fully from the benefits of ICT services; and VII) Information and Communication Technology that enabled benefits for the European Union society that focuses on ICT's ability to reduce energy consumption, support elderly people, revolutionize health services, and deliver better public services.

Romania, as an European Union member state, has taken over some of the objectives set by the Digital Agenda for Europe and tries to adapt them to the current social and economic context in Romania in line with Romania's strategic 2020 ICT vision. Thus, Romania wants the development of ICTs to be correlated with the level of the countries in the region and set the prerequisites for Romania's integration in ICT in the digital single market of Europe. For this purpose, there was launched the National Strategy for the Digital Agenda for Romania, which was developed on the basis of the Digital Agenda for Europe 2020 program (European Commission, 2010b.), being the reference framework for the development of the digital economy 2014-2020 (Ministry for Information Society, 2015).

National Strategy for the Digital Agenda (Ministry for Information Society, 2015) sets out four areas of action (see Table 1) as follows:

1. e-Government, Interoperability, Cyber Security, Cloud Computing and Social Media – where the main objective is to increase efficiency and reduce costs in the public sector in Romania by modernizing the public administration;
2. ICT in education, culture and health – field which aims to support these technologies at the sectoral level;
3. ICT in e-commerce, and research, development and innovation in ICT – area aimed at regional comparative advantages of Romania, and backs growth in the private sector;
4. Broadband and digital infrastructure services – ensures social inclusion and enables the benefits across all other fields of actions.

In Romania, the roadmap for the implementation of strategic initiatives is presented in Table 1.

Table 1. Roadmap for the implementation of strategic initiatives

Field of Action	Strategic initiatives (2014-2016)	Enabler initiative (2015-2018)	Operational initiatives (2016-2020)
<i>Field of Action I</i> eGovernment, Interoperability, Cyber Security, Cloud Computing, Open data. Big data, Social Media	<ul style="list-style-type: none"> ✓ Define the National Interoperability Framework ✓ Implement the Governance structures for ICT ✓ Establish the National Cyber Security System ✓ Establish key principles for Social Media ✓ Define Government Cloud Capacity 	<ul style="list-style-type: none"> ✓ Prepare E-identity ✓ Build Sustainable Initiatives ✓ Boost R&D in Cyber Security ✓ Data Center Consolidation ✓ Support for Open Government and Big data 	<ul style="list-style-type: none"> ✓ Promote and implement better standards ✓ Promote and implement transparency and openness ✓ Unique Portal ✓ Promote public debates ✓ Common infrastructure
<i>Field of Action II</i> ICT in Education, Health, Culture and eInclusion	<ul style="list-style-type: none"> ✓ Provide the frame for OER ✓ Ensure equitable access to cost-effective healthcare ✓ Modernize culture ✓ Contribute to Europeana ✓ Develop uniform digital literacy 	<ul style="list-style-type: none"> ✓ Encourage Life Long learning ✓ Web 2.0 platforms in the learning process ✓ Improve availability of telemedicine equipment ✓ Raise awareness on digital library 	<ul style="list-style-type: none"> ✓ Stimulate students to get involved ✓ Educate on ICT technologies ✓ Patient-centric service model ✓ Monitoring & evaluation of healthcare ✓ Digitize the Romanian culture patrimony ✓ Involve public and private entities for social inclusion
<i>Field on Action III</i> eCommerce Research-Development and Innovation in ICT	<ul style="list-style-type: none"> ✓ Improve Regulatory framework ✓ Strategy for copyright law ✓ Promote competitiveness clusters 	<ul style="list-style-type: none"> ✓ Support from ICT to Reduce barriers for eCommerce ✓ Development and use of infrastructure for collaboration ✓ Support inovative start-ups 	<ul style="list-style-type: none"> ✓ Improve access to online services ✓ Resolves disputes and improve communication ✓ Increase involvement in R&D projects
<i>Field Action IV</i> Broadband and Digital Services Infrastructures	<ul style="list-style-type: none"> ✓ Improve regulatory framework ✓ Encourage access to passive infrastructure 	<ul style="list-style-type: none"> ✓ RONET project ✓ Simplify procedures 	<ul style="list-style-type: none"> ✓ Implement monitoring mechanism ✓ Transparency and coordination for civil works ✓ Increase involvement in R&D project
<i>Full coverage activities: improve legislation and promote innovation</i>			

Source: (Ministry for Information Society, 2015)

Concrete measures set out in the Strategy will lead to: a) To ensure access to electronic public services for citizens and private and public organizations (e-government services); b) To improve and facilitate access to the Internet by

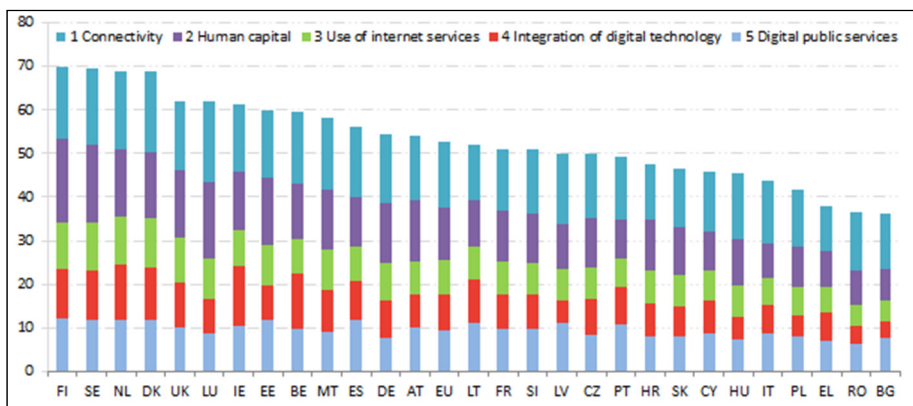
increasing the coverage of high-speed electronic broadband communications networks; c) To increase and to promote the use of the Internet; d) To promote e-commerce; e) To improve cross-border electronic public services and to increase the number of them; f) To enhance digital content and the development of ICT infrastructure in many public important sectors such as education, health and culture; and g) To focus on the growth of the ICT sector added value by supporting research, development and innovation in the field.

The target of the full implementation of the strategic vision of the ICT sector in Romania will be a total investment of around 2.4 billion euro. Direct and indirect impact on the economy should be a GDP growth of 13%, an increase in the number of jobs by 11% and cut in administration costs by 12% until 2020. The strategy also establishes the following indicators for 2020 Romania: i) At least 35% of people use e-government systems; ii) At least 60% of citizens use the Internet regularly; iii) At least 30% of citizens make purchases online; and iv) Coverage with broadband communication networks (over 30 Mbps) of minimum 80%.

For Romania, sustainable growth in digital performance is needed because, according to Digital Economy and Society Index, Romania is not situated very well in the clasament of the European Union. Despite the dynamics of the Information Technology (IT) sector and the massive use of high-speed Internet, the use of the Internet by individuals and societies is very uneven, and the use of public services and Internet commerce is not the same as in other European Union countries (see Figure 2).

Over the years, all the European Union countries improved their digital performance because digital economy became a necessity. The Digital Economy and Society Index (DESI) is a composite index that summarises five relevant indicators on Europe's digital performance: i) Connectivity; ii) Human Capital; iii) Use of Internet Services; iv) Integration of Digital Technology; and v) Digital Public Services. Each index can have more sub-dimensions.

Some of the countries, such as Finland, Sweden, the Netherlands, and Denmark scored the highest ratings in DESI 2019 and are among the global leaders in digitalisation (European Commission, 2019b.). These countries are followed by the United Kingdom, Luxembourg, Ireland, Estonia, and Belgium. Romania's index is low compared to other European Union countries, standing in the 27th place in the landscape of the EU (Figure 2).



Source: (European Commission, 2019b)

Figure 2. Digital Economy and Society Index (DESI) 2019 ranking

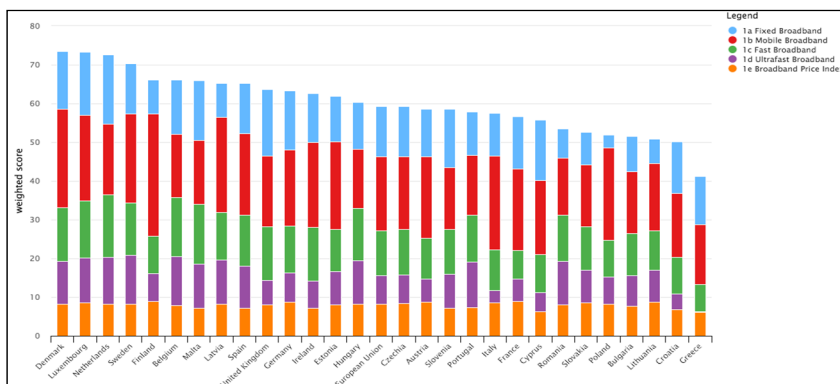
The progress is slow in Romania, only the Connectivity Index (see Table 2 and Figure 3) is having the highest performance between indexes due to the wide availability of fast and ultrafast fixed broadband networks, especially in urban areas (Alexe, 2019).

Table 2. Digital Agenda Scoreboard key indicators in 2019

Series	Name	Code	y
1 Connectivity	European Union	EU	14.8346
	Romania	RO	13.3641
2 Human Capital	European Union	EU	12.0023
	Romania	RO	7.77146
3 Use of Internet	European Union	EU	8.00979
	Romania	RO	4.79031
4 Integration of Digital Technology	European Union	EU	8.21051
	Romania	RO	4.09338
5 Digital Public Services	European Union	EU	9.42844
	Romania	RO	6.48150

Source: (European Commission Digital Scoreboard, 2019)

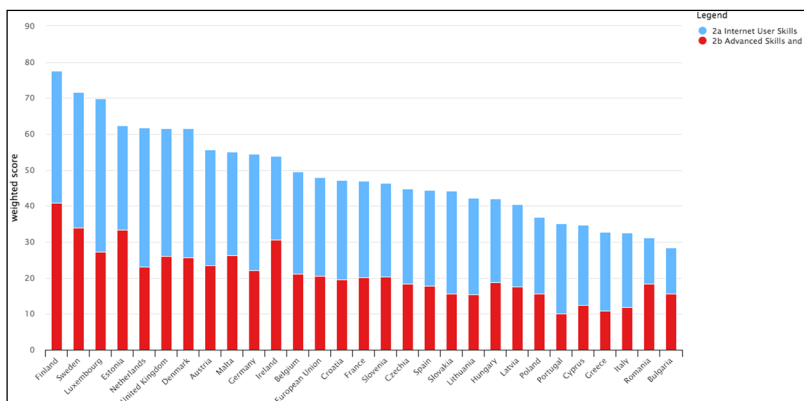
Regarding to Table 2, the Connectivity Index of Romania (13.3641) is not far from the EU average (14.8346). The most sensitive of the indicators compared to the European Union average is Integration of Digital Technology (4.09338), where Romania is less than half the EU average (8.21051). This index is also the lowest of the 5 DESI indexes.



Source: (European Commission Digital Scoreboard, 2019)

Figure 3. Digital Economy and Society Index (DESI) 2019 on Connectivity Index

According to the Digital Economy and Society Index (DESI) 2019, the Connectivity Index of Romania (13.3641) ranks 22nd out of the 28 European Union member states above Slovakia, Poland, Bulgaria, Lithuania, Hungary and Greece. The Connectivity Index is maximum in Denmark (18.3899) and minimum in Greece (10.2958).



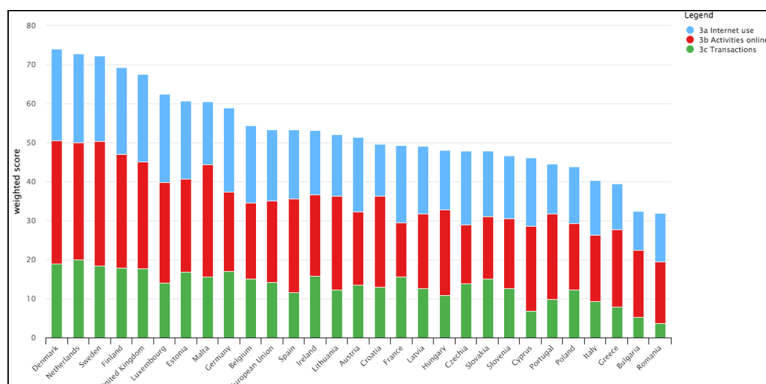
Source: (European Commission Digital Scoreboard, 2019)

Figure 4. Digital Economy and Society Index (DESI) 2019 on Human Capital Index

The Human Capital Index (Figure 4) has two sub-dimensions covering 'internet user skills' based on the number and complexity of activities involving the use of digital devices and/or the internet and 'advanced skills and development' based on indicators on ICT specialist employment and ICT graduates.

According to Human Capital Index, Romania ranks 27th out of the 28 European Union member with a value of 7.77146 states above Bulgaria and after Italy and Greece. The top performers in terms of Human capital Index are Finland,

Sweden and Luxembourg. Human Capital Index is maximum in Finland with 19.3848 and minimum in Bulgaria with 7.12804.

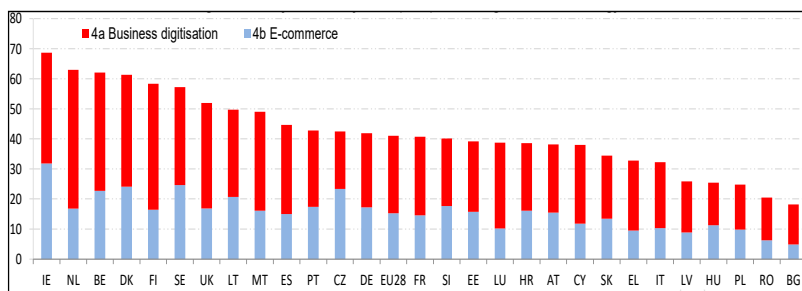


Source: (European Commission Digital Scoreboard, 2019)

Figure 5. Digital Economy and Society Index (DESI) 2019 on Use of Internet Services Index

Use of Internet Services Index (Figure 5) registers Romania on the last place in the European Union with 4.79031. This Index has three sub-dimensions covering ‘internet use’, activities online’ and ‘transactions’. The top performers in terms of Use of Internet Services Index are Denmark, the Netherland and Sweden. The highest index is registered in Denmark with 11.1131.

According to Integration of Tecnology Index (Figure 6), Romania ranks 27th out of the 28 European Union member states above only Bulgaria.

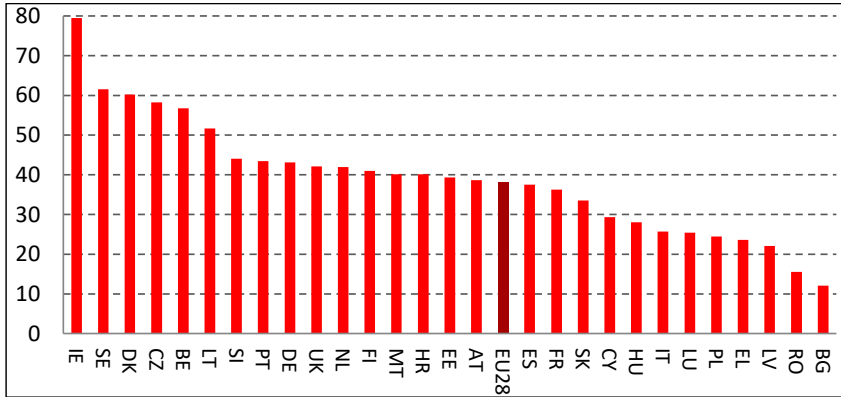


Source: (European Commission, 2019c)

Figure 6. Digital Economy and Society Index (DESI) 2019 on Integration of Technology Index

The top performers in terms of Integration of Technology Index are Ireland (13.742), the Netherlands (12.6004) and Belgium (12.4218). Enterprises in Romania are implementing both e-business and e-commerce solutions, but at a very slow pace.

In Romania, SMEs (Small and Medium Enterprises) are at the beginning of the exploitation of the many opportunities in e-Commerce (Figure 7).

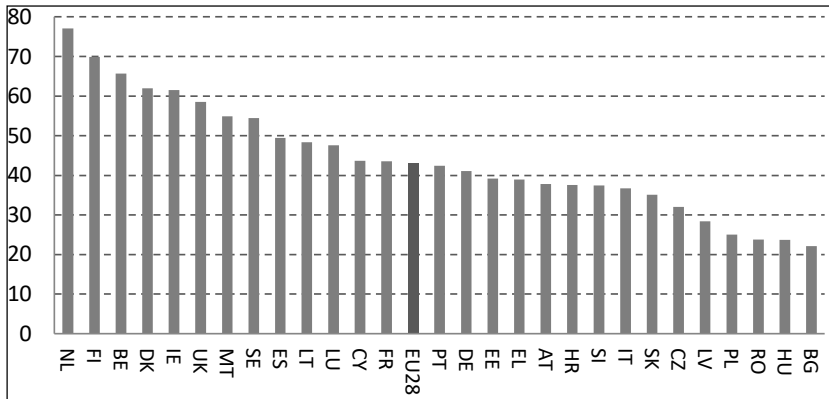


Source: (European Commission, 2019c)

Figure 7. DESI 2019 – e-Commerce index

e-Commerce has gained the largest expansion as a concrete form of doing business in all countries of the European Union, but Romania ranks 27th out of the 28 European Union member states, with less than 15. Ireland is situated on the top regarding e-Commerce Index.

When it comes to e-business technologies (see Figure 8), Romania ranks 26th out of the 28 European Union member states above Hungary and Bulgaria.

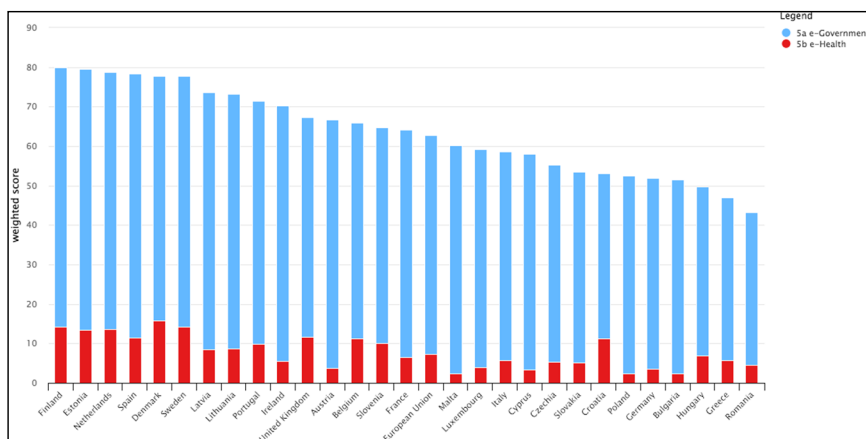


Source: (European Commission, 2019c)

Figure 8. DESI 2019 – Business digitisation index

According to Digital Public Services Index (see Figure 9), Romania registers the lowest score of the index (6.4815). The top performers in terms of Digital

Public Services are Finland (11.98), Estonia (11.9308) and the Netherlands (11.8218). The digital public services dimension consists in: a) e-Government that means the percentage of those internet users who need to submit forms to the public administration, and; b) e-Health that means the percentage of people who used online health and care services without having to go to a hospital or doctors surgery.



Source: (European Commission Digital Scoreboard, 2019)

Figure 9. DESI 2019 – Digital Public Services index

E-Government reduces the time spent in public administrations and this should encourage Romanian people to use them, but the level is the lowest compared with European Union member states. e-Health is used by only 18 % of people in the European Union. In Romania, e-Health is used more than in Bulgaria, Poland, Cyprus, Malta, or even Austria.

To take full advantage of the benefits of the digital economy, the Information Technology sector is upgrading by promoting the innovation component. Investing in digital competence training is also an important stake, as is the development of high-speed internet infrastructure in rural areas (The Embassy of France, 2019).

5. CONCLUSIONS

Digital economy becomes inevitable in a society whose dimension is the knowledge society. It is important that states all over the world harmonize globally so that this economy becomes sustainable. Digital economy is becoming a desideratum and instrument of sustainable development. Romania is a country that has built a strategy and is trying to implement it, but progress is 'in small steps'. The convergence between European states exists in many areas of the digital

economy. Romania, however, needs significant progress in e-government, but the interactive effect of digital economy of the European Union will determine a positive evolution of Romanian digital economy.

In the case of Romania, it is important to realize that the technology must be seen and understood as part of daily life as we are connected to others through our mobile phone, smart TV or smartwatch. From the perspective of businesses, the online environment serves perfectly the interests of traders, with the total value of gains on this market being about 2, 5 billion euros annually.

Romania needs to provide the digital economy with a new representation that, through state-owned instruments (e-government, creating the legal framework for regulation, etc.), will increase the interest of traders to move their businesses into online, which leads to an increase in the online economic level.

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TRAVEL PLANNING USING INTERNET. INSIGHTS FROM ROMANIAN CONSUMERS

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Abstract

During the last four decades, the development of the tourism industry has been mirrored by the growth of information and communication technology. Meanwhile, the advances in mobile devices made consumers search for customized and easily accessible tourism services through mobile apps. Yet, it was noticed that the use of these internet-based devices for travel planning is influenced by consumers' perceptions regarding the easiness and usefulness of these tools. From the theoretical perspective, the Technology Acceptance Model is considered the most suitable theory for explaining individuals' acceptance and use of information systems, assuming that a consumer's perception regarding the usefulness and ease of use of a system determines his attitude and behavioral intention. Considering these aspects, this study investigates Romanians' behavior when using the internet for planning the business or leisure trips. Using an online survey, the study included a sample of 355 respondents from Romania. The conditions for participating in this study were that the respondents had to have taken at least one business or pleasure trip during the year prior to the survey and that they had used the Internet for this travel planning. The findings of our study allowed us to divide the respondents into three segments: the on-line business planners – those travelers that mostly use the internet in planning their business trips, the on-line leisure planners – the respondents that are buying their vacations from the internet, and the traditional leisure planners – the travelers that purchase their vacations from traditional travel agencies. We have related all these results to several socio-demographic and economic variables of the respondents, such as gender, age, educational level, residence area and income.

Keywords: *Internet; Romanian travelers; on-line business planners; on-line leisure planners; traditional leisure planners.*

JEL Classification: R41, L86, Z30

1. INTRODUCTION

During the last four decades, the development of the tourism industry has been mirrored by the growth of information and communication technology. According to some studies, in 2014 over 70% of travelers used the Internet for planning their business or leisure trip (Google, 2014). Meanwhile, the advances in mobile devices made consumers search for customized and easily accessible tourism services through mobile apps. Social media applications such as blogs or electronic social networks play a very important role in influencing user-generated

travel information, opinions and recommendations (Xiang *et al.*, 2015). Such technology adds value to tourism services, offering benefits to both clients and travel suppliers. Consumers can now use mobile apps to look for customized and easily accessible tourism services, while travel suppliers can make their clients loyal through online social channels (Thakran and Verma, 2013). Together with the wide spread of Internet, which has led to abundant travel information, the mobile devices give users flexibility in time and space (Okazaki, Li and Hirose, 2009). Therefore, travelers were enabled to use the Internet in order to obtain, rapidly and from everywhere, reliable and accurate travel information and to plan itineraries within a limited amount of time.

De Valck, Van Bruggen and Wierenga (2009) suggested that virtual communities are becoming important networks of consumer knowledge that influence their behavior. Understanding how travelers adapt to the technological change can serve as a foundation for tourism businesses to identify and develop effective communication strategies. Therefore, the online activities, which comprise travel planning, serve as a window towards a potentially wide range of travel behaviors (Gursoy and McCleary, 2004).

It was noticed that the use of these internet-based devices for travel planning is influenced by consumers' perceptions regarding the easiness and usefulness of these tools. From the theoretical perspective, the Technology Acceptance Model is considered the most suitable theory for explaining individuals' acceptance and use of information systems, assuming that a consumer's perception regarding the usefulness and ease of use of a system determines his attitude and behavioral intention.

Considering these aspects, the present paper investigates Romanians' behavior of using the internet when planning the business or leisure trips. Using an online survey, the study included a sample of 355 respondents from Romania. The paper is structured as following: the next section briefly presents some relevant studies on the topic, the third part includes the methodological approach and the fourth section presents the results and discussions. In the end, the conclusions briefly summarize the findings of the study.

2. LITERATURE REVIEW

The literature approaching the aspects related to travel planning using the Internet offers a wide range of studies aimed at identifying the characteristics of the travelers, the process of planning that includes the information sources, the strategies of information search and the factors that influence this behavior (Gretzel, Hwang and Fesenmaier, 2012). Some researches underlined travelers' characteristics, including gender (Kim, Lehto and Morrison, 2007), educational level (Bai *et al.*, 2004) or general demographic profiles (Ip, Lee and Law, 2012). Jun, Vogt and MacKay (2007) found that past travel experiences influence the online information search before a new trip. Yet, age seems to be the most

important characteristic when it comes to goods and services purchases, since consumers tend to change their preferences with the passage of time (Robert and Manolis, 2000). In the study conducted by Beldona, Nusair and Demicco (2009) regarding travelers' behavior while online searching information, it was found that the likelihood of online travel purchase has increased for all generations, but the highest increase was noticed at Baby Boomers. Actually, even from beginning of the 21st century some studies have underlined that Baby Boomers take more trips than any other age group (Horneman *et al.*, 2002).

Social media have become extremely important in travel planning since they provide information about other travelers' experiences (Yoo, Gretzel and Zach, 2011) and offer a sense of belonging into virtual travel communities (Gretzel, Fesenmaier and O'Leary, 2006). It was noticed that, usually, people rely on other travelers' experience in order to get maximum of satisfaction with minimum of costs and risks (Kotler, Bowen and Makens, 2010). However, travelers do not read reviews only before the trip, when they get information (Cox *et al.*, 2009), but also after it, when they compare and share experiences (Gretzel, Yoo and Purifoy, 2007). Yoo, Gretzel and Zach (2011) concluded that more travelers trust the posts made by official tourism sites than travel blogs, social networking sites or review sites. Yet, Del Chiappa (2011) suggests that blogs are the second most important source of information when planning a trip, after travelers' reviews and travel agencies' websites. Meanwhile, White (2010) found out that the photos posted on Facebook could largely influence viewers' travel plans.

The Technology Acceptance Model, developed by Davis (1989) is recognized in the travel and tourism literature as an influential theory for investigating the acceptance and use of the internet. This model is adapted from the Theory of Reasoned Action of Ajzen and Fishbein (1980) and it postulates that perceived usefulness and perceived ease of use are the key influences on attitude and use intention (Davis, 1989). Applying the results of this study to the tourism industry, *the perceived usefulness of the internet* represents that belief of an individual according to which the use of a social media will improve his travel planning. The common belief is that individuals would use an application if they consider it useful for achieving an intended result. Several researches have confirmed the importance of this factor as a basic component of technology utilization in hospitality and tourism industry (Morosan, 2010; Huh, Kim and Law, 2009). Meanwhile, *perceived ease of use* refers to the easiness that individuals perceive when manipulating a particular computer-mediated technology for making traveling plans. A study conducted by Ayeh, Au and Law (2012) found that travelers' evaluation of the amount of effort required when using the consumer-generated media platforms influences their attitudes and their perception of usefulness.

Davis, Bagozzi and Warshaw (1992) has adapted the motivational theory in order to show that Internet users' behaviors differ depending on whether their

motivation is extrinsic or intrinsic. Travelers may use consumer-generated media in order to attain an end, such as travel planning or social networking – fact that proves an extrinsic motivation. Intrinsic motivation reflects the perception that individuals would want to perform an activity for no apparent reinforcement (Davis, Bagozzi and Warshaw, 1992). Yet, Castañeda, Frías and Rodríguez (2009) consider that the travelers are less interested in the outcome of searching travel information (extrinsic motivation) but they will be more intrinsically motivated.

Toh, DeKay and Raven (2011) argues that some factors contribute to the increased use of the internet for the airlines' bookings, thus reducing the role of the travel agents. Firstly, the Internet is suitable for the purchase of intangible goods such as the airlines' seats. Secondly, customers expect, in general, that the products purchased through the Internet will generally be cheaper (O'Connor, 2003) because of lower distribution costs. Thirdly, the Internet provides a wide range of choices (Zhang *et al.*, 2006). Fourthly, the majority of the traveling websites allow the purchase of not only the airlines' tickets, but also hotel rooms or rental cars.

Starting from all these results, we have launched two major hypotheses:

H1. Most of the travelers are investigating different online sources before deciding a trip.

H2. The traveling decision is influenced by other peoples' experiences.

3. RESEARCH METHODOLOGY

The purpose of the present paper is to investigate the attitudes of the Romanian people when using the internet for planning the business or leisure trips. In order to reach this goal, we have used an online survey, on a sample of 355 respondents from Romania. The initial sample included 400 people, but 45 of them did not answer to all the questions or did not meet the eligibility criteria. The conditions for participating in this study were that the respondents had to have taken at least one business or pleasure trip during the year prior to the survey and that they had used the Internet for the travel planning.

The respondents had to fill-in a 10-minutes online questionnaire, focused on travel habits and attitudes. The survey was conducted between May and June 2019 and included 16 questions, which were grouped in five variable sets. The first set referred to the impact of the online sources on travelling decision. The second set included aspects related to the importance of the social media in planning the trips. While in the third set, the travelers were asked to mention some habits when planning their trips, such as using various devices, the fourth one included aspects related to the purpose of the majority of the trips. In the end, the respondents were asked several questions that underlined their socio-economic and demographic characteristics, such as gender, age, monthly income and occupation (the results are presented in Table 1).

Table 1. Socio-economic and demographic characteristics of the respondents

	Gender	Age	Level of Income	Occupation
Percentage of the population	Male – 61%	Below 20 – 10%	Low level – 21%	Student – 26%
		20-40 – 41%		Employee – 43%
	Female – 39%	40-60 – 36%	Middle level – 62%	Entrepreneur – 24%
		Above 60 – 13%		High level – 17%

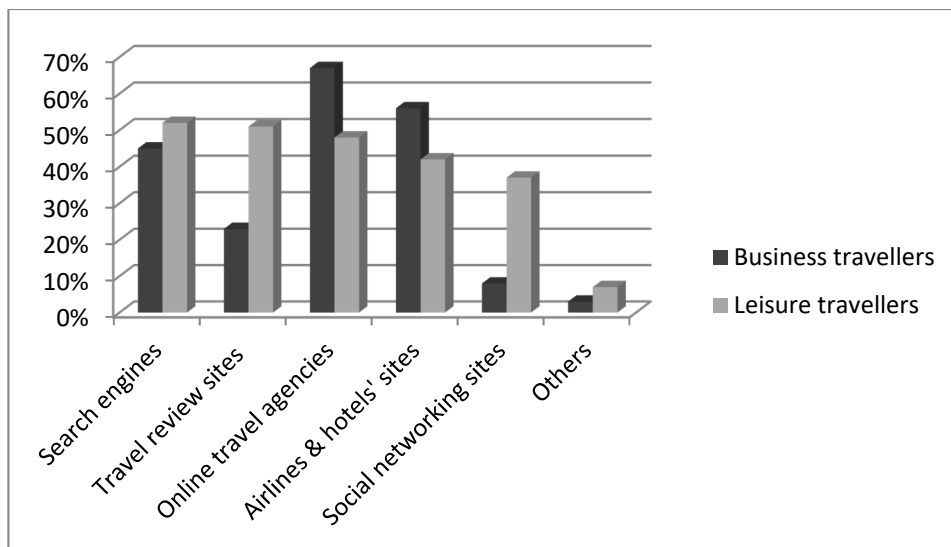
Source: computed by the author

4. RESULTS AND DISCUSSIONS

The first questions of the survey referred to the impact of the online sources on travelling decisions. 34% of the respondents mentioned that they start searching on the internet before they decide where or how they want to travel. These are the leisure travelers, employed on a medium salary, with the age between 20 and 60 years old. Most of them (67%) are men, which usually travel with family or friends. 72% of the business travelers, usually entrepreneurs, start searching information on the internet regarding their trip only when they are about to travel. They have a medium or high income and most of them are between 40 and 60 years old. Considering these results, the first hypothesis – *H1. Most of the travelers are investigating different online sources before deciding a trip* – is accepted.

Regarding the major sources of inspiration that influence the travelling decision, 65% of the respondents mentioned the internet sources – for both business and leisure travel planning, 45% the mass media (TV or radio), 32% indicated the relatives or friends, 24% the travel agents and 18% mentioned other sources. The search engines and YouTube are on the top of the online sources of inspiration, 72% and, respectively, 45% of the leisure travelers using them.

From all the internet sources, the business travelers are relying more on online travel agencies, hotels or airlines’ sites when planning their trips, while the leisure ones are using more the search engines and travel review sites for the same purpose (see Figure 1).



Source: computed by the author

Figure 1. The most popular online planning sources for business and leisure travelers

87% of the leisure travelers are looking for other persons' experiences, in order to be efficient in terms of costs, associated risks and benefits. Meanwhile, the percentage of business travelers searching information on blogs, social networks or review sites in order to take the best decision regarding flights or accommodation is much more reduced – 31%. Therefore, the second hypothesis – *H2. The traveling decision is influenced by other peoples' experiences* – is only partially accepted.

The most used devices in almost all the stages of a trip, by both business and leisure travelers, are the computers or tablets (see Table 2). Yet, most of those aged below 20 years old (89%), which are students, use smartphones for planning a trip. Meanwhile, 56% of those aged above 60 years old do not use the internet for their trips. The large majority of this last category is represented by the leisure travelers, which purchase their vacations from traditional travel agencies.

Table 2. Devices used in different phases of the travel process

Phase of the travel process	Leisure travelers			Business travelers		
	Computer/ Tablet	Smartphone	None	Computer/ Tablet	Smartphone	None
Research	59%	34%	7%	72%	25%	3%
Purchase/ booking	73%	21%	6%	78%	22%	1%

	Leisure travelers			Business travelers		
Traveling	38%	58%	4%	51%	48%	1%
Post-traveling	52%	37%	11%	51%	47%	2%

Source: computed by the author

5. CONCLUSIONS

The findings of the present study allow us to divide the respondents into three segments: the on-line business planners – those travelers that mostly use the internet in planning their business trips, the on-line leisure planners – the respondents that are buying their vacations from the internet, and the traditional leisure planners – the travelers that purchase their vacations from traditional travel agencies.

Almost a third of the leisure travelers, aged between 20 and 60 years old, mentioned that they start searching on the internet before they decide where or how they want to travel. Most of them are men, which usually travel with family or friends. A large majority of the business travelers, aged between 40 and 60 years old, start searching information on the internet regarding their trip only when they are about to travel.

More than half of those aged above 60 years old do not use the internet for their trips. Most of them are leisure travelers that purchase their vacations from traditional travel agencies.

While a large majority of the leisure travelers are looking for others' experiences in order to minimize the costs and maximize the benefits of the online trips' planning, less than a third of the business travelers are doing the same.

Considering all these results, we have accepted the first hypothesis and only partially accepted the second one.

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CHALLENGES FOR ROMANIAN TRAVEL AGENCIES IN DIGITAL ERA

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Abstract

Ensuring long term business success relies on a company's ability to understand and exploit consumers' behavior trends. Moreover, in the on-line shopping environment, the customer value – the trade-off between what clients receive and what they sacrifice – is considered to be the most important driver of competitive advantage in attracting and retaining customers. From this perspective, the Internet was seen as a platform that facilitates continuous technological innovations and fosters new business practices, but which could also alter the competitive environment of various industry sectors. Since the end of the last century, the travel and hospitality sector has actively adopted the Internet as a new distribution and advertising channel. In this context, the number of the business and leisure trips has constantly increased. Yet, the emergence of the Internet-based distribution channels has created both opportunities and challenges to the travel agencies. Using an online survey, this study aims at identifying the major issues faced by the Romanian travel agencies during the last 10 years, in the context of the rapidly changing business environment, due to extensive use of the Internet in travel planning. The results of our study, which were based on a sample of 17 Romanian travel agencies, indicate that some respondents – especially the very small agencies – faced a continuous decrease of the revenues during the last years, in favor of the on-line reservation intermediaries. Yet, those agencies that have largely invested in the development of their websites, succeeded to maintain the same volume of clients and to increase their revenues. However, these travel agencies had also to come up with very attractive and tailor-made touristic packages.

Keywords: *digital era; Romanian travel agencies; on-line trip planning.*

JEL Classification: L86, Z31

1. INTRODUCTION

Ensuring long term business success relies on a company's ability to understand and exploit the consumers' behavior trends. Moreover, in the on-line shopping environment, the customer value – the trade off between what clients receive and what they sacrifice – is considered the most important driver of competitive advantage in attracting and retaining customers. A study conducted by Keeney (1999), aimed at understanding the value of the e-commerce on customers, developed a concept called *value propositions*. This term defines the benefits and costs of using the Internet, by analyzing how the online goods and services can be better than what it is already available through conventional means.

From this perspective, the Internet was seen as a platform that facilitates continuous technological innovations and fosters new business practices, but which could also alter the competitive environment of various industry sectors. Since the end of the last century, the travel and hospitality sector has actively adopted the Internet as a new distribution and advertising channel. In this context, the number of the business and leisure trips has constantly increased. The abundant online travel information enabled travelers to use the Internet in order to plan, by their own, the trips within a limited amount of time. Moreover, numerous travelers are enjoying sharing their experiences and photographs using platforms such as forums and blogs, fact that indirectly raised the potential traveling populations. Therefore, acquiring information through the Internet has increased travel motivations and requirements, causing both opportunities and challenges to the travel agencies. One of the major threats comes from the airlines and hoteliers that started offering their products and services directly to the customers, thus replacing the intermediation of the travel agencies that operate from physical offices with online services (Villano, 2000). Yet, developing the ability to offer both traditional and Internet-based services may offer agencies an added value if they give up the traditional role of a booking office and focus more on increasing the travel experiences (Buhalis, 2003). Therefore, the challenge for the travel agencies is not “whether or not” but rather “how and when” (Sigala and Buhalis, 2003) they start identifying themselves primarily as travel managers and advisors.

Taking into account all these aspects, the present study intends to identify the major issues faced by the Romanian travel agencies during the last 10 years, in the context of the rapidly changing business environment, due to the extensive use of the Internet in travel planning. The paper includes five parts: while the next section briefly presents some relevant studies on the topic, the third part underlines the methodological approach. The fourth section presents the results and discussions. In the end, the conclusions briefly summarize the findings of the research.

2. LITERATURE REVIEW

The electronic distribution of travel information has opened new channels through which people can reserve travel services. The most notable development is that reservations, traditionally made through travel agents, are now being generated online by individual or corporate travel planners (Miller, 2004). Therefore, the travel agencies face increasing competition that forces them to reevaluate the efficiency of their websites (Park, Gretze and Sirakaya-Turk, 2007). From suppliers' perspective, the successful factors for a travel website are lower distribution costs, higher revenues and a larger market share (Law, 2000). Meanwhile, the Internet allows travelers to communicate directly with tourism suppliers and to purchase services at any time and place (Olmeda and Sheldon, 2001).

In the case of the tourism sector, the topic of disintermediation, referring to the elimination of the middleman (traditional travel agencies) by using the Internet, has largely been debated in various studies. To some researchers, the accessibility of online travel websites reduces the importance of the travel agencies, which might be, at some point in time, completely avoided by the clients (Barnett and Standing, 2001). However, Palmer and McCole (1999) underline that a major advantage of the travel agencies is their ability to provide personal information and advice to travelers. Therefore, the role of travel agencies would remain secure if their advice-offering capability will be doubled by their presence of the Internet, rather than if they were simply booking agencies.

Yet, in order to survive in an information-intensive industry, travel agencies must embrace all aspects of the information technology. In this context, it is important not only to rely on the online reservation systems, but also to learn how to use other hardware and software applications. As noticed by Bédard (2005), specialization, increased professionalism and improved travel counselling abilities are among the competencies that travel agents need in the increasingly competitive environment. They must reposition themselves from information providers and simple resellers to consultants and developers of personalized packages (Garkavenko, Bremmer and Milne, 2003).

Smaller travel agencies might be the most affected by the development of the online services. However, they can still obtain an advantage if they create specialized products that are relevant to their local communities (Buhalis, 2003). The added value they can offer is related to designing high-quality, personalized travel arrangements for which consumers are willing to pay a premium. In order to identify specific products that satisfy the tourism demand, taking full advantage of technology is essential (Tinnilä, 2002).

According to Bédard and Gagnon (2001), there are three basic features necessary for adaptation to new technologies: training, acquisition and use. Companies must offer proper new technologies' training programs to their employees and these activities must be part of their regular activities. Regarding the acquisition of the new technologies, travel agencies have to pay attention to

those that really meet companies' needs. The technologies are generally applied to internal, external or both uses. Meanwhile, the adaptation to new technologies is framed by four aspects: partnerships, groups, alliances and consortium. All these illustrate the current trend for companies to join forces so that they can better face the challenges of the digital era (Burn and Barnett, 1999).

Starting from all the aspects mentioned above, we have developed two research hypotheses:

H1. The development of the online tourist services has negatively influenced the very small travel agencies.

H2. The travel agencies that invested more in tailor made programs succeeded to maintain the customers.

3. RESEARCH METHODOLOGY

The purpose of this study is to identify the major issues faced by the Romanian travel agencies during the last 10 years, in the context of the rapidly changing business environment, due to extensive use of the Internet in travel planning. In order to reach it, we have used an online survey, on a sample of 17 Romanian travel agencies. The initial sample was formed from 20 companies, but 3 of them refused to respond to some questions. The final sample included very small, small and medium size travel agencies.

The respondents had to fill-in an online questionnaire, focused on travel habits and attitudes. The survey was conducted between June and August 2019 and included 12 questions (both open-ended and closed-ended), which were grouped into five variable sets. While the first set referred to the online activity of the agencies, the second one included questions related to the way in which the companies responded, during the last years, to the diverse needs of the customers. The third set was focused on the tailor-made programs offered by the travel agencies. Afterwards, they were asked about the evolution of the number of the clients and revenues during the last 5 years. In the end, the respondents had to mention some factors, which they consider that have influenced the activity of the company during the last years and what strategies they intend to implement, in future, in order to increase their profitability.

4. RESULTS AND DISCUSSIONS

The first two questions that the respondents answered referred to their online activity. A large majority (89%) said that they created a website for the company even from the beginning of the agency's activity. Yet, only 60% of the very small travel agencies have a website, created during the last 3 years, while the rest still does not have a webpage. From all the small and medium companies that have a website, only half are weekly updating the information and less than a third (21%) offer clients the possibility to check, by themselves, in real time, the options regarding accommodation and flights for a particular period.

Regarding the adaptation to the clients' needs, most of the agencies said that they have diversified the offer during the last years, by introducing the city-breaks (76%), new destinations for summer and winter holidays (63%), new circuits (44%) and boat cruises (13%). However, only those companies that have also updated their website with these pieces of information have succeeded to attract new customers. The very small agencies, which have a website but it is not updated with the latest offers and packages, said that have lost clients and, consequently, their revenues have decreased during the last years. The opposite findings were in the case of the small and medium size companies with updated information on their websites. Considering these results, the first hypothesis – *H1. The development of the online tourist services has negatively influenced the very small travel agencies* – is accepted.

Only 23% of the investigated agencies mentioned that they can offer tailor made programs. These programs include, for example, self-drive trips in EU and non-EU states, summer festivals' organized trips, outdoor/nature discovery packages, creativity workshops' trips, sports and adventure packages, mind and health experiences or conferences' arrangements. Most of these packages are presented on the agencies' websites, but all the details are discussed with the clients face-to-face. When asking about these programs, the customers also receive advices and other information that might help them taking the best decision. Therefore, designing these tailor-made programs offered travel agencies the possibility to retain the clients and make them loyal. Most of the agencies that offered such programs are medium-size companies, which noticed a considerable increase of the number of customers during the last years. The profile of the clients that are looking for tailor made programs shows that they are young and active people (usually between 30 and 50 years old), which are influenced in their traveling plans by the reviews posted by others on blogs, social networking sites or on travel review sites. Therefore, the internet represents an important source of inspiration for them. Considering these results, the second hypothesis – *H2. The travel agencies that invested more in tailor made programs succeeded to maintain the customers* – is accepted.

Being asked about the profile of their usual clients, the responses of the travel agencies' representatives differed. As it results from Table 1, the small and medium size firms with a website usually have young clients that are using the Internet to inform themselves about tourism products and destinations before coming into the agency. Almost a third of them are on the look-out for the last-minute deals. Moreover, some of these clients e-mail their travel agents a feedback about their travel experience soon after returning from their trip. Meanwhile, the very small size companies without a website are usually frequented by older persons that, in general, do not use the internet for making trips' plans.

Table 1. Profile of the travel agencies' clients

Type of travel agency	Regular clients' profile	
	Age	Actively internet users
Medium size with website	Between 20 and 50	Yes
Small size with website	Between 20 and 50	Yes
Small size without website	Between 40 and 65	Yes
Very small size with website	Between 20 and 50	Yes
Very small size without website	Between 40 and 80	No

Source: computed by author

The last aspects mentioned by the respondents were related to the factors they consider that have influenced the activity of the company during the last years and to the strategies they intend to implement, in future, in order to increase their profitability. Those agencies that mentioned the tailor-made programs as a determinant of their success from the last years have also said that they intend to focus and develop more these packages, with the possibility of offering, in future, online consultancy. Meanwhile, almost all the travel agencies that have a website underlined that the major potential factors which could increase their profitability in future are related to maintaining up-to-date, on their websites, the information regarding the services they offer and to give clients the possibility to make online trips' purchases. The agencies that currently do not have a website are very aware of the fact that they must create one, in near future, in order to maintain their profitability.

5. CONCLUSIONS

The results of our study, which were based on a sample of 17 Romanian travel agencies, indicate that some respondents – especially the very small agencies – faced a continuous decrease of the revenues during the last years, in favor of the on-line reservation intermediaries. Yet, those agencies that have largely invested in the development of their websites, succeeded to maintain the same volume of clients and to increase their revenues. However, these travel agencies have also offered very attractive and tailor-made touristic packages.

Some strategies that could implement the travel agencies in order to increase the number of clients and revenues are related to the possibility of offering online consultation, maintaining, on their websites, up-to-date the information regarding the services they have and offering clients the possibility to make online trips' purchases. Obviously, those companies that still do not have a website must create one.

Considering the theoretical aspects presented in the literature and the findings of this study, we may argue that the strategies that could be adopted by travel agencies in relation to online developments are product and information specialization. Meanwhile, in order to minimize the risk of disintermediation and

to improve business performance, travel agents should assume functions and services that cannot be provided by technology.

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EMPLOYEE HAPPINESS AND PRODUCTIVITY IN TIMES OF PANDEMIC

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Abstract

If until now, work from home was seen as a benefit given to certain employees who can work in other places, now it has become a measure of protection of COVID-19. Any change brings with it more changes, more or less inspired for the management and employees. Methodologically, a qualitative research was undertaken, resorting to descriptive and exploratory literature review. Research hypothesis of this paper is that productivity and work from home are factors that affect the happiness of individuals in their work context. The main objective of this paper is to explore the challenges and opportunities that COVID-19 presents to employee happiness and productivity as well.

Keywords: *COVID-19; work from home; employee productivity; employee happiness.*

JEL Classification: I30, J81, O15, E24, J24

1. INTRODUCTION

A viral pneumonia originating from China was announced to the World Health Organization on December 31, 2019 known as Coronavirus disease 2019 (COVID-19) and this pandemic has rapidly and profoundly affected every part of our daily life, from the way people work, live, shop, socialize, and plan for the future (Lee *et al.*, 2020).

The COVID-19 pandemic has created a particularly challenging environment for human resource management (HRM) – with managers having to quickly venture into the “unknown unknowns” as they strive to help their workforce adapt to and cope with radical changes occurring in the work and social environment (Carnevale and Hatak, 2020). According to Gartner, Inc., organizations need to focus on employees’ emotions related to the coronavirus pandemic to restore productivity and deliver on employee experience (HR One, 2020).

Now, in a time of pandemic, more than ever employers need to consider what makes employees happy and invest in it because a happy employee is more productive. When people are dissatisfied, become extremely critical of each other, become negative and are concerned only with the negative aspects of the workplace, happy people being more selfless, willing to share not only their money but also their time and energy.

The changes of recent months have left a strong mark on the labor market, which now looks completely different from what it was at the beginning of the year. Given the fact that some companies could no longer afford to pay their employees, they were forced to find another job, and now the demand from candidates far exceeds the supply of jobs. There have also been changes in the work from home are, which many of the employees have experienced for the first time. Showing that it is possible and that working from home is just as productive as spending time in an office, there is a possibility that the number of companies that will give employees the opportunity to work from home will increase, so there will be an increase in company interest to turn to freelancers or project-based specialists (Bellu, 2020).

2. WORK FROM HOME AND EMPLOYEE PRODUCTIVITY

According to a survey conducted by the Association of Business Service Leaders in Romania (ABSL) between March 12 and 16, with the theme of the Covid-19 pandemic, 98% of companies in the industry took as their main safety measure the work from home approach. According to the survey, working from home has been one of the most attractive benefits for employees in recent years, before the Covid-19 pandemic. Thus, 71% of companies benefited employees from the opportunity to work from home, at least one day a week (Covid-19 measures in the business services industry: employees work from home in 98% of companies, 2020). To help a team work more efficiently, certain tools have been used to facilitate the work from home, and the most known and useful are the following: Slack, Zoom, Google Hangouts Meet, Skype or Microsoft Teams (Tech against Coronavirus, 2020).

The healthier the employees, the more productive, more involved in the business and the happier they will be, and the following measures have been taken to return employees to work during the period of self-isolation: employees are given temperature checks at the entrance to the building with the help of a thermal cameras, all offices are equipped with automatic dispensers of protective masks, gloves and disinfectant gel, and the routes are signaled by written warnings (Rotaru, 2020).

While organisations plan the gradual return of employees to their offices, they have the challenge of balancing the desire of employees to spend more time working from home than returning to the office. Employees may feel anxious about the risks that this poses to them personally. How such anxieties are managed can have an impact on both individuals and the organisation, not just operationally but also how its culture is shaped going forward (Papagiannidis, Harris and Morton, 2020).

In these challenging times, here are few tips for maintaining sound health, contentment and productivity while working from home:

- *Comfortable and healthy workspace setup* – minimize glare on your laptop and make sure you have good lighting. Sit at a proper distance from your screen, about an arm's distance. Ideally, you should position your computer screen so windows are to the side instead of in front or behind. Also, ensure that your chair is in a comfortable, upright position for you (Adenle, 2020).
- *Make time for yourself before your work start time* – there are a couple of options to consider for your “me” time during this work-at-home period. Exercise is good for mental health and for maintaining a “can-do” attitude. You could also spend time focusing on a hobby or expanding your knowledge in your field of work (Adenle, 2020).
- *Take regular short breaks* – if you are working on a lengthy task, take regular breaks to stretch your legs. Being super productive for a long period is difficult, so make sure you take short, regular breaks to re-energize (Adenle, 2020).
- *Set regular hours, and stick to the schedule* – the most popular way employees stay productive at home is having set work hours (33%). Encourage employees to maintain the same schedule they did when they went into the office. Following a routine will help your workers feel more structured and efficient, and it will help keep their attention focused (Martins, 2020).
- *Keep your desk and general work area tidy* – a tidy workspace helps keep a tidy mind, which helps make your day more productive.
- *Define your work space* – confine your work space to a specific area in your home so your productivity doesn't intrude into the lives of other household members and you can concentrate (Robinson, 2020).
- *Set boundaries* – learn to say no. Refuse to commit to more projects when you're already overloaded. Tell yourself there's a limit to what you can do (Robinson, 2020).

A research by Oxford University's Saïd Business School, in collaboration with British multinational telecoms firm BT, has found a conclusive link between happiness and productivity. The study has found that workers are 13 percent more productive when they are happy. They do not work more hours than their discontented colleagues, they are simply more productive within their time at work (Oxford University, 2019).

Putting employees' and their families' health and safety first should be the first priority. Worrying about their health and that of their families can place immense psychological pressure that is likely to impact on their performance and productivity. Appropriate measures can reassure staff and make them feel valuable, which can only have a positive impact on the organisation (Papagiannidis, Harris and Morton, 2020). Understanding employees needs and

the mechanisms for dealing with the consequences of the incident is crucial to surviving the pandemic (Pan, Cui and Qian, 2020).

Irina Stoica, co-founder of Tknos Teleworking, a consulting company in the implementation of work-from-home procedures, says that working from home can increase employee productivity, but is also a benefit for the employer, not only for the worker, because it can reduce costs with work spaces (Diaconu, 2020).

Compared to office employees, remote workers saved an annual average of \$4,523 on fuel alone. This also equated to an extra 408 hours, or 17 days, of free time each year for not having to take the time to get from their home to an office. Working from home not only benefits employees by eliminating their daily commutes, it also increases productivity and leads to healthier lifestyles. It's a win-win situation that workers relish for its flexibility – but often at the cost of their work-life balance (Airtasker, 2020).

3. THE NEGATIVE EFFECTS OF WORKING FROM HOME

Aside from the increased inability to separate work and private life, the closure of schools and child-care services has increased parental demands for employees, further blurring the lines between work and family spheres. While work-family interconnections seem particularly demanding for employees with children, single and childless workers are not immune to the negative consequences of such altered working conditions, as they may be at greatest risk of loneliness, a felt lack of purpose, and associated negative effects on well-being (Achor *et al.*, 2018).

Previous studies reported a negative impact on the mental health of those who underwent unexpected events like this one, which could culminate in post-traumatic symptomatology (Mak *et al.*, 2010). Traumatic events, such as those related to the global spread of unknown epidemics, generate psychological distress and anxiety symptoms, which impact sleep quality (Cohen *et al.*, 2017). These diseases may represent the first signs of the development of more severe symptoms, which could culminate in the onset of post-traumatic stress disorder (PTSD) (Casagrande *et al.*, 2020). The results of a study on Italian population about pandemic situation revealed that 57.1% of the respondents experienced poor sleep quality, 32.1% had high levels of generalized anxiety symptoms, 41.8% experienced psychological distress, and 7.6% reported relevant PTSD symptomatology linked to the COVID-19 diffusion (Casagrande *et al.*, 2020). Sleep has tremendous importance to organizations because of its relationship with employee performance, safety, health, and attitudes (Litwiller *et al.*, 2016). Sleep plays an essential role in thinking and learning. Lack of sleep damages these cognitive processes in several ways. First, it affects attention, alertness, concentration, reasoning, and problem solving. This leads to a lack of concentration which leads to low productivity during the day at work and a state of unhappiness.

Here are some ways that working from home may be harmful to your well-being:

- *Difficulty with work and home life separation* – working from home can be quite harmful to your psyche. Having a commute home from work allows you to mentally detach from the stressors that your job may cause you. When you work from home that transition is no longer there, and the line between work life and home life becomes blurred.
- *Loneliness* – workplace loneliness can be a problem even when everyone is working in an office. But the sudden shift to remote work can increase the risk. Research shows that workplace loneliness hurts job performance. You can become a less effective worker as co-workers find you less approachable and stop collaborating (Vasel, 2020).
- *Decreased social life* – when you spend eight hours of your day inside with little to no human interaction, you will without a doubt begin feeling isolated.

4. CONCLUSIONS

Asking if productivity has been impacted positively/negatively by home working during the pandemic is the wrong question. Instead managers should be asking which lessons during this period can be applied to improving productivity, considering the experience from the forced upon us experiment of remote working. Attitudes of managers and employees may have been affected by the lockdown experiences and should be interpreted accordingly (Papagiannidis, Harris and Morton, 2020).

In conclusion, companies are certainly catching onto the trend, and most have the flexibility to work from home, if not at all the time, at least when needed. There is a good part and a not so good part to the fact that employees work from home now, but we have to choose what is good for us and our employees because there is no valid universal truth and we are all different and have different desires.

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EU TAX COMPETITION AND THE INNOVATION OF THE DIGITAL ECONOMY

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Abstract

Tax competition is a governmental strategy for attracting foreign investment and greater manpower by minimising overall taxation levels or specific taxes. Economists view tax competition as beneficial and worthwhile, and low taxation levels are geared towards stimulating economic growth. On the contrary tax competition is perceived as harmful, eroding the tax bases of other countries, and encouraging other countries to follow without clear knowledge of the implications. Tax competition jeopardizes infrastructure, welfare and other public services. It can also misallocate economic resource by driving investment escape, from higher tax countries to lower tax countries. Taxes can impact upon innovation and higher taxes reduce the net profit and lead to decrease of innovation. Tax competition is not a new phenomenon, it exists in EU countries and in some cases it is unregulated between member states creating favourable and unfavourable tax treatments to some businesses. Arguably, some countries use other systems such as corporate income tax to widen their market and to compete globally. The question is whether tax competition distorts resource allocation of innovation, especially with the development of the digital economy and with such developments, lower barriers of capital flows and manpower mobility exists. Through the utilisation of current literature, this paper examines the effects of tax competition on innovation in the EU in the past 20 years. A key focus upon enterprises' innovation activity (including Research & Development expenditure and patents) and inventions. Consideration is given to the comparison of the different effects of overall tax competition and specific taxes targeted on innovation related revenue. This paper further argues that digital economy is vital and requires more attention from the government, high power authorities and time should be devoted to innovation as well as developing sophisticated technology industries. With the advent of EU tax competition, questions about digital economy are paramount in the business lifecycle. The paper concludes that more prospects are presented in EU tax competition and the prevention of such competition can dislocate innovation, minimise economic growth and distort the digital economy.

Keywords: *tax competition; European Union; innovation; digital economy; industry.*

JEL Classification: O32

1. INTRODUCTION

Nowadays, advanced economies are basically knowledge-based (Dunning, 2000; Carrillo *et al.*, 2014) and its success leads to the organisation's innovation. Innovation has been widely recognized as the main engine for economic growth and provides a comparative advantage for both companies and countries. This is the key to survival for companies and advantageous for countries, especially in the digital economy. Consequently, the positive spillover effect of innovation leads to more investment in research and development (R&D) activities and countries with R&D capacity are more likely to produce even more innovation (Baumol, 2002). EU companies are perceived as the main force in R&D activities but due to high costs and huge uncertainty in the economy companies are forced to keep away from R&D activities. Therefore, government's innovative incentives and support mechanisms must be alluded to enable companies partake in R&D activities (Scotchmer, 2004; Leiblein and Madsen, 2009).

Tax incentive is a generally accepted tool to stimulate companies' R&D activities. In both developed and emerging countries, governments have widely used tax incentives to encourage companies to invest. It is believed that lower tax rates could increase the after-tax profit of companies so that they can invest more in R&D activities (Cai, Chen and Wang, 2018). Tax incentives induce stimulation among countries leading to negative consequences of tax competition.

Tax competition is the process by which countries, states or even cities use tax cuts, tax breaks, tax loopholes or tax subsidies to attract investment, capital and high value labor resources. It exists when governments use reductions in fiscal burdens to encourage the inflow of productive resources. A country's tax competition policy represents the governmental strategy of attracting investment, capitals, multi-national companies and high value human resources. Thus, the country could create a comparative advantage by minimizing a special tax rate or the overall tax rate level.

In recent decades, with the process of global integration, the barriers to free movement of capital and human resources has lowered, it has become easier to relocate to different countries, especially for multi-national companies. Thus, tax competition between countries becomes fiercer than ever. One criticism upon tax competition is that it forces tax rates below their optimal levels, and results in tax rates to be too low reducing governments' fiscal revenue, which may reduce the overall economic welfare. Governments then have to cut public spending such as research, education and infrastructure. On the other hand, some views support tax competition, they argue tax competition as an incentive for governments to cut unnecessary spending and improve spending efficiency.

According to this assessment, the paper concentrates on the following issues. First, in most of the existing studies, tax competition between countries is mainly focused on some certain tax rates, such as corporate income tax rate, labor income tax rate, or some special tax policies, like patent box policy. However, we believe

that one's tax competition is closely related with its fiscal revenue and fiscal spending, the fund shortage problem caused by tax competition is inevitable. As the country must pay on public goods, the government need to maintain its fiscal revenue at a fixed level. Thus, when the country cuts one tax rate, it needs to add another. Therefore, focusing on one certain tax rate is not enough, we use the overall tax rate level as the proxy variables for tax competition. Second, as tax competition is related to tax avoidance, the common tax avoidance strategy is called base erosion and profit shifting (BEPS). BEPS is usually used by multinationals to shift profits from higher-tax jurisdictions to lower-tax jurisdictions. Organisation for Economic Co-operation and Development (OECD) develops a BEPS Action Plan in 2012 (OECD, 2013), but the effect of OECD BEPS project is not satisfactory. Third, tax competition widely exists in EU countries and in some cases it's unregulated between member states creating favourable tax treatments to some businesses. Arguably, some countries use other systems such as corporate income tax to widen their market and to compete globally. Tax competition distorts resource allocation of innovation, especially with the development of a digital economy where the affect should be considered. With the development of digital technology, such as communication technology and digital networking, there is lower barriers of capital flows and manpower mobility. With the bloom of intellectual property (IP), profit shifting becomes extremely convenient and the impact of tax competition is magnified. Fourth, we use data for 26 OECD countries in the European Union (EU) with annual frequency, covering the period from 2000 to 2018. To do so, we collect data of Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom.

2. THEORETICAL PERSPECTIVE

An understanding of tax competition and innovation is pivotal in increasing competitiveness. Since Schumpeter had firstly acknowledged the importance of innovation in 1934, innovation is regarded as the engine of countries and companies to keep economic growth and competitiveness (Cooke and Leydesdorff, 2006; Pancholi, Yigitcanlar and Guaralda, 2015). OECD clarifies that innovation forms the basis of economic development (OECD, 2016) and induces many positive social spillover (Klenow and Rodriguez-Clare, 2005). R&D investment can also create knowledge spillover, which has a positive role on aggregate productivity. Therefore, building an innovation ecosystem and investing in labor and companies is crucial for countries to become and stay competitive (Dedehayir, Mäkinen and Ort, 2018; Silva *et al.*, 2017). Governments have provided several ways to promote innovation (Hewitt-Dundas and Roper, 2010; Kang and Park, 2012), which play an important role in promoting

companies' innovation. These methods include public grant, low-interest and long-term loans, and tax incentives. Existed studies prove governments' incentives are essential to increase innovation performance.

According to Arrow (1962) and Griliches (1998), because of the existence of moral hazard in the financing market and positive technological spillovers of R&D, the level of R&D is below an efficient level without government intervention. Besides the fiscal function of taxes, governments always use taxes to stimulate economic growth, promoting investment or other favorable outcomes. The economic rationale of implementing tax incentives is to correct market failures, tax incentives would push the R&D toward the efficient level (Chang, 2015).

A tax hike is recognized to reduce companies' innovation for it lowers companies' internal cash flows, which are a main source of innovation financing (Hall and Jorgenson, 1967). While, Tax reduction provides tax offsets to promote companies' innovation (Guellec and Potterie, 2003; Lerner and Wulf, 2007). Several empirical studies find that companies' innovation is sensitive to tax changes related to R&D activities (Bloom, Griffith and Reenen, 2002) and corporate tax rates change (Mukherjee, Singh and Zaldokas, 2017). Research supports the positive role of tax incentives in promoting innovation, and previous studies find tax incentives related to innovation mainly in the form of tax credits or corporate income taxation deduction. Bozio, Irac and Ry (2014) test the impact of research tax credit on R&D and innovation from the 2008 French reform, they find a positive effect of the reform on R&D, but limited impact on innovation. Atanassov and Liu (2015) find that tax decreases boost the quantity and quality of patent, which is regarded as innovation output, and have also a positive impact on innovation due to the relief of financial constraints, whereas, tax increases have little impact on innovation, and tax changes have no impact on R&D expenditure. Mukherjee, Singh and Zaldokas (2017) examine corporate income tax changes in the US and find that higher corporate taxes indeed reduces companies' future innovation. Akcigit *et al.*, (2018) study the effect of corporate and personal taxes on innovation in the US over the 20th century, they find higher personal and corporate income taxes negatively affect the quantity and quality of innovation at both the firm and state levels. Some studies on corporate tax collection reform in China show that decreasing the effective tax rate significantly increase the number of patent application and stimulates R&D expenditures. A lower effective tax rate could also release resources that companies spend on tax avoidance, which can be used on innovation (Cai, Chen and Wang, 2018).

Accounting for tax being the source of the government revenue budget, tax incentives are always costly. In traditional economy, countries are the participants of international tax competition. From the view of the countries, they are more willing to maintain a high tax rate in order to support the enormous spending on public goods, however, fear of losing international investment to lower tax rate countries, they lower their tax rates. Countries have an incentive to reduce tax rates in order to attract more investment, more capital, more high value human resources, otherwise these resources would escape to lower tax rates countries.

Leading to tax competition racing to the bottom at a global scale. Davies and Voget (2008) find the evidence that EU membership affects responses, with EU members responding more to the tax rates of other members.

Although some policymakers suggest lower tax rates could make companies more innovative and competitive, and several empirical studies support this discourse. Tax competition is beneficial for encouraging investment because lower tax rates give companies more after-tax profit that can be used in R&D activities and investment. Others still argue lower tax rates would distort the balance of government budgets and increase inequality. Tax revenue spent by government is used to invest in education, basic research and infrastructure. These investments are a kind of public good, which have positive spillover effects on companies by reducing their costs and facilitating their investment. Thus, higher tax rate is essential for governments to invest on public good, which is beneficial for economic growth. There is a longstanding skepticism over whether tax policies can effectively improve innovation. The academic community supports international efforts on refraining tax competition. Since 2012, the Organisation for Economic Cooperation and Development (OECD) has worked on international tax system through the Base Erosion and Project (BEPS). However, the OECD BEPS seems to fail in stopping tax competition between countries, tax coordination between countries is not incentive-compatible (Collier, 2017). Collier (2017) points out the existing literatures do not distinguish harmful and non-harmful tax competition. The latter one intends to attract real investment, while the former one seems to attract financial investment which is seeking taxation loopholes. Elkins (2016) argues that free and fair tax competition is necessary to allocate resources efficiently and to maximize global welfare.

Tax competition proved workable in the past, for most goods and production were tangible, movement of capital and goods were limited. Whereas, since the turn of the digital century, digital technologies are pervasive in both developed countries and emerging economies. Digital technologies are transforming companies' investment, operations and business models. There are more and more intangible goods and services which result in the lower barriers of the movement all over the world. On a global scale, the free movement of capital, investment and human resources suffers from high barriers to low barriers. With the development of global integration, the cost of the movement across nation boarder becomes lower and easier. In the recent decades, the onset of the digital economy makes free movement easy to implement further. The development of digital computing technologies, such as digital networking and communication infrastructures, provide a global platform over which people and companies could collaborate easily. The cost of mobility reduces dramatically, and the barrier of mobility erodes and this created more choices in terms of capital investment and location.

3. TAX CHALLENGES OF THE DIGITAL ECONOMY

Digital economy, starting in the 1990s, expands by the combination of computer hardware and software, booms with the popularity of Internet and the rapid development of information and communication technology (ICT). The digital economy relies on intangible assets and uses massive data. According to OECD, it includes e-commerce, app stores, online advertising, cloud-based processes, virtual currencies, advanced robotics, 3D printing and the sharing economy. As for 21st century, the digital economy continuously produces new revenue models which replace old business models. The digital economy is regarded as a key driver of economic growth and innovation, also supposed as a huge challenge for international tax system. In business, there are three main changes brought by the digital economy: business transaction with virtual currencies, digital goods and services, business transaction provided by the internet.

Although there is a generally accepted view that the digital economy cannot be used as “ring-fence” for tax purposes (OECD, 2015) because the development of the tax system cannot keep up with the development of the digital economy, tax challenges are inevitable.

3.1. Base erosion

One of the advantages of digital economy is the mobility, which accompanies the reliance on intangible assets. The movement of intangibles is extremely easy and convenient, this exacerbates the problem of base erosion of taxation. There are four main aspects of tax base erosion. The first aspect is eliminating tax in the market country by avoiding a taxable presence or minimizing the income in the market country. It could reduce tax in the residence country by transferring valuable intangible assets to affiliates in a low-tax country. Two other aspects are avoiding withholding tax and reducing tax in the intermediate country by specific contractual payments and the imposition of holding companies (Olbert and Spengel, 2017).

3.2. Transfer price

The major tax challenge in the digital economy is transfer pricing which in most cases lead some savings for companies. In some situations, intangible assets can naturally be used as a tax planning tool in the area of transfer pricing. The company can easily overcharge on intangibles to the affiliates in high-tax country and undercharge to the affiliates in low-tax country. Thus, the profit transferring is legally realized.

3.3. Right of levy

The new business model in the digital economy is the biggest challenge to the “source principle” of taxation. Due to the application and revolution of ICT, the business activities occur via the internet on any mobile device at any time and

any location, cross-border business activities are undertaken without physical operations in the market countries. The cross-border online business does not require a physical presence, thus the tax liability is no longer applicable to domestic law of the market country.

3.4. Value creation

The existing tax system tax profits with value creation. In digital economy, intangible assets are core contributors to value creation, but how companies using intangible assets to add value and make profits in digital economy is not clear. Although the consensus of data as a driver of value creation is reached, there is still no clear method to measure the value creation brought by data.

According to the analysis above, the tax challenges brought about by the digital economy have affected the tax benefits of all countries. Considering that the digital economy can promote economic growth and innovative development, what is the attitude of countries on the taxation of products and services in the digital economy?

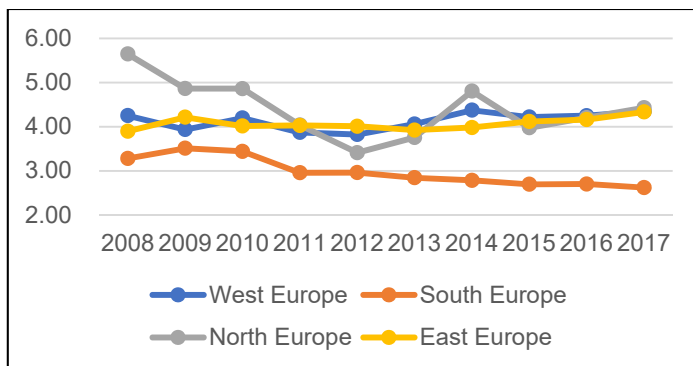
Several countries have decided to move ahead to encounter the tax challenges in the digital economy. About half of the European OECD countries have planned to propose or implement direct tax such as digital services tax (DST), withholding tax (WHT) or digital permanent establishment (Digital PE). DST is a tax on certain gross revenue of large digital companies. Different countries have different specific practices. For example, till 2020, Austria and Hungary tax revenues from online advertising, France's tax base is broader, it tax revenues from the provision of a digital interface, targeted advertising and the transmission of data collected. The UK taxes revenues of search engines, social media platforms and online marketplace. The digital service tax rate is from 2% (UK) to 7.5% (Hungary). At this stage, most of the European OECD countries tax value added tax (VAT) on some specific source of revenue.

4. DIGITAL ECONOMY, TAX COMPETITION AND INNOVATION IN EU COUNTRIES

In this part, we divide 26 European countries into Western Europe, Eastern Europe, Southern Europe and Northern Europe according to the location, and depict the change trend from the three levels of digital economy, tax competition and innovation.

4.1. Digital economy

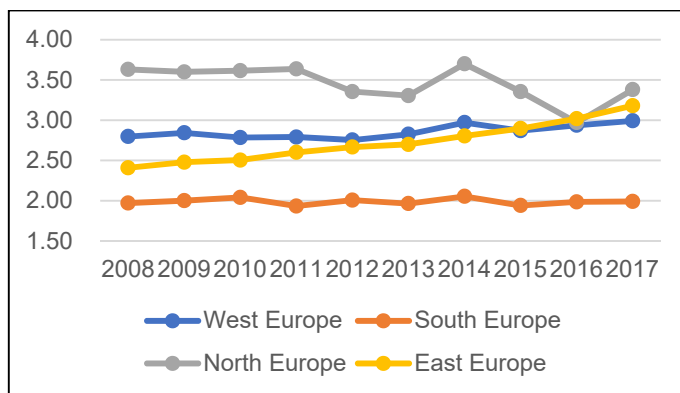
The development of the digital economy is based on the spread of ICT, the ICT have become a major value driver of digital businesses, thus, investing in R&D activity is crucial for the success of a business in the digital economy. Thus, we use data of ICT to represent the development of digital economy.



Source: (OECD, 2020)

Figure 1. Percentage of the ICT sector on GDP

Figure 1 shows the percentage of the ICT sector on GDP. From Figure 1, we could see in 2008 ICT sector on GDP in North Europe is much higher than other regions, but it declines year by year and below the level of the West and East Europe in 2012. From 2012, it promotes from 3.41%, the lowest point, and approaches the level of the West and East Europe in 2017. The lines and levels of the West and East Europe are similar, the develops stably. While the South Europe experiences a steady development from 2008 to 2010, and then it declines all the way, by 2017 it is slightly above 2.5%, which is far below the level of nearly 4.5% in the West Europe, East Europe and North Europe.



Source: (OECD, 2020)

Figure 2. Percentage of the ICT personnel on total employment

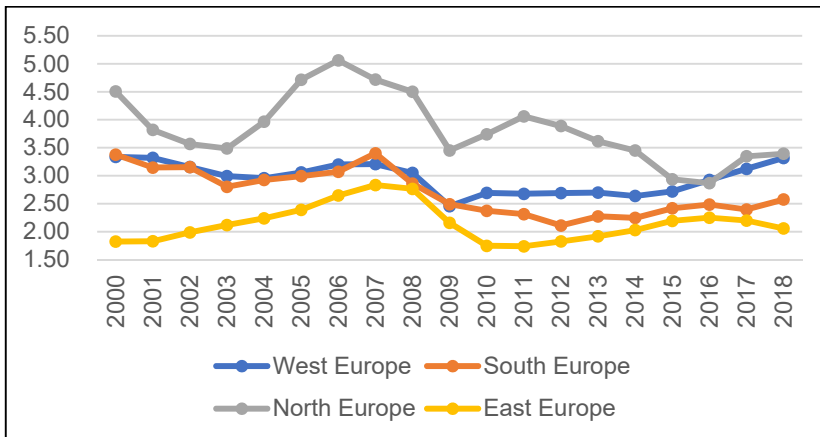
Figure 2 shows the percentage of the ICT personnel on total employment. The rate of ICT personnel in North Europe is the highest in the four regions, it fluctuates from 2012, although a slightly drop it's still higher than the others. The rate of West Europe grows slightly and stably, in East Europe the rate maintains constant growth and surpasses the West for the first time in 2015. In contrast, there

is little progress in South Europe, the percentage of ICT personnel on total employment remains at the level of 2%.

4.2. Tax competition

Tax on corporate profits is the basin field of tax competition for all countries, if one country decreases its corporate profits tax rate, then the neighbor would follow, this phenomenon spreads. Thus, there is nothing surprising that the overall trends of development of corporate profits tax in the four regions are similar. The lines show the process of increasing sharply at first, then decreasing and slowly increasing again. By 2018, the levels of Northern Europe and Western Europe are close, Southern Europe is lower, and Eastern Europe is the lowest.

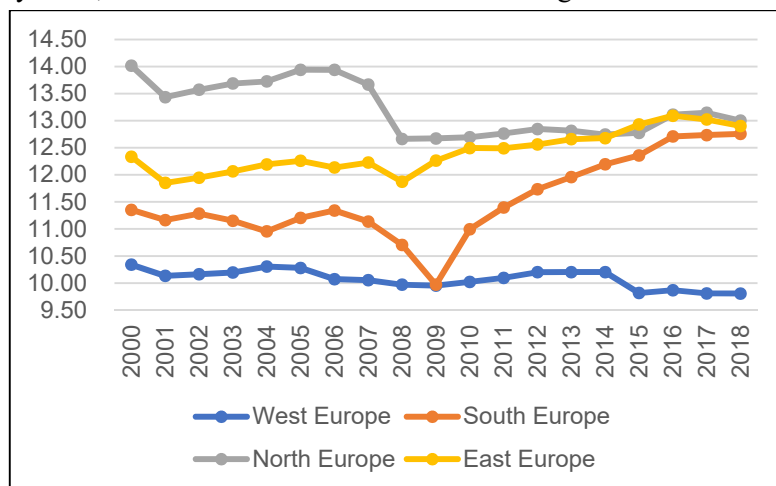
Figure 3 shows the tax on corporate tax on GDP. In the past two decades, the corporate profit tax on GDP of North Europe has undergone the profound change, it begins from 4.51% in 2000 and declines in the next two years, then rises rapidly, by 2006, the figure is above 5%, which is the highest in the two decades. After a sharp decline, the figure is below 3.5%, it begins bounce and finally reach 3.39% in 2018. Different from the North Europe, the West Europe’s fluctuation is the gentlest, except in 2009 the figure which is affected by the financial crisis drops to 2.49%, it rises slowly and remains at the same level as in 2000. From 2000 to 2007, the tax on corporate profits in South Europe decreases at first and then slowly increases. From 2007 to 2012, the figure falls very badly. After a slight increase in 2012, it exceeds 2.5% by 2018, but is still 1% lower than the level of 2000. Tax on corporate profits in East Europe is different from that in other three regions, at the beginning, it was even below 2%, and then increased rapidly to 2.83% in 2007, after that the figure dropped and shows a slow increase, after 2016, it dropped again and back to 2% which is a little higher than the figure of 2000.



Source: (OECD, 2020)

Figure 3. Tax on corporate profits

Tax on goods and services is highly related to the activity of the corporates. From Figure 4, we can see low points in 2008 or 2009 on the lines of tax on goods and services on the GDP. That could be the influence brought by financial crisis. Ignoring this point, the tax on goods and services in the South Europe and East Europe increase steadily. In the two decades, tax on goods and services in the North Europe is always higher than other regions, it significantly drops in 2008 and then remains stable. By 2018, the gaps among the North Europe, South Europe and East Europe are small. On the other hand, the line of the West Europe is always far below the other regions, it begins at 10.34% in 2000 and further decreases in 2015. By 2018, it's at least 3% lower than the other regions.

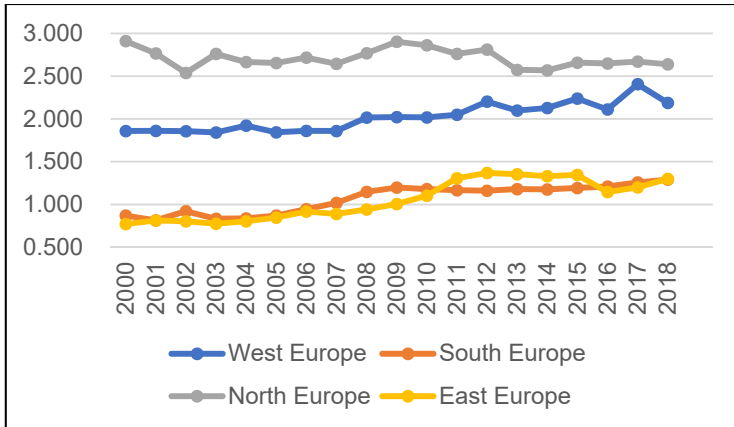


Source: (OECD, 2020)

Figure 4. Tax on goods and services

4.3. Innovation

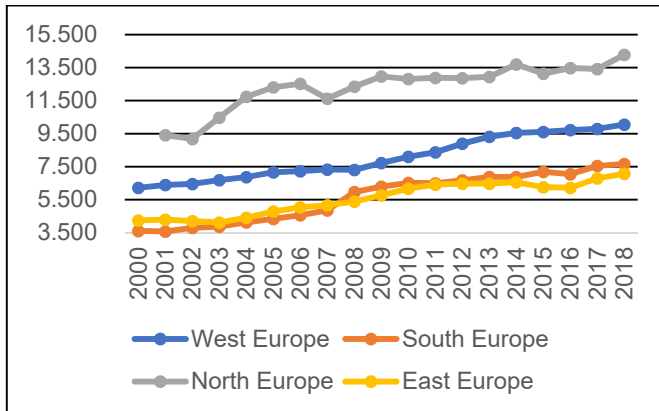
Figure 5 shows the gross domestic spending on R&D on the GDP. This is an important index to measure the input on innovation. From Figure 5, we can see the input on innovation in the North Europe is the highest, the next is the West Europe, and then South Europe and the East Europe. The rate in the North Europe is always above 2.5%, in the past two decades, the rate is relatively stable and no significant progress. The rate in West Europe starts from 1.86% and climbs to 2.19%. The situation in the South Europe and East Europe are similar, the lines remains climbing in the past years.



Source: (OECD, 2020)

Figure 5. Gross domestic spending on R&D

Researchers are another crucial resource for innovation, we depict the researchers on per 1000 employed, as Figure 6 shows. Similar with the lines of gross domestic spending on R&D, the rate in the North Europe is the highest and increases nearly 5% from 2000. The lines in the other three regions are all climbing steadily.

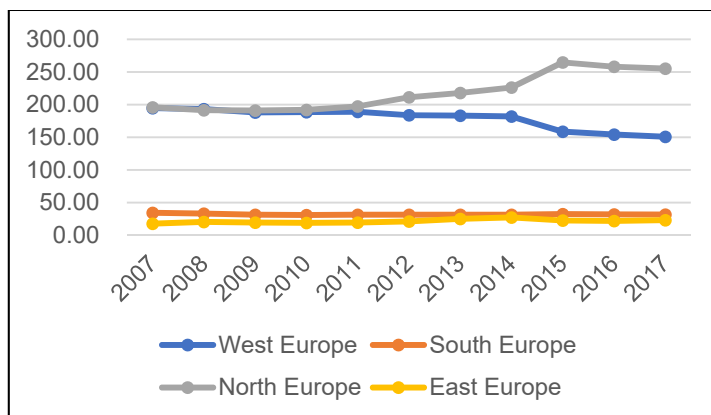


Source: (OECD, 2020)

Figure 6. Researchers (per 1000 employed)

To some extent, patent application is regarded as the output of innovation, patent applications could reflect the innovation on another level. Figure 7 shows patent applications per million inhabitants. In the past two decades, the gross domestic expanding on R&D and the researchers on per 1000 employed mainly shows a significant growth, unfortunately, there is limited progress on the patent applications. The South Europe and East Europe remains in the past 10 years, and

the number in the West Europe even drops from near 200 in 2010 to 150 in 2017. Only the number in the North Europe is satisfied, it increases from below 200 in 2010 to more than 250 in 2017.



Source: (OECD, 2020)

Figure 7. Patent applications per million inhabitants

There is no significant progress on ICT development, the development of digital economy in Europe is not satisfied. Tax on corporate profits and on goods and services mainly decrease, and the input both capital and human resource improves dramatically and do not induce the bloom of the patent applications.

5. CONCLUSION

In the digital era, the importance of innovation to national economy is increasing, and the spillover effect of innovation is reinforcing. Studies confirm the role of tax competition in innovation is fundamental and should not be underestimated. The taxation in EU countries shows the characteristics of homogeneity. That means one country’s tax competition intention of reducing tax rate once identified is very often imitated by others. Despite the benefits of tax competition and government initiative to prevent cartels, encourage investment and economic advancement, it is also harmful leading unfair competitions. It is noted that OECD and the EU have set specific measures to detect, neutralize and eliminate any perceived harmful tax practices.

As companies endure operating in the digital era and so are the tax challenges brought about by the digital economy. In such era companies continue to develop ways of dealing with these changes. Some companies have transformed their operations and have become digitally competitive businesses leading to excellence in service delivery. Similarly, companies ought to be more innovative and R&D is of paramount importance for EU businesses life cycle irrespective of size and provisions. The EU tax competition prevents its challenges and should

not be ignored. The prevention of such competition does not only disrupt innovation, minimise economic growth but also fails to secure the future of the digital economy. In future work, it would be fruitful to analysis the deep-seated reasons why tax competition and R&D input fail to improve R&D output.

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COMPARATIVE STUDY ON PUBLIC MANAGEMENT MODERNIZATION ACTIONS IN EUROPE

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Abstract

Actions to modernize public management in Europe have focused on administrative reforms, reforms focused on the best interests of the citizen face to face with public services. The purpose of a comparative synthesis study is to identify models of actions in modernizing public management, so that proposals can be outlined to identify guidelines for implementing an effective public management model in Romania. At the same time, the analysis of some advantages and disadvantages of the modernization actions of the public management undertaken in the states subject to research has the purpose of leading to the drawing up of an implementation guide in the public services in our country.

Thus, we propose through this research study the analysis of modernization actions in countries such as Germany, France, Finland, as well as in countries closer to the geopolitical context of Romania – Poland or Bulgaria (the enumeration being in both cases an example and not exhaustive).

The working hypotheses we advance are the following:

- there is an archetype of public administration reform/modernization, at European level, with optimal results in implementation;*
- the process of modernization of public management in Romania is one integrated in the European current;*
- there is an evolution of public services at European level by borrowing from the private sector.*

The working methodology in the proposed research consists in the comparative study, structured in stages: from identifying the guidelines in public management in other states, to juxtaposing the different approaches at European level, and finally identifying and interpreting the advantages and disadvantages of the models under analysis. At the same time, epistemological aspects are targeted, given the specificity of interdisciplinarity of the research topic.

Keywords: *management modernization; comparative study; administrative reform.*

JEL Classification: K23

1. ANALYSIS OF ACTIONS TO MODERNIZE PUBLIC MANAGEMENT IN EUROPE

Identifying models that are applicable in the practice of reforming public management is the starting point in our research. Actions to modernize public management in Europe have mainly focused on administrative reforms, reforms

focused on the best interests of the citizen face to face with public services. European construction has engaged in a major transformation of the public sphere by removing monopolies or even privatizing certain public sector operators (Lamarzelle, 2008).

The purpose of a comparative synthesis study is in general, “identifying solutions to improve the application of comparative terms” (Iftimiei, 2018), and in particular, to identify models of actions in modernizing public management, so that they can be outlined proposals for identifying guidelines in implementing an efficient public management model in Romania.

Public management reform and its implementation focused around the notion of *New Public Management* (NPM), which knew the following major directions of orientation – participatory democracy and public-private partnership (Lamarzelle, 2008).

The first states receptive to the application of the classical version of NPM were those with *common law system* (although many of the authors use the phrase countries with Anglo-Saxon system, the terminology is not correct. For correctness in expression we will use the term *common law*, Anglo-Saxon being only a period in the development and formation of the *common law system* (Iftimiei, 2018), such as the United States, the United Kingdom, Australia, New Zealand (Rosta, 2011). According to the model implemented by these states and other countries, they wanted to apply the NPM principles without copying a model itself, but by adapting certain principles to the national specifics (e.g. France).

We therefore propose an analysis of how the modernization of public management has been understood and applied in both Western and Eastern European countries, and will demonstrate that the degree of economic development has been an aid or an impediment, as the case, in this continuously process.

1.1. Examples of modernization of public management in Western European countries

1.1.1. France

The implementation of public management modernization measures in France, materialized in the new public management, focused on some essential aspects as follows (Alguazil *et al.*, 2010).

a. Withdrawal of the state from the first line;

The withdrawal of the state from the first line involved the outsourcing of certain public services, which were previously provided exclusively by the French state (e.g.: France Telecom or SNCF – National Railway Company).

The main purpose of such a movement was to reduce costs, especially by establishing public-private partnerships.

Public-private partnerships (PPPs) in France have encountered administrative problems in their development, in the sense that, using European funds and subsequently auditing these PPP-based projects, it has been found that there is no adequate institutional framework for their implementation. For example, in France, in the period 2000-2014, 21 projects carried out through PPPs were supported, all with European funds (European Court of Auditors, 2018). It is worth mentioning that in the course of the PPP, where administrative impediments were identified, the number of months of delay in carrying out the project amounted to even 16. Thus, for example, following the audit of the project “Le numérique au service des Girondins” – Digital services for the benefit of the inhabitants of Gironde, whose purpose was to build and operate a telecommunications infrastructure in the Gironde department of France, it was found that the infrastructure was built within the deadline set by the project, but that the commissioning of the services was extremely delayed due to administrative reasons.

In addition to the above-mentioned aspect of finding a delay in the completion of projects under the PPP umbrella, another shortcoming was found. If at a theoretical level it is considered that PPPs are win-win structures, in reality it was found that there is a lack of training of public sector officials in implementing such projects, as it was seen that there is a bureaucratic network which complicates the whole process.

b. Decentralization and deconcentration, through the process of delegating power.

The process of delegating power was mainly aimed at conferring increased prerogatives on local authorities/communities. The typical example for this measure of modernization of public management in France is given by the situation of universities, which since 2007 they have become independent. Law no. 1199/2007 on the freedoms and responsibilities of universities was a major step in gaining the independence of the nearly 80 higher education institutions in France. Through this legislative novelty at that time, universities became responsible for their own budget and human resource management. Such a move by the French government has led to the empowerment of all higher education institutions, by relieving them of their budgetary burden and by facilitating the implementation of a separate managerial policy.

1.1.2. Germany

In Germany, the main way of implementing the principles and guidelines characteristic of new public management was given by local authorities, considered the “key” of the places of implementation of administrative reforms (Wollmann, 2013), mainly due to the federal type. In general, the federal states know the measure of double degree, respectively double degree of administrative

authorities, double degree of autonomy, fundamental laws both at the level of the federated states and at the central level of the federal state, etc., so that each component state of the federation had the freedom to implement the principles of new public management.

The modernization of the administrative sector in Germany began around the 1960s, having as model the United States and based on the structure of PPBS (Planning, Programming, Budgeting System).

Due to the federal structure, the modernization of the administrative sector by applying the NPM principles was achieved in a different and heterogeneous way. The global national framework for the modernization of the public system in Germany is called the New Steering Model (NSM), within which the NPM principles apply (Ritsert and Pekar, 2009).

A particularity of the implementation of the NPM principles in the German public system and, implicitly, its reformation, is given by the 3 phases of application of the NPM, respectively the pioneering phase (1995-1998), the modification phase (1999-2002) and the integration phase (2002-2005). In the pioneering phase, certain concepts were tested, in the modification phase, concepts from the private sector to the public sector were borrowed and implemented, and in the last phase of the NPM, organizational change was desired.

In conclusion, although the tripartite distribution of the NPM implementation was well and correctly thought out, the process itself did not achieve the desired results, so the NPM was only partially applied.

1.2. Examples of modernization of public management in Eastern countries

1.2.1. Bulgaria

The Bulgarian state is one of the member states of the European Union that has understood to implement some of the principles of new public management, remaining, rather, faithful to a culture and an administrative tradition (Zankina, 2018). Bulgaria continues to maintain and apply the principle of an ultra-centralized administration, even showing resistance to the implementation of the new public management principles.

However, the change in the mode of operation in the Bulgarian public administration takes place timidly, by implementing the NPM principles in the management of state hospitals. Thus, after 12 years of reforming the health system in Bulgaria (1996-2008), although the state monopoly on health institutions was abolished, the mode of administration and management was not subsumed under the NPM principles, mainly due to lack of knowledge and specialists in this field (Nautre and Georgieva, 2013).

1.2.2. Greece

For Greece, the last years have represented a period of great restructuring, modifications, modernizations. The executive leadership of the Greek state directed modernization on four main coordinates: flexible governance, citizen involvement in decision-making, directing the market to public-private partnerships and implementing private practices in the public domain, constant reform (Xanthopoulou, 2019).

At the same time, a strategy for modernization – the National Strategic Framework for Reform – has been conceived and implemented in Greece, which aims to focus on innovation, research, entrepreneurship, technology, sustainable development, but also to improve the quality of education and the administrative capacity of the public services.

Since 1990, the main guidelines in the implementation of NPM in Greece have been and continue to be the following: management performance, management by objectives and results, reconfiguration of public services by reference to private models, ensuring and increasing competitiveness through modern training techniques. The test of time has shown that all these measures have been partially implemented, so that in 2016 it was intervened through legislation, through Law 4369/2016, was imposed the need to identify and implement performance indicators for public management.

In conclusion, for Greece, the reform of the entire administrative system is in a continuous process, and the identification of limitations and gaps in the implementation of the NPM principles has the role of leading to the improvement of the economic-legislative framework.

2. SHORT PRESENTATION OF THE GUIDELINES IN THE MODERNIZATION OF PUBLIC MANAGEMENT IN ROMANIA

In Romania, the guidelines pursued in the modernization of public management were outlined on the basis of what has already been implemented in other European countries. Of course, the main point of reference in the case of modernizing public management is the United States, but we will refer to the main issues identified in the comparative study above, by reference to Member States of the European Union.

In Romania, as well as in France, the need to develop partnership lines between the public and private sectors was taken into account. In this sense, on May 10, 2018, the Government Emergency Ordinance no. 39/2018 regarding the public-private partnership entered into force. Commendable initiative to achieve a legal regulatory framework, in order to meet the provisions of the Government Program 2018 – 2020, but the Romanian state is already in its third attempt to identify an effective regulatory act and in accordance with the *Green Paper on public-private partnerships and Community law on public contracts and concessions*, since 2004. The first two normative acts that sought to regulate the

public-private partnership were the Public-Private Partnership Law no. 178/2010 and Law no. 233/2016 on public-private partnership, both repealed.

According to art. 4 of the Government Emergency Ordinance no. 39/2018 there is the possibility of collaboration in two forms: a) *contractual public-private partnership* – public-private partnership realized under a contract concluded between the public partner, the private partner and a new company whose share capital is wholly owned by the private partner who will act as a project company; b) *the institutional public-private partnership* – the public-private partnership realized on the basis of a contract concluded between the public partner and the private partner, through which a new company is established by the public partner and the private partner, which will act as a project company and which, after registration in the companies register, it acquires the quality of party to the respective public-private partnership contract.

Another aspect pursued by the national authorities for the implementation of the new public management was digitization. Although there is no national strategy for efficient digitization, as we identify in France the law for a digitized republic, important steps have been taken in this direction. There is an acceleration of measures to digitize public administration, especially in recent months, the pandemic crisis being a good indicator of a failed start.

The Romanian administration is constantly facing a rather poorly understood term, namely decentralization. If in France the decentralization and delegation of attributions was a real success in the case of higher education institutions, in Romania we face the desire for regionalization, apparent decentralization, but without the administrative-territorial divisions to be succeeded and full budgetary autonomy.

In conclusion, regarding Romania, the directions it is heading towards are good, but the road to success in their implementation and application is quite difficult.

3. CONCLUSIONS

From the brief and comparative analysis of the implementation of the new public management principles in certain states, the following conclusions emerged:

- Western states have already overcome the stage of implementing new public management, have discovered the possible shortcomings of this current and have moved towards structuring the administration and public services on the guidelines of the new current called post new public management;

- Eastern states, trapped in the nets of the communist past, have developed a kind of reluctance, sometimes even opposition, to modernization through the application of new public management;

- Economic power, as well as the degree of economic development, are important and decisive factors in the opening given by each government to the modernization of public administration and services;

- The gap between Western and Eastern states in terms of the implementation and application of new public management is quite large, representing, in itself, an expression frequently used in the European Union – Europe with more speeds. The degree of integration, through harmonization and standardization, is closely linked to the specifics of each Member State, to its past, but especially to the more or less growing desire for modernization;

- The efficiency of the implementation of the principles of new public management, respectively post new public management can be achieved only through unitary and obligatory measures, materialized in regulations, as derived legislation;

- The transition to post new public management can only be achieved through the intermediate and necessary stage of the implementation of the new public management principles in each Member State.

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SUSTAINABLE BUSINESS PRACTICES AND CORPORATE MODELS

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Abstract

The business model consists in defining the manner by which the company delivers value to customers, entices customers to pay for value, and converts those payments to profit. Thus, starting from the main objective of the paper, the authors set out to start first from the concept of business model and how it is presented in the specialized literature, from different perspectives, finally reaching to the concept of Sustainable business model, the sustainable business model archetypes being viewed as a starting point to broaden and unifying the research agenda for sustainable business models. Applying the concept of sustainable development at the company level takes into consideration the corporate responsibility – resulting from the need for companies to adapt to survive in a company a context in which globalization and civic activism are increasingly changing radically. This article aims to identify the best practices of sustainable development adopted at the level of large companies, which represent corporate models at the international level.

Keywords: *corporate social responsibility (CSR); sustainable development; sustainable development model; sustainable business model.*

JEL Classification: Q01, M14, M21

1. INTRODUCTION

Sustainable development requires radical and systemic innovations, integrated in the concept of business models, which thus offers an analytical tool provided in a holistic framework, which will allow to evaluate the interaction between the different aspects that companies combine to create an ecological, economical and social value (Boons *et al.*, 2013).

Within the Corporate Social Responsibility strategy, the most important thing to be understood is the general plan of implementation the social responsibility of the business, which is based on a long-term socially responsible corporate behavior. Strategic corporate social responsibility is usually identified through a

long-term process based on continuous dialogue with stakeholders on the one hand and on the formation of social reports on the other (Socoliuc *et. al.*, 2018).

Companies are increasingly aware that business opportunities include the adoption of voluntary standards (ISO, EMAS, other voluntary standards), respectively ensuring the effectiveness and efficiency of quality management systems, environment, occupational health and safety, etc., condition of insurance competitive advantage.

Like any economic revolution, the transition to the green economy requires sustained effort and many sacrifices, and registration on this sustainable path will be a long and complex process. Governments need to play an important role, acting promptly within borders and working with other governments at both European and global levels. Companies and various institutions will have to take a large part of the risks, create innovation and create new jobs, while citizens will change their mentality, way of life, habits and practices of production and consumption. It is true that, in the short term, the transition to a sustainable business model may seem less profitable, but in the long run, economic studies have shown that sustainability will lead to an increase in process efficiency, which will later translate into a reduction. of costs. In addition, the focus on these new solutions comes with pollution reduction benefits, less waste generated and a positive impact on human life and the environment. At the same time, it is important to mention that these efforts could be funded by EU research funds.

The need for corporate social responsibility can be seen as a way to give life to the company in the social landscape, contributing positively to receiving the same thing. Some critics see corporate social responsibility as an ideological movement meant to make the power of multinational corporations known, others as a theft from company's employees (Banerjee, 2008).

In the last years, the corporate social responsibility has served as a means used by companies to respect the provisions related to the environment and has contributed, at the same time, to increase the competitiveness of the company (Boulouta and Pitelis, 2014). For example, consumers are more attracted to buying products from companies that donate funds and goods to non-profit organizations and schools, use products that do not affect the environment, and practice volunteering.

Corporate social responsibility became acquainted with a considerable evolution from a phenomenon little known and practiced by corporations, to a fundamental start-up priority, for both large and small companies (Mihalciuc, 2019a). The involvement of corporations in solving global problems (such as global warming, low level of education, poverty eradication, equality between individuals and respect for human rights) is a widespread trend nowadays.

2. LITERATURE REVIEW

The specialized literature attempts in many ways to highlight the importance of corporate social responsibility in business strategy. Some authors even believe that “Corporate Social Responsibility initiatives must be integrated and internalized by the organization so that they are placed at the heart of the organization”, to gain benefits such as: improving corporate reputation, gaining customer confidence, increasing employee motivation or quota market. Businesses need to be aware that the inclusion of social responsibility goals in the organization's strategy should not be driven only by the desire to build a positive image, to increase operational efficiency or to gain competitive advantage but as a condition for business building (Mihalciuc and Apetri, 2019).

In a recent study (Yu *et al.*, 2019), a legal analysis is performed, considering whether foreign multinational companies working in Pakistan comply with CSR provisions and norms and, if so, to what extent these principles are respected. The study focuses more on identifying laws, rules and regulations in both international and national legal frameworks and aims to analyze the impact of CSR compliance especially on human rights, the environment and sustainable development. The results of the study show that the implementation and enforcement of these policies that support sustainable development are still in its early stages.

In another study (Kovačič, 2018), it was examined whether the CEE entities integrate economic, social and environmental aspects/policies in business activities in accordance with the principles of sustainable development that have a positive impact not only on the economic performance and on the company's relations with employees, business partners, customers, with the community and region of which it is part but also on the constant reduction of the impact on the environment through the sustainable development of human resources, community and society. The author concluded that business sustainability is high in CEE enterprises, and is linked to technological progress, paying special attention to pollution, health and safety.

Some studies confirm that economic entities publish social and environmental information only to be within the limits of legality in the field in which they operate. It has also been found that less performing entities publish performance-related information (Aldaz, Alvarez and Calvo, 2015).

Jeffrey (2015) also mentioned: “*From the Brundtland report, the concept of sustainable development has passed beyond the original inter-generational framework, in order to be able to focus more on the objective of sustainable and inclusive economic growth.*” As the concept became wide larger, it focused more on economic development, social development and environmental protection for future generations (Keeble, 1988).

An interesting approach is also given by author Shaker (2015), who points out that sustainability is related to the equilibrium between human being and environment: “It has been suggested that the term sustainability should be seen as

a target of human-ecosystem equilibrium (homeostasis), while sustainable development refers to the holistic approach and time processes that lead us to the end of sustainability”.

In the opinion of the author Diesendorf (2000), a corporation that successfully integrates sustainable development into its strategy, both in terms of its operation and the types of goods it sells, it is called a corporation that promotes sustainability. But it also depends on the intensity the corporation promotes the development of sustainability.

Maon, Lindgreen and Swaen (2010) develops the phenomenon of corporate social responsibility during seven stages, divided into three cultural phases of the organization: reluctance to the phenomenon of corporate social responsibility (CSR phenomenon being ignored, or even rejected), understanding of the phenomenon (corporations becoming familiar with the principles of the phenomenon) and its incorporation into the landscape (corporations integrating the phenomenon into their own activity. This model is different from the existing ones, because it highlights the stage of development of the organizational culture (corporations being divided into those that accept and adopt socially responsible behavior and those that do not). This development is achieved by integrating corporate social responsibility programs and policies.

The online presence, which is widespread today, can have both positive and negative effects on the company's image. The social responsibility that corporations prove or not, is part of the benchmarks that differentiate corporations, influencing the consumer's decision. Also, a good image also influences the decision of the employees to choose one company to the detriment of another. Businesses that ignore social responsibility have a minus from the beginning. The social reputation has a special impact on the company's image and, implicitly, on its profitability and success.

The three aspects of sustainability (economic, environmental and social) are translated into an approach to corporate sustainability (Jonikas, 2013). Corporate sustainability has been presented as the ultimate goal for corporations, which meet the needs of the present without compromising the ability of future generations to meet their own needs (Thomsen, 2013).

Sustainability assessment is a growing concern worldwide, with the implementation of the United Nations 2030 Agenda, thus finding the appropriate tools to ensure full coverage of environmental, social and economic issues in light of cultural, historical perspectives – retrospective and prospective – respectively institutional and to allow the participation of several stakeholders (Villeneuve *et al.*, 2017).

The General Assembly of the United Nations adopted in September 2015 a resolution establishing the sustainable development plan by 2030 (Development Knowledge Platform, 2015), the main objectives of the 2030 Agenda (General Assembly of the United Nations, 2015) being given by the following elements: no

poverty; zero hunger; good health and well-being; quality education; gender equality; clean water and sanitation; affordable and clean energy; decent work and economic growth; industry, innovation and infrastructure; reduced inequalities; sustainable cities and communities; responsible consumption and production; climate action; life below water; life on land; peace, justice and strong institution; partnership.

3. SUSTAINABLE BUSINESS MODELS

Carroll's conceptual model (1979) comprehensively describes essential aspects of corporate social performance (evaluation of the company's social responsibilities, identification of the social problems that must be addressed and an answer to the chosen philosophy), presenting the notions of ethical and discretionary responsibilities, placing ethical and discretionary expectations into a rational economic and legal framework. The model presented attempts to articulate and integrate these essential aspects into a conceptual social performance framework that could assist managers in understanding that social responsibility is not separate and distinct from economic performance but rather is just one part of the total social responsibilities of business. Other papers (Carroll and Meeks, 1999) (Carroll, 2000), presented the extent to which three models of management morality – *Immoral Management*, *Moral Management*, and *Amoral Management* – are extant in the European business environment.

From an ethical perspective, a corporate model of sustainable business practices may be divided into five separates but at the same time interconnected elements (Svensson, Wood and Callaghan, 2010) as follows in Table 1.

The authors (Svensson, Wood and Callaghan, 2010) of this corporate model of sustainable business practices do not claim that this model would be a complete one, but it may constitute a platform for further development and improvement in the field of sustainable business practices from an ethical perspective. They also mention that this corporate model of sustainable business practices is considered as iterative, in that it presents the continuous and future reconnection between all the given elements, each element being linked and evaluated in relation to the sustainability of the business practices. Thus, each element is viewed from an ethical perspective: the *foundation* consists of a subset of artefacts that may guide companies in their efforts to manage and monitor sustainable business practices; *communication* consists of a subset of artefacts that may aid companies to inform stakeholders about their efforts in performing sustainable business practices; *guidance* consists of a subset of artefacts that may support companies in their efforts to manage and monitor sustainable business practices; *outcome* consists of a subset of artefacts that may be used to evaluate sustainable business practices; *reconnection* ensures control and adjustment of business practices, whether they are sustainable or not, and also allows monitoring and control of each previous element of the model ((Svensson, Wood and Callaghan, 2010).

Table 1. A corporate model of Sustainable business practices

I. Foundation	II. Communication	III. Guidance	IV. Outcome	V. Reconnection
1. a code of ethics	1. communication of code to company's workers company	1.the support of whistle blowers	1. resolving ethical and sustainable problems in the marketplace and society	1. control
2. ethical audits	2. information about of the code to new staff	2. an aid in strategic planning	2. effects on the bottom line	2. adjustment
3. ethical performance appraisal	3. information about the code to customers	3. the provision of an ethics ombudsman		
4. consequences for a breach of the code	4. information about the code to suppliers	4. an ethics committee		
	5. communication of the code to other stakeholders	5. ethics training committee		
		6. staff training in ethics		

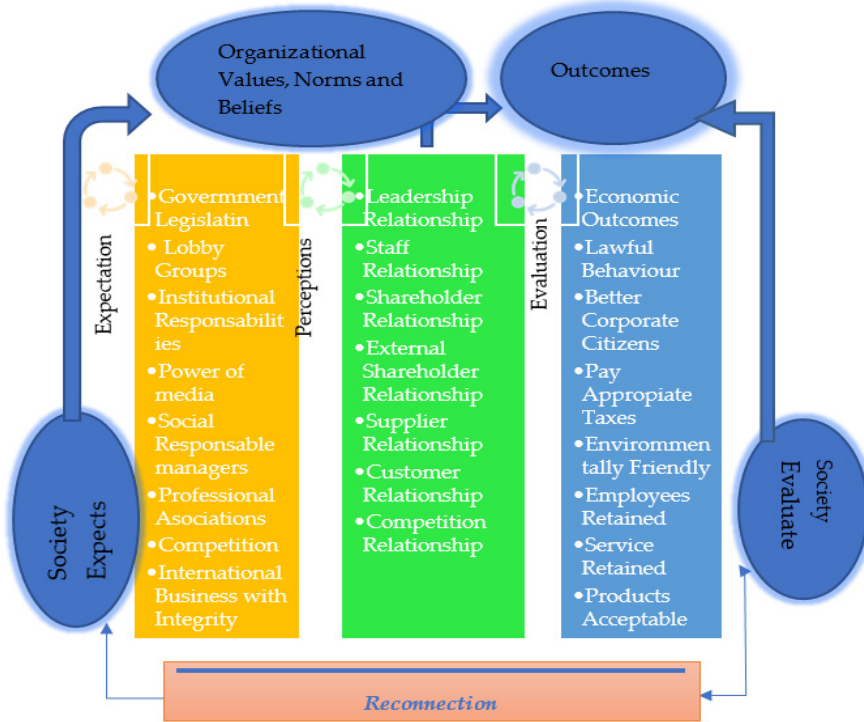
Source: own projection on the basis of Svensson, Wood and Callaghan (2010)

The corporate model of sustainable business practices is based on model proposed by Svensson and Wood (2008), namely *the business ethics model*, the authors considering that the introduced model makes a contribution to the creation of a conceptual framework for business ethics through the three principal components: expectations, perceptions and evaluations, that are interconnected by five sub-components: *society expects; organizational values, norms and beliefs; outcomes; society evaluates and reconnection* as can be seen from the Figure 1.

Wood (2002) also proposed an ethical model based on 2 concepts: *commitment and partnerships*, that represented a commitment to partnerships with all stakeholders both internal and external in an attempt to enhance the level of ethical business practices that are contemplated and pursued within corporate Australia.

Asgary and Mitschow (2002) attempted to suggest a code of ethics for multinational firms, based on their literature survey and discussions in their classes, this International Business Code of Ethics included, but was not limited to, the following principles: *Trust; Fairness; Do not Cheat; Honesty; Full disclosure of financial information; Be responsible for your dealings; Respect national sovereignty; Support the economic goals of host country; Respect social and cultural values and traditions; Respect human rights and fundamental*

freedoms; Provide equal opportunity; Uphold integrity of your company; Be respectful to every person contacted; Uphold environmental laws and regulations; Be fair and take action not to discriminate; Honor contracts, agreements, and assigned responsibilities, the authors considering that in order to ensure compliance with this code of ethics, several policies and procedures should be implemented.



Source: author’s elaboration on the basis of Svensson and Wood (2008)

Figure 1. The model of business ethics

Another empirical study (Weaver, Trevino and Cochran, 1999) of Fortune 1000 companies in the Mid-1990’s assesses the degree to which those companies have adopted various practices associated with corporate ethics programs and activities, the study examined a number of factors related to ethics codes and policy statements, including their usage, age, rate of revision, degree of dissemination, and employee acknowledgement of the policy. This study is distinguished by the degree of specificity with which different aspects of corporate ethics activity are delineated and measured, the authors of the study offering, in fact, an image of the informal function of corporate ethics, which they call the “state of the art”. The results of this empirical study showed a high degree of

corporate adoption of ethical policies, but much variability in the extent to which these policies are implemented through different support structures and managerial activities.

Osterwalder, Pigneur and Tucci (2005) present the business model as a conceptual tool that helps in understanding the business assertion mode, which can be used for analysis, comparison and performance assessment, management, communication, and innovation. Osterwalder and Pigneur (2010) also present in detail the business model, having in its component a number of elements: *the value proposition* (product/service offering, customer segments, customer relationships), *activities, resources, partners, distribution channels* (i.e. value creation and delivery) and *cost structure, and revenue model* (i.e. value capture).

Bocken *et al.* (2014) defined a *business model* taken into account three main elements: *the value proposition* (is typically concerned with the product and service offering to generate economic return, in a sustainable business), *value creation and delivery* (is at the heart of any business model) and *value capture* (is about considering how to earn revenues from the provision of good, services or information to users and customers). These three factors were presented also by Richardson (2005) who proposes a consolidated view of the components of a business models based on a wide range of literature.

In Teece's opinion (2010), the business model consists in defining the manner by which the company delivers value to customers, entices customers to pay for value, and converts those payments to profit, specifying that a business model articulates how the company will convert resources and capabilities into economic value.

Rasmussen (2007) showed that business models are concerned with how the company defines its competitive strategy by designing the product or service it offers on its market, how it is perceived for it, what it costs to produce, how it differs from other companies by proposing value and how the company integrates its own value chain with those of another company in a value network

Building on existing literature, Zott and Amit (2010) conceptualize a company's business model as a system of interdependent activities that transcends the focal company and spans its boundaries, the activity system allowing the company, in collaboration with its partners, to create value and also to match a part of that value.

A holistic, multi-level, boundary-spanning and dynamic description of business models is presented also by Beattie and Smith (2013), the authors examine two concepts related to business as business reporting and the business model, from the perspective of intellectual capital. The concept of business model is viewed as a key driver of value in the knowledge economy and, therefore, a crucial element of the business-reporting model.

Regarding business modeling, this is the managerial equivalent of the scientific method (Magretta, 2002) – *you start with a hypothesis, which you then test in action and revise when necessary.*

Casadesus – Masanell and Ricart (2010) present a conceptual framework to separate and relate the concepts of strategy and business model, a business model, being a reflection of the company's realized strategy. Teece (2010) exemplifies several features of the business model concept by surprising the following:

- Are necessary features of market economies where there is consumer choice, transaction costs, and heterogeneity amongst consumers and producers, and competition;
- Are often necessitated by technological innovation, which creates both the need to bring discoveries to market and the opportunity to satisfy unrequited customer needs.
- Can they facilitate and represent a form of innovation.

In 21st century innovations are an important vector of progress, improving the quality of life thanks to which they become a key factor of sustainable development (Szopik-Depczyńska *et al.*, 2018).

Business models and business model innovation have received substantial attention in the literature and industry and it is increasingly suggested that business model innovation is a key to business success (Bocken *et al.*, 2014).

Chesbrough (2010) argues in his paper that a company has at least as much value to gain from developing an innovative new business model as from developing an innovative new technology. He also the point of this article: companies need to develop the capability to innovate their business models, as well as their ideas and technologies.

New business models, with a strong focus on sustainability, are currently emerging and include (Beltramello, Haie-Fayle and Pilat, 2013): *green product/process-based models; waste regeneration systems; alternative energy-based systems; efficiency optimization by ICT; functional sales and management services; innovative financing schemes; sustainable mobility systems; industrial symbiosis; and green neighborhoods and cities.*

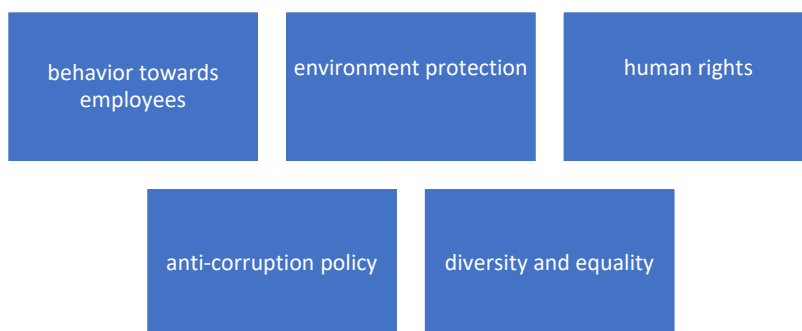
Sustainable business models (SBM) (Bocken *et al.*, 2014) incorporate a triple bottom line approach and consider a wide range of stakeholder interests, including environment and society. Sustainable business model archetypes are introduced to describe groupings of mechanisms and solutions that may contribute to building up the business model for sustainability, the aim of these archetypes is to develop a common language that can be used to accelerate the development of sustainable business models in research and practice, and the content of these archetypes details the following key aspects (Bocken *et al.*, 2014): *Maximize material and energy efficiency; Create value from 'waste'; Substitute with renewables and natural processes; Deliver functionality rather than ownership; Adopt a*

stewardship role; Encourage sufficiency; Re-purpose the business for society/environment; and Develop scale-up solutions.

4. THE SUSTAINABILITY REPORTS OF MULTINATIONAL COMPANIES

Another important aspect is given by the content of the sustainability reports of multinational companies, which should be fully committed to preserving the natural environment, depending on their activities, and it is possible to identify from these reports measures that are taken in relation to the increase in the share of consumption energy from renewable sources, efficient waste management and increased recycling rates (Grosu and Mihalciuc, 2015). Other actions are related to reducing the environmental impact of the production of finished products and reducing the harmful process, increasing energy efficiency of resources, financing community activities on sustainable development. Companies should also present those actions aimed at respecting the rights of all stakeholders, promoting a creative, diverse and cultural working environment, respecting the national cultures in which they operate, ensuring favorable working conditions, and operating within companies an efficient employee health management system that provides fitness and healthcare services (Berheci, 2013).

In accordance with Directive 2014/95/EU, corporations with more than 500 employees are obliged to make public a series of information on social responsibility within their own sustainability report. The elements to be captured in the sustainability reports of CSR-related companies refer to the following elements represented in Figure 2:



Source: own representation after Directive 2014/95/EU of the European Parliament and of the Council

Figure 2. Elements to be captured in the sustainability reports of the companies

The five elements in the Figure 2 represent the foundations on which the image of the social responsibility of a corporation is built. In their sustainability report, the companies describe the measures and programs adopted, thus being forced to prove their concern for the improvement of the social environment. Ethical behavior towards employees, measures to protect the environment, strictly respect the rights and freedoms of the individual, as well as anti-corruption rules, but also equality in terms of differences between individuals, prove to be, from the point of view of the European Union Directive, the most important spheres of action regarding the social responsibility of corporations.

The starting point for this Directive was the need to increase, in all Member States, the transparency of social and environmental information provided by companies in all sectors and the need to improve the presentation of this information. The main objectives are to identify risks related to sustainability and increase investor and consumer confidence.

Specifically, this non-financial statement will contain information on environmental, social and personnel issues, respect for human rights, the fight against corruption and bribery. The statement should also include a description of the policies, results and risks related to these issues. Noting the difficulty of preparing such much-needed reporting, in July 2017 the European Commission came to the aid of the reporting entities with a guide on non-financial reporting that was based on the UN's sustainable development goals.

Regarding the national space, Directive 95 was transposed into Romanian legislation by the Order of the Minister of Public Finance 1938/2016 and the Order of the Minister of Public Finance 3456/2018 (published in the Official Gazette no. 942 of November 7, 2018, with applicability from 1 January 2019), by Law 111/2016 for the approval of GEO 109/2011, but also by a series of norms adopted by the National Bank of Romania, respectively by the Financial Supervisory Authority.

Returning to Order of the Minister of Public Finance 3456/2018, it extended the obligation to submit, together with the annual financial statements, a non-financial statement to several categories of companies, because until its appearance, the obligation to submit the non-financial statement had only public interest companies that have, in average, during the financial year, over 500 employees. As such, following this MFP, starting with 2019, the obligation also falls on private companies that meet the criterion of the number of employees. Thus, the non-financial statement must be submitted for the first time in 2020 by these companies, together with the balance sheets for 2019.

Most companies separate the section dedicated to Corporate Social Responsibility, within the sustainability reports in four major categories: the environment, employees, the retail market and society (Mihalciuc, 2019b). Regardless of the succession and form in which the four concepts are addressed in the sustainability reports of companies, they are all defining elements in shaping

the image of corporate social responsibility and, for this reason; most companies do not omit information about these four big spheres.

The move to corporate responsibility in business practice is a response not only to the negative environmental effects that the organization can have, but also to evaluate the economic and social effects of the organization on a global scale. In general, corporate sustainability focuses in the long term on the social and environmental economic impact of the organization and their interactive effect (White, 2009).

Lately, the big corporations present their business activity in a more transparent and responsible way. Thus, for businesses to be able to fulfill their obligations in accordance with the ethics of stakeholder responsibility, they must provide relevant, timely and understandable information about their activities through corporate reports.

The company's conventional reports on annual financial performance, sustainability, and governance disclosures often fail to link the organization's strategy, financial results, and performance to environmental, social, and governance issues.

Corporate Social Responsibility initiatives must be integrated and internalized by the organization so that they are placed at the heart of the organization (Dey and Sircar, 2012).

Recognizing the inherent shortcomings of existing reporting models, there is an increasing trend of moving towards integrated reporting. A study in this direction was developed by Clayton, Rogerson and Rampedi (2015), showing the impact of the transition from sustainable reporting to integrated reporting on the non-financial disclosure of eight companies in South Africa using the content analysis of the annual reports.

According to the Global Reporting Initiative (GRI, 2011), sustainability reporting is the practice of measuring, disclosing, and being responsible for internal and external stakeholders in organizational performance for achieving the sustainable development goal. A sustainability report should provide a balanced and reasonable representation of the sustainability performance of the reporting organization, including positive and negative contributions" (GRI, 2011).

Reports on annual financial performance, sustainability and governance disclosure often fail to link the organization's strategy, financial performance, and environmental, social, and governance issues. On the basis of this weaknesses background of the existing reporting models, integrated reporting appeared as a preferred approach (IRC of SA, 2011). Integrated reporting is defined as "a holistic and integrated representation of the company's performance in terms of both its financing and its sustainability" (IoDSA, 2009).

5. THE CONCEPTS OF SOCIAL RESPONSIBILITY FOUND IN THE PRACTICE OF COMPANIES WITHIN BVB

In this part of the paper, the authors conducted a study on the main segment of the BVB selecting companies in areas such as: electricity industry, production and supply of electricity, construction, trade, transport and storage, hospitality, information and communications, mobile transactions and professional, scientific and technical activities and analyzing the annual reports of the selected sample, key terms were sought such as: social responsibility, environment, sustainability, emissions, health, society, renewable energy, communities, etc. Thus, in Table 2 were centralized the results related to the main topics approached and presented in the analyzed reports.

The selection of companies from various fields of activity aimed to create a multidisciplinary overview of the economic market and thus to outline an image of the interest of companies in addressing issues related to environmental reporting and social responsibility in the reports that they draw them up for certain categories of stakeholders.

Table 2. Environmental social responsibilities topics presented in the sustainability reports of BVB listed companies

Environmental topics presented in the sustainability reports of BVB listed companies								
No crt.	Sign BSE trading	Turnover (Million Lei)	No. of report pages	Green energy	Reduction of gas emissions/ carbon footprint	Waste management/ waste recycling	Invention activities in sustainability	Others
1	PTR	66,31	99				√	
2	SNG	4.964,73	211		√	√	√	
3	SNP	19.793,59	353		√	√	√	√
4	SNN	2.379,42	474	√		√	√	
5	TEL	2.679,16	415	√	√	√	√	√
6	COMI	7,11	82		√	√		
7	ENP	0,24	67			√		
8	IMP	161,08	139					√
9	NAPO	47,64	45					
10	ALU	67,24	74					
11	RMAH	104,20	156			√		√
12	RPH	500,99	155			√		

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Environmental topics presented in the sustainability reports of BVB listed companies								
No crt.	Sign BSE trading	Turnover (Million Lei)	No. of report pages	Green energy	Reduction of gas emissions/ carbon footprint	Waste management/ waste recycling	Invention activities in sustainability	Others
13	COTE	407,82	268				√	√
14	OIL	168,02	221				√	
15	SOCP	76,92	120					√
16	TGN	1.741,93	280		√	√		√
17	BCM	9,96	81					√
18	CAOR	26,57	84					
19	EFO	48,66	216				√	
20	TUFE	93,09	133			√	√	√
21	COTR	39,37	178					
22	EL	16,83	368	√		√	√	
23	M	419,85	211			√		√
Social responsibility topics presented in the sustainability reports of BVB listed companies								
No crt	Sign BSE trading	Turnover (Million Lei)	No. of report pages	Investments in education and culture	Development of local communities/ disadvantaged area	Humanitarian sponsorships/ donations	Human rights/gender equality / health	Covid-19
1	PTR	66,31	99	√	√	√	√	yes
2	SNG	4.964,73	211	√	√	√	√	yes
3	SNP	19.793,59	353	√	√	√	√	yes
4	SNN	2.379,42	474	√	√	√	√	yes
5	TEL	2.679,16	415	√	√	√	√	no
6	COMI	7,11	82					no
7	ENP	0,24	67					yes
8	IMP	161,08	139	√	√	√	√	yes
9	NAPO	47,64	45					no
10	ALU	67,24	74					yes

Social responsibility topics presented in the sustainability reports of BVB listed companies								
No crt	Sign BSE trading	Turnover (Million Lei)	No. of report pages	Investments in education and culture	Development of local communities/ disadvantaged area	Humanitarian sponsorships/ donations	Human rights/gender equality / health	Covid-19
11	RMAH	104,20	156					no
12	RPH	500,99	155	√	√	√		yes
13	COTE	407,82	268	√		√		yes
14	OIL	168,02	221					no
15	SOCP	76,92	120				√	yes
16	TGN	1.741,93	280		√	√		yes
17	BCM	9,96	81			√		yes
18	CAOR	26,57	84		√	√		yes
19	EFO	48,66	216					yes
20	TUFE	93,09	133			√		no
21	COTR	39,37	178			√		no
22	EL	16,83	368		√	√		no
23	M	419,85	211				√	yes

Source: author's elaboration on the basis of Bucharest Stock Exchange – BVB data (BVB, 2020)

6. RESULTS AND DISCUSSIONS

According to the data presented in Table 2, the authors can observe the fact that the most approached/developed environmental topics are those such as; waste management/recycling and reducing their impact on the environment and sustainable activities. The authors also noticed that, unfortunately, companies do not invest in renewable energy (green) or in plans/projects to reduce emissions of any kind, or at least do not detail such reports in the reports. Such a lack of information on topics such as the above, can lead to an uncertainty about the policy and responsibility of the environment in which it operates. Also based on the presented data we can correlate the fact that the companies that achieve a turnover of the order of billions of lei have a predisposition in carrying out activities of support and conservation/rehabilitation of the environment because they have more resources in this regard and are much more interested in the image and the imprint it leaves in the society because, the bigger they are, the more important the impact it generates and the feedback they receive, respectively. An important

aspect that must be mentioned is the fact that in the various categories are centralized activities that did not fall into the other categories or represent activities that were not developed, these representing only simple enumerations regarding quality and environmental standards that the company meets, which in fact represent the minimum legal requirements necessary for carrying out the activity.

Regarding the approach related to social responsibility, the authors note that the areas of most interest to companies in the selected sample (within several areas of activity) is represented by the activities of collaboration/ development of local communities in which they operate as authorized economic agents, respectively the involvement in activities to support the educational projects, implicitly of all that they imply, as well as the sponsorships of social cases. Also, it can correlate the turnover, the volume of the report (no. of pages), with the approach and development of topics that do not take into account the performance and financial situation of companies, but topics that refer to the importance and responsibility of the organization by those who represent current or possible categories of stakeholders.

7. CONCLUSIONS

The authors conclude that, for Romanian companies, the concept of integrated reporting and topics such as environmental performance and social responsibility are still areas that have not been fully discovered in the Romanian market so we cannot talk about a development or presentation in various reports issued by entities. However, we mention that there are pioneering companies in this regard that prove that financial performance can be achieved through an approach in which the environment, people, communities, etc. they are not ignored in favor of a greedy desire that seeks only to make a profit without caring about what is left behind.

From the analysis it can be seen that companies are prone/prefer to invest monetary resources in social activities to the detriment of activities/processes that have in view the conservation/protection of the anthropic environment. We consider that such a situation is due to the image capital that is much easier to obtain and maintain among people by carrying out populist activities. However, we emphasize that a deficient share of long-term environmental activities will affect nature in the coming years, which, increasingly affected by human presence/activities in recent years, will deteriorate in an irreversible way, which it will lead to a change in the way of life we know today. Unfortunately, the fragility of the human being is demonstrated today through the crisis called COVID-19 (SARS 2). Thus, it was interesting, even if the COVID crisis started at the end of January, (did not influence the financial year 2019), to observe the approach/non-approach by the company of this subject that affects the continuity of activity, implicitly everything that derives/implies this. It is gratifying that most of the

selected companies in the sample have approached this topic responsibly, so that the intended information users know the implications of this crisis.

Integrated reporting is the ideal that a company should achieve, this need for information being even more acute especially when we refer to listed companies in which the information presented in various reports influences their listing implicitly their value.

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DIGITALISATION – A SINE-QUA-NON CONDITION FOR THE ROMANIAN PUBLIC MANAGEMENT

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Abstract

Public management has undergone major changes along the history. Our current times are defined by profound tendencies to change the society in which we live, World governments are faced with a number of serious issues: emigration, easy distribution of fake news, great climate changes, a lack of the working force, the speed with which technology develops, cyberattacks, and, more recently, substantial public health problems, with impact on economy and administration.

The sanitary crisis caused by COVID – 19 took by surprise administrations, private companies and citizens alike. New administrative measures have resulted after reactions of adapting to this new situation, generated by the enforcement of social restrictions, measure such as remote working, or teleworking, in the case of civil servants, electronic mail or online learning.

Our study aims at analysing the level of digitalisation within public institutions in Romania. Moreover, it will provide an analysis on groups of age and gender of civil servants that we could find registered in the National Agency of Civil Servants.

We have studied secondary data made public by the European Commission, who has calculated the Digital Economy and Society Index (DESI) for Romania for the years 2018 and 2019. DESI is a tool destined to calculate the degree of digitalisation of member states and, since 2015, it has shown the level of digital competitiveness of EU member states.

Furthermore, we have taken a look at the last report regarding the management of public offices and civil servants, made public by the National Agency of Civil Servants in Romania. We have targeted details of the civil servants recorded by NACS in 2018: groups of age and gender distribution.

The last part of this study focuses on the measures suggested and implemented by the Romanian administration during the COVID -19 crisis in order to ensure the continuity of the inter-institutional activity, as well as its collaboration with the citizens.

The originality of the current study becomes relevant when investigating the provided data, in conjunction with approaching the measures taken by the Romanian Government in the digitalisation field, in the context of the sanitary crisis of 2020.

Both at a national level and at a local one, it is necessary that the Romanian public management undergoes a series of steps in the direction of digitalisation, so that it covers the existing gap between the degree of technology usage in the private and the public sector.

If, so far, the citizens were to the ones to address governments and administrations, these times have shown us that it is time that the latter should be addressing the citizens.

Keywords: *digitalisation; public administration; public management.*

JEL Classification: H19, H80

1. INTRODUCTION

Technological advancements have allowed society to communicate so much easier (audio/video), to have greater mobility when it comes to employment, career development or leisure.

Citizens' expectations from central or local administrations differ greatly from 10 or 20 years ago.

The public management from EU member states are continually searching for innovative solution to meet the citizens' needs as quickly as possible, and with minimal cost.

Still settled into physical documentation, offering solutions from behind a counter or a desk, the Romanian public management is faced with challenge: identifying digital means of communication with citizens who are more or less technologically educated.

The COVID-19 crisis and the measures taken by the government in relation to public health have led the managements of public institutions to identify, in a very short period of time, solutions to provide a continuous activity, without physically interacting with the people. Remote working has been one of the suggestions, however we are lacking data related to its efficiency at the moment.

The European Union, as well as Romania itself have been preparing a "digital strategy" in the last 4 years, between 2016 and 2020 (Ministry of Communications and Information Society, 2020).

The EU's course of action, regarding an electronic government 2016-2020 (Accelerating the digital transformation of governments) made public by the European Commission in April 2016 in Brussels (European Commission, 2016b), shows that an electronic government supports administrative processes, improves the quality of services and enhances the efficiency of the public sector. Additionally, it was outlined that a digitalised public service would reduce the administrative workload for enterprises and citizens alike, making interactions between these two parties not only more efficient and time-saving, more practical and transparent, but also less costly.

After consulting with the citizens, the European Commission has formulated a list of principles, as part of its Action Plan for an electronic government 2016-2020/Accelerating the digital transformation of governments in the EU, which we will reproduce in the following:

- a. “Implicitly digital” in providing services digitally, with the mention of keeping active certain channels for those citizens who do not wish or do not have the possibility to access online public services. According to the Comparative Analysis Report of 2017 regarding eGoverning designed by the EU Commission (European Commission, 2017), it has been estimated that an “implicitly digital” approach could produce annual savings of approximately 10 billion EUR.
- b. The “only once” principle, which establishes that citizens and enterprises provide a certain information only once, given to a public form of administration, following the thought that public institutions communicate with each other in order to avoid additional effort from both citizens and firms. According to a study regarding eGoverning and reducing the administrative workload (SMART 2012/0061) (European Commission, 2012), applying the “only once” principle would have generated approximately 5 billion EUR in net annual income until 2017 at EU level.
- c. “Inclusion and accessibility”: public administrations should envision digitalised services, favourable to people of age or people with disabilities.
- d. “Openness and transparency” through which public administrations should exchange data between each other and to allow access to public data to the citizens.
- e. “Implicit cross-border feature”: public services around EU member states should function with no discontinuity, and should be based on freedom of circulation of data and digitalised services.
- f. “Credibility and information system security” for a high level of trust in digital services, as well as a higher degree of acceptance.

We wished to delineate these principles as to have a European reference system in regards to a minimum set of rules the Romania has to implement along with the digitalisation of public services, as well as to highlight savings that can flourish through the introduction of digitalisation in the Romanian public administration.

The National Strategy concerning the Digital Agenda for Romania 2020 has been created in accordance with the Digital Agenda for the European Union 2020 and has been approved in February 2015 (Ministry of Communications and Information Society, 2020).

2. LITERATURE REVIEW

Technology and digital innovation are two elements that have changed the way society is evolving. Whether we speak about private enterprises (Janowski, 2015; Porter and Hepelaman, 2014) or public organisations, the issue of digitalisation continues to be very important, one that permanently remains involved in management. There have been numerous debates in regards to what some authors consider *digitalisation* to be (Legner *et al.*, 2017), while others prefer the term

digitisation. Many studies suggest that the implementation of new technologies along with digitalisation will bring countless benefits to firms (Holotiuk and Beimborn, 2017). Thus, in the context of developing countries, Al-Naimat, Abdullah and Ahmad (2013) have identified multiple advantages for the public domain. A great benefit would be brought to citizens, who would be favoured in terms of time consumption and costs, as well as through the reduction of bureaucracy.

eGovernance is generally defined (Misuraca, 2009) by the ability of Information and Communication Technologies (ICT) to prevail in the future, not only through an increasing usage of technologies that provide online services, but also as a paradigm for the offering of services by governments to its citizens, the attempt at transparency and at participation of the state's institutions in appreciating their needs.

Androniceanu, Georgescu and Kinnunen (2019) noted that digitalisation is a strategic investment for states and enterprises alike, one that stimulates growth and development, efficiency, productivity and generates substantial money savings.

If well implemented, eGovernance could allow citizens, firms and organisations to carry out operations with the government more easily, faster and with much less cost (European Commission, 2020).

For instance, in Denmark, e-billing produces annual savings of 150 million EUR in the case of citizens, and 50 million EUR in the case of enterprises. If they were to be introduced in the EU, annual savings could exceed 50 billion EUR. Electronic acquisition systems have reduced the costs by over 3 billion EUR only in Italy (European Commission, 2020).

Action plans about eGovernance are political tools meant to accommodate a modernisation of public administrations all over EU (European Commission, 2016b).

3. METHODOLOGY

In our study, we aimed at inspecting the secondary data made public by the European Commission, which calculated DESI for Romania – Digital Economy and Society Index for the years 2018 and 2019 (European Commission, 2019).

Furthermore, we have analysed the last report prepared by the National Agency of Civil Servants in Romania regarding the management of a civil service and that of civil servants themselves. We have followed up on their characteristics found in the NACS in 2018: gender and age distribution.

The last part of the study will focus on the measures presented by the national administration during the COVID-19 crisis, in order to ensure the continuity of inter-institutional activities in the case of a collaboration with citizens.

4. DESI ANALYSIS FOR ROMANIA – YEARS 2018-2019

The European Union has been paying attention to identifying tools that can measure the level of digitalisation in the member states.

DESI has been created with this intent and, since 2015, it has been reflecting the degree of digital competitiveness of the EU member states. *DESI is calculated for each state, and then published in an annual report.*

The Romanian National Report from 2019 specifies that the methodology of calculating such an index (DESI) has been improved in order to take into account the newest technological advancements. We will now list the domains covered by DESI, according to the aforementioned report: the level of preparations for the usage of 5G technologies, basic digital knowledge, at least basic software knowledge, women hired in IT, IT graduates, people who have never used the internet, professional social media, online courses, online consulting and voting, online sales made by a private person, large amounts of data, medical data exchange, e-prescriptions.

In order for an administration to be digitalised, a series of elements need to exist: online platforms given to users must be functional and intuitive, users must have at least basic digital knowledge, a good internet connection that allows a fast data exchange, civil servants prepared to work with electronic platforms, to name only a few.

In our study, we will focus on those domains that touch upon human capital, the digital knowledge of citizens, and online communication with public institutions, eGovernment.

Table 1 reveals the information about the basic digital knowledge, above basic knowledge and basic software knowledge. When looking at the first 2 types of skills, Romania take the 28th place in EU; in regards to the 3rd, Romania occupies the 27th position, with a score of 29% against the EU average of 57%, 10% against an EU average of 31%, respectively 32% against an EU average of 60%.

The data corroborates information about citizens with ages between 16 and 74. This study does not specify the professional categories of those involved.

Table 1. Analysing the Romanian human capital in relation to digital knowledge

	DESI 2017 value	DESI 2018 value	DESI 2019 value place	EU average DESI 2019 value
At least basic digital knowledge % people	28% 2015	29% 2017	29% 28 2017	57% 2017
Basic digital knowledge % people	9% 2016	10% 2017	10% 28 2017	31% 2017
At least basic knowledge in software % people	30% 2016	32% 2017	32% 27 2017	60% 2017

Source: processing the National Report 2019 – Digital Economy and Society Index (DESI) (European Commission, 2019, p. 8)

We identify a need to improve the digital knowledge in public administration, when they are so necessary in the use of online platforms.

Table 2. Analysing the usage of internet services

Using internet services	DESI 2017 value	DESI 2018 value	DESI 2019 value place	EU average DESI 2019 value
People who have never used the internet % people	30% 2016	27% 2017	21% 24 2018	11% 2018
Internet users % people	56% 2016	61% 2017	68% 27 2018	83% 2018
Professional social media % internet users	6% 2015	6% 2017	6% 25 2017	15% 2017
Following online courses % internet users	4% 2016	5% 2017	5% 23 2017	9% 2017

Source: processing the National Report 2019 – Digital Economy and Society Index (DESI) (European Commission, 2019, p. 10)

According to the data provided in Table 2, Romania is positioned on the 24% place in the European ranking in regards to the number of people who have never used the internet, with 21% of the population, as opposed to the EU average of 11%. In fewer words, 1 in 5 Romanian citizens have never used the internet, according to the data provided. This number has decreased, however, since 2017 when 30% of the population had never used the internet, showing an improvement.

One other piece of information draws our attention, that of the number of people following online courses – 5%. However, the EU average is not high itself, of only 9%. This percentage shows highlights that a part of the young population (young people in compulsory education, university students) are undergoing such activities, but it becomes worrying since the professional preparations are not developed through such means.

The COVID-19 crisis, during spring 2020, determined the National Administration Institute (National Administration Institute, 2020), as well as private enterprises dealing with professional training to qualify online trainers, so that professional training programmes can be made available for civil servers. It is a praise-worthy endeavour and can be recognised as pioneering work. The numbers from the table show us that efforts are needed to target an awareness of the importance of internet usage in adults' professional training.

Table 3. Digital public services in Romania

Digital public services	DESI 2017 value	DESI 2018 value	DESI 2019 value place	EU average DESI 2019 value
Users of an eGoverning solution % of internet users, who have submitted their forms	84% 2016	80% 2017	82% 7 2018	64% 2018
Pre-filled forms Score (0 – 100)	12 2016	12 2017	10 28 2018	58 2018
Services offered entirely on the internet Score (0 – 100)	55 2016	62 2017	67 27 2018	87 2018
Public digital services for enterprises Score (0 – 100) – including on national and international levels	48 2016	51 2017	54 28 2018	85 2018

Source: processing the National Report 2019 – Digital Economy and Society Index (DESI) (European Commission, 2019, p. 13)

The numbers from Table 3 show that Romania ranks the 7th in terms of the percentage of eGoverning solutions users (% internet users who have submitted online forms). This percentage of 82 shows us a good degree of communication between public administrations and citizens.

In regard to the number of pre-filled forms, we are positioned on the 28th place, with a score of 10 when the EU average is 58.

In relation to services offered entirely on the internet, we have registered 67 points, as opposed to the average of 87.

Digital public services for enterprises/firms are represented by 54 points, ranking Romania the 28th in the EU, with a deficit of 31 points from the EU average, fact that does not encourage the Romanian business environment.

We can notice conflicting figures between the first cell of the table (users of eGoverning solutions – rank 7 out of 28) and the following cells, which can be explained by the existence of a small number of pre-filled e-forms, as well as a small number of services that can be provided entirely online.

5. ANALYSING THE NACS FOR THE YEAR 2018

NACS publishes an annual report including the age groups of all its registered civil servants. For our study, we have pinpointed the report made available in 2018; in the case of the report published in 2019, we have not found any data.

We wished to analyse the the age groups as it is revealed in its distribution: under 30 years old, 30-40 yo, 40-50 yo, 50-60 yo and over 60 yo.

We have undergone this process in order to correlate it with the digital knowledge resulted in the DESI analysis for the years 2018 and 2019.

We have identified the age distribution of employees, from the study made by NACS: 65,94% women, 34,06% men.

According to the age distribution: 3,72% are under 30 years old, 17,75% between 30 and 40 yo, 38,01% between 40 and 50 yo, and 33,47% are between 50 and 60, and above 60 yo.

Table 4. The age distribution of civil servants registered at NACS in 2018

The age distribution of civil servants registered at NACS in 2018	Under 30%	Between 30-40%	Between 40-50%	Between 50-60%	Over 60%
Percentage	3.72%	17.75%	38.01%	33.47%	7.05%
Numerical	5059	24117	51663	45495	9582

Source: own processing of the data provided by the National Agency of Civil Servants (2018, p. 10)

We can remark that 40,52% of all civil servants registered to the Agency are older than 50. Romania is met with the same issue of ageing of its civil servants that other EU member states are facing as well. However, the percentage is under that of Belgium, Spain or Italy, who register even 45% of civil servants who will retire in the next 15 years, according to the piece of writing “The quality of public administration” published by the European Commission (European Commission, 2016a).

Reforms about digitalisation also include human capital in regards to openness and will to learn and to apply new information programmes.

The role of public management will be a crucial one in the process of sending the message of digitalisation, and it will either stimulate or dampen the implementation of a technological reform.

6. DIGITALISATION MEASURES TAKEN AS RESPONSE TO THE COVID – 19 CRISIS

Public administrations heavily digitalised throughout Europe have not felt the effects of social distancing as profoundly, since their electronic services functioned in very good conditions.

The Government and the Authority for Digitalising Romania have introduced emergency measures in April 2020 in the context of the administrative crisis generated by COVID-19 (Authority for Digitalising Romania, 2020).

Some legislative measures regarding e-mail within public administration have been taken along with the Government Emergency Ordinance no. 38/2020 regarding using documents in an electronic format by authorities and public institutions. It has thus been decided on the usage of an e-signature and electronic documents with the aim of limiting interactions with the public and ensuring population protection. This measure leads to a significant saving of financial resources, of time, and offers at the same time an increase in comfort for citizens.

The Authority for Digitalising Romania launched the platform [aici.gov.ro](http:// aici.gov.ro) to offer citizens the possibility to submit documents destined to certain public institutions, which did not have an online window that allows communication.

We appreciate the fact that, along with this context, the implementation of such digitalisation methods has been accelerated, the public administration and its civil servants have been urged to accept more easily these measures of electronic communication which, in the end, are so useful to both citizens and employees of public institutions.

7. CONCLUSIONS

Romania has seen progress in 2019, in comparison to 2018, but keeps its 28th place in the list of EU member states regarding the digitalisation of public services. This changing process brings with itself a series of administrative reforms, strenuously accepted by those civil servants rooted in old habits, but also significant economical savings: of time and money.

Over 40% of the civil servants registered to NACS are over 50 years old. The aptence to change towards digitalising public services is smaller than in the case of younger people, who have much better digital skills.

The need for social distancing will demand for new rules and regulations that address administrative issues, as well as offering solutions to citizens' various requests. Introducing such online platforms will lead to a need of digital refinement or digital improvement of civil servants. Citizens used to solve their issues in front of a counter or a desk will be faced with new challenges.

The COVID-19 crisis has accelerated the implementation of some digitalisation measures in the field of public administration, but there are still important steps to be made until we can solve such problems with the help of a single click of a mouse.

Public management will be reformed by the implementation of digitalisation. The circuit of documents within public institutions will be recreated. There will be entry data and the tracing of documents, answer time, the level of responsibility assigned to civil servants, delays in finding solutions will be possible. We will learn new things about how our work should look like, new forms of jobs will be created, while others will disappear.

The heads of public institutions will have real-time access to reports.

There will be no turning back to the old methods of work, once this transition towards online communication will be finally in place. A low percentage of population will still prefer to wait in line at a counter for certain issues, however the great majority of civil services will be made via the internet.

With all these benefits brought by the digitalisation, we must not forget the element of personal data protection. The European legislation is very clear and restrictive. *Applying Regulation no. 679 of April 27th 2016 regarding the protection of people in the face of processing personal data, the free circulation of such data and the abrogation of Directive 95/46/CE in Romania stipulates additional provisions, which need to be known and respected by those processing personal data, as well as by Romanian citizens.*

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ELECTRONIC GOVERNANCE AND ITS IMPORTANCE IN ECONOMIC DEVELOPMENT IN ROMANIA

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Abstract

This article highlights the most important aspects of e-government and their importance. We will make a brief analysis of the level of implementation of e-government at central and local level and we will identify possible efficiency solutions. The conclusions will focus on a brief analysis of the importance and level of implementation of e-government in economic development.

Keywords: *e-governance; economic development; impact.*

JEL Classification: H7

1. INTRODUCTION

Talking about e-government at this time may seem like a not-so-interesting topic, but let's be patient. What is and what is the purpose of e-government is not the aspect considered in this article. Instead, we can highlight two important objectives of e-government and analyze the past, present and future. One of the analyzed objectives is to ensure access to official information through web pages and the second is to provide public services through electronic means for citizens and the business environment.

Access to official information through web pages is an objective assumed by all public institutions but the quality and ease of accessibility is a different thing from one institution to another. More important is the provision of public services through electronic means for citizens, which was largely lacking. Today we see a change of attitude, deliberate and necessary, in order to provide public services by electronic means. Even if the most used way of providing services is by email, it is still a welcome option.

The next and natural step should be to sum up the whole experience and propose solutions to simplify such a process. Thus, the creation of a platform where these documents can be uploaded, their safe storage on servers owned by the institution, their easy accessibility from the system by the official who has to respond to a request that came simply through a standard application completed online. All this may be part of future solutions.

Thus, it was observed that the most important component of e-government, namely the provision of services through electronic means, managed to become

the most flexible because it was in the power of people to change. Now it is done with the available resources but we hope for the future with more and more complex and easy variants. Access to official information is a giant with feet of clay and requires more resources (hardware and software).

The governments take advantage of Information and Communication Technologies and the continuing expansion of the Web and started strategies to renew the Public Administration and eliminate existing bureaucracy and therefore reduce costs (Riedl, 2003).

It was mentioned that elements related to the quality of life are directly related to e-government. Thus, there is a need for procedures, (transparent) services that will facilitate the activity of both the administration and the citizens.

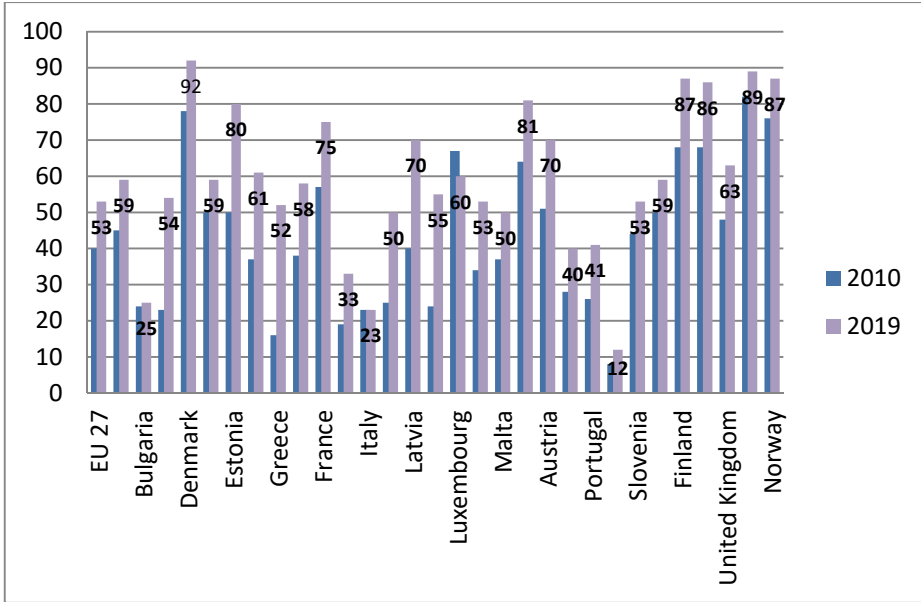
So, e-Government continues to be embraced by the global community as more public services transition online. Advances in ICT have enabled the delivery of new types of government services, through a variety of digital channels such as email, smartphones, tablets, and smart cards. Central to e-government is the ability to deliver government information and services to support business and the wider community citizens, while also saving time and reducing cost (Carter and Bélanger, 2005).

Thus, the main question that arises does not refer to the fact that public institutions can make the transition to digital platforms, but whether this step will be useful and will serve the citizens. Taking appropriate steps to safeguard the security of citizens' data, and being seen to do so would lead to a more usable and reliable environment which would enhance public trust, and ultimately lead to greater acceptance and use of e-government services (Thompson, Mullins and Chongsutakawong, 2019).

2. CITIZENS' INTERACTION WITH THE ADMINISTRATION THROUGH WEB PAGES

We are initially interested in whether the high-speed internet in Romania, which we often boast about, has been used for more useful purposes (Cigu, 2015). Thus, how much of this internet access was used for more useful purposes than watching movies, music and facebook. But even so, how many of us have accessed the websites of various public administration institutions to interact with them?

I look at the Eurostat delivery data, I filter them once more, and I have the feeling that it may still be a mistake. No, it is not. Data from the entire analyzed period 2010-2019 confirm this. The following graph (Figure 1), for readability, offers only the image of 2010 and 2019 but the data are eloquent.



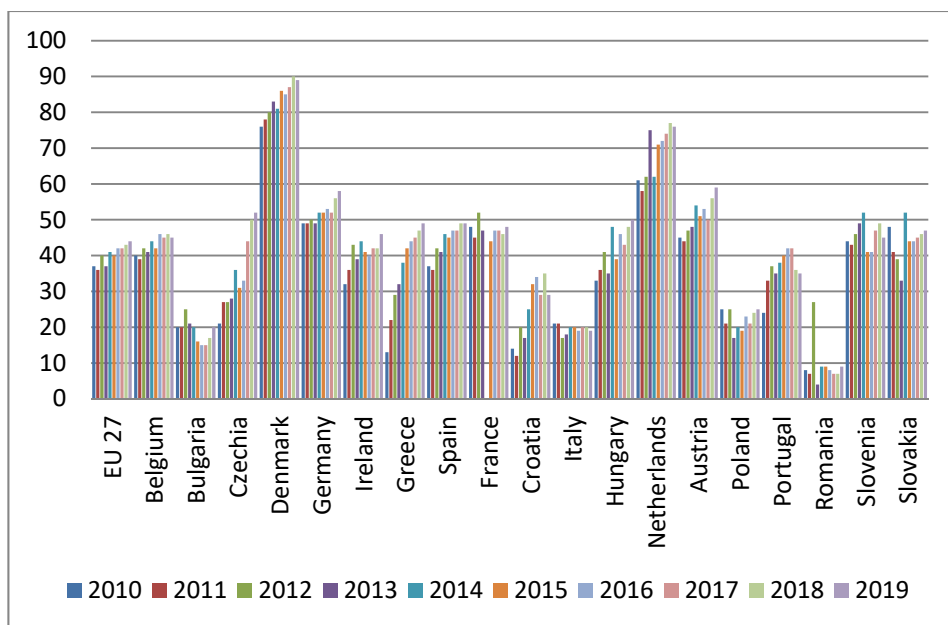
Source: own processing according to data provided by Eurostat (European Commission, 2020)

Figure 1. Internet use: interaction with public authorities ((last 12 months) (%)

The percentage of 8% in 2010 and 12% in 2019 is the nature to send us into a reality that we don't seem to want to see. Even Bulgaria, the neighboring country and which we no longer give a damn to compare ourselves with, is at 25%. The situation is so serious that we cannot put all the blame only on public institutions. It's mostly their fault, of course, but every time you've tried to send at least one email to an institution and wait for a response. The answer is NO, we have to go there. Only there, talking and looking at a person in the eye, it resolves, even if he is the goalkeeper and tells us that he is closed.

We smile maybe but not too much. All this period of isolation made us aware of something else. How much time do we save from running public institutions? We also include traffic, finding a parking space, waiting for a bus, etc. Time passes too quickly and honestly, we really can't waste it. Clearly, the administration must start the engines of developing its own websites and online interaction platforms, but on the other hand it must find a citizen (natural or legal person) willing to access the Internet for something other than opening the social media page.

More eloquent is the following chart (Figure 2) that summarizes the idea of obtaining information from the websites of the institutions. Without being afraid now, somewhat expected we notice with a percentage of less than 10% of the Romanian population obtained information from the web pages of the institutions.



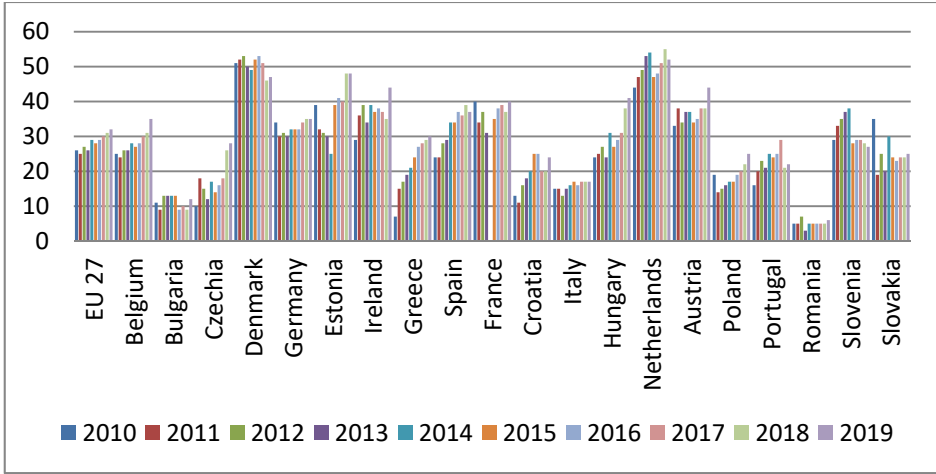
Source: own processing according to data provided by Eurostat (European Commission, 2020)

Figure 2. Internet use: obtaining information from public authorities web sites (last 12 months) (%)

We look with admiration at countries such as Denmark, the Netherlands, Austria that have managed to implement very well the first level of e-government: the provision of information for citizens.

The next segment of the analysis intervenes on the very essence of e-government (Figure 3). Namely, through the data provided by Eurostat, we can see what percentage of the population has downloaded official forms from the websites of the institutions. We all know that moment when we were going to an institution and we had to apply. It was a struggle to find forms and then a pen. Romania is still far from this segment as well.

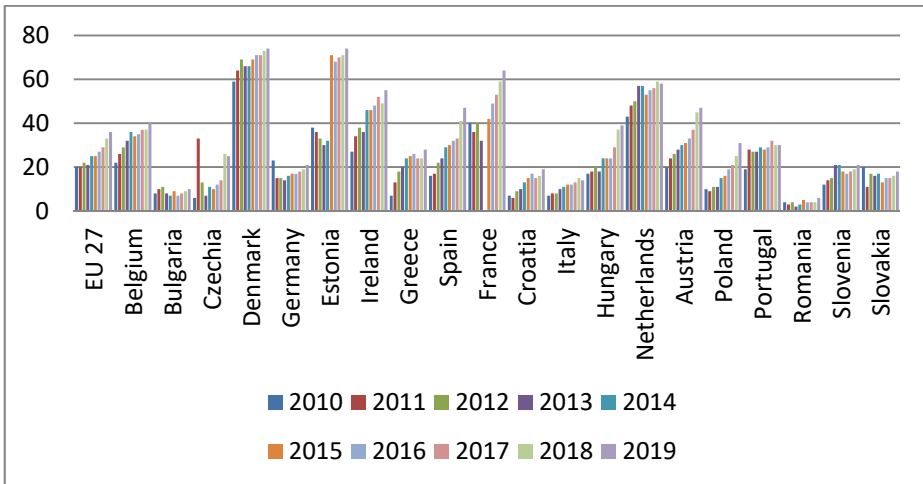
Instead, more than 50% of the population of some countries download these official forms directly from the institutions' websites. Obviously these forms are uploaded by the institutions in question and the population is constantly educated and encouraged to download them and come with them completed to avoid congestion.



Source: own processing according to data provided by Eurostat (European Commission, 2020)

Figure 3. Internet use: downloading official forms (last 12 months) (%)

Last but not least, part of the essence of e-government would be to upload these completed forms directly on the website of the institutions (Figure 4). It is no surprise with countries such as Denmark, the Netherlands, Austria, Germany. The surprise, or not really, is Estonia. The country has become a model of e-government for the whole of Europe.



Source: own processing according to data provided by Eurostat (European Commission, 2020)

Figure 4. Internet use: submitting completed forms (last 12 months) (%)

In Estonia, more than 70% of the population uses the Internet to interact with the authorities, to download forms and, more importantly, to submit them officially through dedicated websites.

3. CONCLUSIONS

We are still far in this segment of e-government. Very soon, due to the current context, we will make a sudden transition online for interaction with the authorities. The workload for the authorities will be huge. There will be no test time for the applications that will appear, instead they will make a change of face for the entire administration.

In the background, a new challenge is expected on the horizon. If we manage to interact with the institutions through the internet, the time will come to be able to sign requests, contracts, various documents and send them. The holographic signature can be found at the beginning of the end. Who knows what it will be like in 100 years but now we need a digital signature. The private segment is already here and uses these signatures frequently. Among the public institutions that introduced the electronic signature, the ANAF stands out, first of all. But as I mentioned in the accessibility of the internet and the interaction with the administration, the road is long and it seems that we are still at the beginning.

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Section V

EU GREEN FINANCE AND ENVIRONMENTAL ISSUES

CORONAVIRUS – A NEW INTERNATIONAL ECONOMIC CRISIS?

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Abstract

The current economy or the new economy, as defined by specialists, is characterized by globalization. This has many strengths, but also some weaknesses, with a strong impact both globally and nationally. One such example is the new economic crisis, which is expected as a result of the spread of the Coronavirus virus in all countries of the world. Apart from the real tragedies that this virus has generated by the fact that it has led to the illness and even death of a very large number of people, a number of economic and financial problems are already being felt both globally and nationally.

The objective of the research is to identify the main changes that have occurred at international and national level, as well as their impact on the quality of economic life, as a result of the appearance and spread of Coronavirus. The research method is non-participatory observation. The data source is the information from authorized sources (National Institute of Statistics, Official Gazette of Romania etc.), but also from articles and other materials from the specialty literature. The results of the research aim to highlight the effects of Coronavirus on the international and national economy. Further directions for research aim at analyzing the impact of this crisis on national and international economic life, as well as highlighting the methods to remove the negative effects generated by this new crisis.

Keywords: *Coronavirus; economic crisis; European Union; Romania.*

JEL Classification: M00

1. INTRODUCTION

Today, the whole world is experiencing a pandemic caused by a new virus Covid-19. This negatively affected social and economic life, both nationally and internationally, and all measures aimed at preventing a financial and economic blockage, which would eventually lead to a new international crisis.

In the literature are presented several types of crises, such as:

- *Social crises*, characterized by rising inflation, unemployment, poverty;
- *Local or international crises*;
- *Crises caused by natural disasters*;
- *Financial crises*, which arise as a result of distrust in the financial system and involve increased volatility in capital markets, falling stock markets, but also their return, sometimes spectacular;
- *Political crises*, which in the worst case can degenerate into wars;

- *Generalized economic crises.*

Even if it is difficult to make assessments when a financial crisis becomes an economic or an economic crisis generates a financial crisis or vice versa, in principle it is an economic crisis caused by various reasons (financial, political or social).

The economic crisis represents the difficult state of economic activity (slowdown, stagnation or decline), which appears as a serious fracture of macro-economic balances between production and consumption, supply and demand, the degree of use of factors of production and employment. (Udrescu, 2012)

According to some authors, there are four interpretations of economic crises (Pribac, 2011):

- *The liberal interpretation*, in which the market is self-regulating, the crisis is due to an external intervention (the state), and the cancellation of the crisis is done by eliminating the external cause;
- *Keynesian interpretation*, in which the market does not have a self-regulatory role, investments are unpredictable and pro-cyclical, and the state can regulate the market;
- *Schumpeter's interpretation* that the economy is cyclical;
- *The Marxist interpretation*, which considers the crisis an element inherent in capitalism, which comes from the anarchic and unequal character of production, respectively overproduction.

Some authors have made a ranking of world economic crises (Orgonas, 2009):

- *1st place – The oil crisis of 1973*, when Organization of Arab Petroleum Exporting Countries decided to stop oil supplies to the USA and other developed countries;
- *2nd place – Great Interwar Depression – 1929-1933*, caused by the unfair distribution of income, overproductions and unlimited speculation, the most severely affected being the USA;
- *3rd place – The Asian crisis of 1997-1999*, which started in Thailand and spread rapidly throughout Southeast Asia;
- *4th place – The financial crisis in Russia – 1998*, initially triggered by the Asian crisis and accentuated by the pyramid scheme of bond issuance, until August 13, 1998 when the stock market and the exchange rate collapsed;
- *5th place – Black Monday – October 19, 1987*, the day with the largest stock market declines in history;
- *6th place – Souk Al-Manakh Kuwait – 1982*, an unofficial exchange in which very risky financial instruments were traded;
- *7th place – German hyperinflation after WW1, 1918-1924*, as a result of the war compensations that Germany was forced to pay in the amount of 132 billion gold marks, (approximately 200 billion dollars in current

money), the annual rate being 2 billion gold marks plus 26% of the value of exports;

- *8th place – Argentina's economic crisis – 1999-2002*, generated by several factors, such as the military dictatorship, the war with England, a rampant inflation, unsustainable public debt, extremely violent popular uprisings, the devalued national currency;
- *9th place – The crisis in Mexico 1994*, when the national currency was allowed to fluctuate freely and the peso devalued greatly in a short time;
- *10th place – Panic of 1907 (USA)*, was generated by the collapse of the banking system.

After analyzing the characteristics of these crises, the authors concluded that *the economic crisis of 2009* will rise directly to the first place both in terms of losses incurred by companies and the amounts spent by governments, and in terms of impact which it will have in the long run on the world economy.

Currently, as a result of the measures taken to manage the medical crisis, *the coronavirus epidemic* has also caused disturbances in the world economy.

2. LITERATURE REVIEW

Following the emergence and spread of the new Covid-19 virus, with major influences on life around the globe, international and national bodies together with specialists and other competent institutions are looking for solutions to keep it under control and avoid a new global crisis. If in medicine investments are made in equipment for the best possible treatment of infested patients and in research activities, leading to the identification of a life-saving vaccine, in the economic field solutions are sought to avoid a global blockage.

As expected, many authors are concerned about this new topic, and studies are looking at the effects of the new Covid-19 virus on the economy, either internationally (Fernandes, 2020; McKibbin and Fernando, 2020), or nationally (Atkeson, 2020; Nestian *et al.*, 2020). There are also many studies conducted on bodies or institutions, both national (ministries, statistical and forecasting institutions etc.) and international (The Organisation for Economic Co-operation and Development – OECD (2020), International Monetary Fund – IMF (2020), etc.), which present statistics, measures adopted and the impact of this pandemic at different levels.

3. RESEARCH METHODOLOGY

The objective of the research is to identify the main changes that have occurred at international and national level, as well as their impact on the quality of economic life, as a result of the appearance and spread of Covid-19. *The research method* is non-participatory observation. *The data source* is the information from authorized sources, but also from articles and other materials from the specialty literature. *The results of the research* aim to highlight the effects

of Covid-19 on the international and national economy. *Further directions for research* aim at analyzing the impact of this crisis on national and international economic life, as well as highlighting the methods to remove the negative effects generated by this new crisis.

4. CORONAVIRUS (COVID-19) AND ECONOMY

The dramatic spread of COVID-19 has disrupted lives and businesses worldwide. Only coordinated action can potentially mitigate the risk and impact of this unprecedented crisis.

4.1. Impact of the coronavirus pandemic on the global economy

The spread of the coronavirus epidemic and the measures taken to manage the medical crisis have led to disturbances in the financial markets, with imported effects on the world economy. Worldwide, the number of cases of covid-19 increased very quickly, Romania ranking 37th with a number of 17,712 cases, according to the data in the following table (Table 1):

Table 1. Cases Covid-19

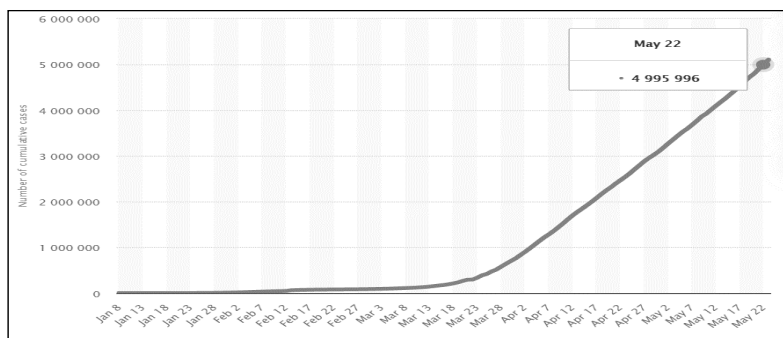
#	Country, Other	Total Cases	Total Deaths	Total Recovered	Population
	<i>World</i>	5,231,084	335,582	2,103,949	
1	USA	1,622,191	96,385	382,936	330,790,544
2	Russia	326,448	3,249	99,825	145,927,804
3	Brazil	312,074	20,112	125,960	212,393,298
4	Spain	280,117	27,940	196,958	46,752,851
5	UK	254,195	36,393	N/A	67,847,158
6	Italy	228,006	32,486	134,560	60,471,198
7	France	181,826	28,215	63,858	65,258,007
8	Germany	179,160	8,316	159,000	83,755,045
9	Turkey	153,548	4,249	114,990	84,237,509
10	Iran	131,652	7,300	102,276	83,871,454
11	India	120,532	3,605	49,872	1,378,492,893
12	Peru	108,769	3,148	43,587	32,919,665
13	China	82,971	4,634	78,255	1,439,323,776
14	Canada	81,324	6,152	41,715	37,705,478
15	Saudi Arabia	67,719	364	39,003	34,751,777
16	Mexico	59,567	6,510	40,657	128,781,349
17	Chile	57,581	589	23,992	19,098,031
18	Belgium	56,511	9,212	15,123	11,584,152
19	Pakistan	50,694	1,067	15,201	220,392,002
20	Netherlands	44,888	5,788	N/A	17,130,802
21	Qatar	40,481	19	7,893	2,875,446

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#	Country, Other	Total Cases	Total Deaths	Total Recovered	Population
22	Ecuador	35,306	2,939	3,557	17,612,428
23	Belarus	34,303	190	12,833	9,449,653
24	Sweden	32,809	3,925	4,971	10,092,371
25	Switzerland	30,707	1,903	27,900	8,647,657
26	Singapore	30,426	23	12,117	5,845,265
27	Bangladesh	30,205	432	6,190	164,506,480
28	Portugal	30,200	1,289	7,590	10,199,821
29	UAE	26,898	237	12,755	9,876,944
30	Ireland	24,391	1,583	21,060	4,931,601
31	Indonesia	20,796	1,326	5,057	273,200,237
32	Poland	20,379	973	8,731	37,850,989
33	Ukraine	20,148	588	6,585	43,760,843
34	Kuwait	19,564	138	5,515	4,263,365
35	South Africa	19,137	369	8,950	59,224,262
36	Colombia	18,330	652	4,431	50,822,230
37	Romania	17,712	1,159	10,777	19,250,875

Source: (Worldmeters, 2020a)

The spectacular evolution of the infection with the new virus is also observed in the following figure (Figure 1).



Source: (Statistica, 2020b)

Figure 1. Number of cumulative cases of Covid-19 worldwide from January 8 to May 22, 2020

However, the death rate from Covid-19 is very low compared to other causes that led to death between January and May 2020, according to the following information (Table 2):

Table 2. Covid-19 death rate in total deaths worldwide

Causes deaths worldwide	Value	Rate (%)
Communicable disease deaths	5,073,660	15.17
Seasonal flu deaths	190,300	0.57
Children under 5	2,970,740	8.88
Abortions	16,617,785	49.70
Mothers during birth	120,802	0.36
HIV/AIDS	657,017	1.96
Cancer	3,209,894	9.60
Malaria	383,363	1.15
Smoking	1,953,798	5.84
Alcohol	977,516	2.92
Suicides	419,112	1.25
Road traffic accident fatalities	527,588	1.58
<i>Covid-19</i>	335,582	1.00
TOTAL	33,437,157	100.00

Source: processing after Worldmeters (2020b)

Many analysts have pointed out the main problems caused by this virus, which are elements likely to generate the prospects of a potential crisis, such as: (Pricop, 2020)

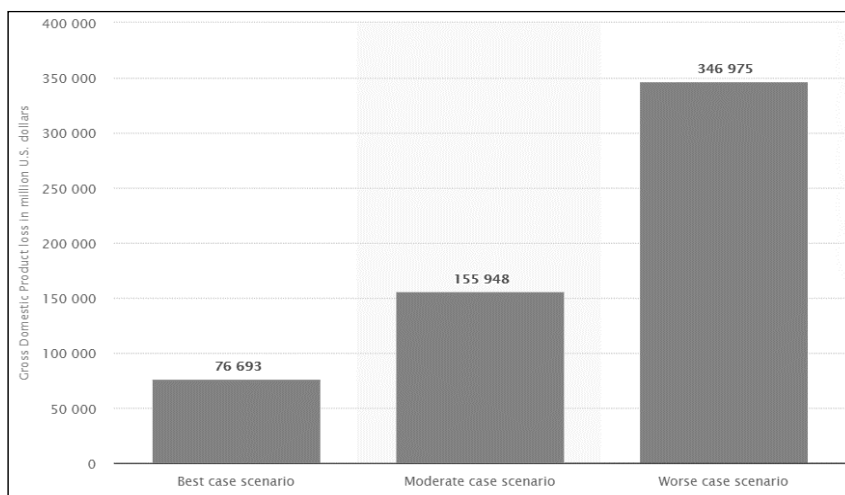
- Increasing delays or interruptions in supply, especially in China, the main exporter in the world;
- Significant fluctuations in resource tariffs (oil, gas, copper etc.);
- Significant decrease in global consumption, the main economic engine;
- Diminution or cessation of tourism and transport activity.

Global forecasts are not optimistic at all:

- The global economy is projected to contract sharply by –3 percent in 2020, much worse than during the 2008-09 financial crisis, according International Monetary Fund;
- According to the Organization for Economic Co-operation and Development (OECD) (2020), the world economy will record the lowest value of economic growth in 2009, respectively only 2.4%, compared to 2.9% as shown by data presented in November 2019;
- The economic fallout could include recessions in the U.S., euro-area and Japan, the slowest growth on record in China. Lost output is a total of \$2.7 trillion. (Orlik *et al.*, 2020)

In the best case scenario in 2020, which is defined as a two month duration of travel bans and a sharp decline in domestic demand, the monetary loss of global Gross Domestic Product (GDP) is expected to be about 76.7 billion U.S. dollars due to the coronavirus (COVID-19) outbreak, but in a worst case scenario, with

six month duration of travel bans, the global GDP is predicted to lose about 346.98 billion U.S. dollars, aspect represented graphically thus (Figure 2):



Source: (Statistica, 2020a)

Figure 2. Forecasted monetary global Gross Domestic Product (GDP) loss as a result of COVID-19 in 2020

Furthermore, in a survey conducted by the Association of Certified Fraud Examiners (ACFE) (2020), 90% of respondents reported that they have seen an increase in scams targeting consumers, with 51% believing the increase has been by a significant amount given that many activities were transferred in online mode.

4.2. Impact of the coronavirus pandemic on the European economy

In Europe, every country, whether or not it is a member of the European Union, has made its own decisions during this pandemic to avoid a brutal economic shutdown:

- **Italy** announced a series of measures to reduce the economic impact, including suspending the obligation to pay utility bills, taxes and mortgages for small businesses and households; the payment of 80% of the salary of all employees who are forced to become unemployed due to the cessation of production; prohibition of dismissals etc. About 25 billion euros are considered for this plan, but which will bring the budget deficit above the 3% limit;
- **Spain** has a plan to stimulate the economy with a budget of 18.23 billion euros; supplemented the budgets of local governments (€ 1 billion) and social services (€ 25 billion). Tax payments were postponed by 3 months, and 400 million euros were allocated for the tourism sector; (Mitroi, 2020)

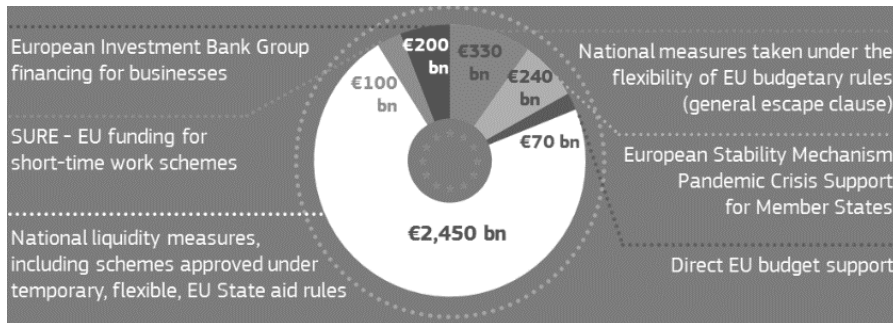
- According to Forbes (2020), **Portugal** has a special law for the temporary suspension of employment contracts for companies that have seen a 40% drop in sales in the last three months compared to last year due to the COVID-19 epidemic; the affected employees would receive 2/3 of the salary, ie at most 1,905 euros, of which 70% are paid by the state, and the rest by employers; launch of a € 200 million government credit line for companies whose turnover has fallen by more than 20% compared to the same period last year;
- In **Germany**, the work schedule has been reduced, the state offers unlimited guarantees for loans to companies through the development bank, KfW, and 750 billion euros have been allocated to save the economy through a package of measures to help companies and laid off employees, according to media reports (DIGI24, 2020);
- According to the media (Hotnews, 2020), **the United Kingdom** subsidizes salaries of up to £ 2,500 by 80% to avoid massive redundancies; The government offers £ 1 billion in aid to pay rents to 4 million disadvantaged families and postpones VAT on companies; state guarantees are provided for loans to companies amounting to 330 billion pounds; Bank of England reduces interest rate to an all-time low of 0.1% and increases asset repurchase program;
- **France** offers deferrals from taxes and social security contributions, tax credits for affected businesses and sums of money for SMEs and the intention to ensure payments to employees who cannot work from home has also been announced. (Mitroi, 2020)

To mitigate the negative effects of this virus on the living standards of the population and on the economy, the European Commission has adopted a wide range of economic measures (European Commission, 2020b). Specifically, the measures taken and published on the European Commission's website can be summarized as follows:

- Support for the recovery of tourism through promotion, a gradual and coordinated reopening of tourist services and units, as well as support dedicated to companies in this field;
- Immediate financial assistance, estimated at EUR 8 billion for European Union SMEs;
- Adoption banking package to facilitate the granting of loans to households and companies;
- Support for the agricultural sector through a package of exceptional measures (private storage aid, flexibility for market support programs, exceptional derogation from European Union competition rules), and according to the Temporary Framework for State Aid, total national support which can be granted to a farm amounts to EUR 120,000 or EUR 125,000;

- Temporary suspension of customs duties and VAT on imports of medical devices and protective equipment;
- Flexibility within European budgetary rules;
- Action relating to State aid;
- Launching tools such as:
 - SURE – *Support mitigating Unemployment Risks in Emergency*, which will provide Member States with financial assistance of up to EUR 100 billion in the form of loans on favorable terms;
 - *Investment initiative* and *Plus investment initiative* in response to the coronavirus, worth € 37 billion, to provide liquidity to small businesses and the healthcare sector;
 - *The Emergency Support Instrument*, which has € 2.7 billion in the European Union budget and is used to mitigate the immediate consequences of the pandemic and anticipate needs for exit from the crisis and recovery;
- Strategic funding for initiatives and operations to mitigate the economic effects of the coronavirus epidemic and save lives around the world.

An overview of the European Union's involvement in this pandemic is presented in the following figure (Figure 3):

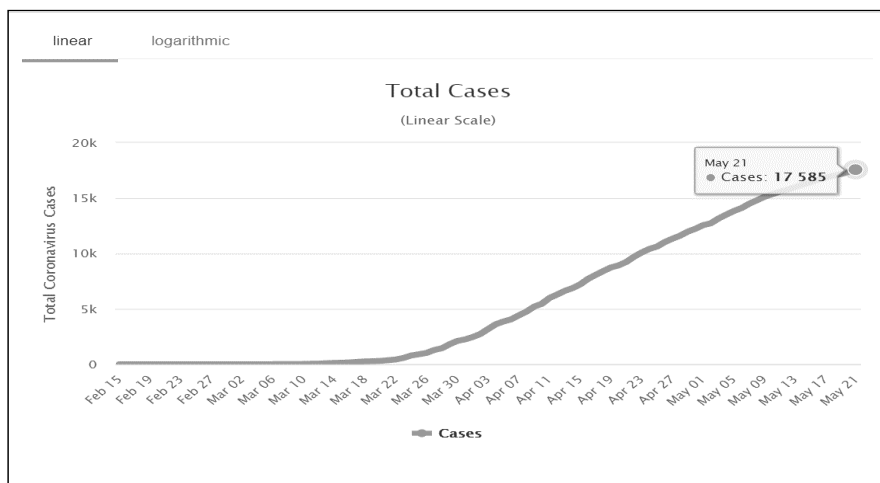


Source: (European Commission, 2020b)

Figure 3. Crisis EU economic response

4.3. Impact of the coronavirus pandemic on the Romanian economy

Romania is also among the countries that are affected by this new virus. If on February 26 there was only one case of infection with Covid-19, on May 21, the number of cases reached 17,585 (Figure 4).



Source: (Worldmeters, 2020c)

Figure 4. Total Coronavirus Cases in Romania

The transformations that appeared in the economic and social life in Romania, with the spread of the Covid-19 virus, are the following:

- On March 16, a state of emergency was declared, initially for 30 days, and later it was extended by another 30 days, and on May 15, the state of alert was established;
- Tougher measures have been taken for people who do not comply with quarantine or provide false information to the authorities, including prison sentences;
- On March 25, a full quarantine was declared, with traffic allowed in limited cases (work, food shopping, pharmaceuticals, exercise) and stricter restrictions for people over 65;
- Schools have been closed and classes are held online;
- While many companies have reduced or stopped their work, others have moved to the online environment and employees work by teleworking;
- Transport and border crossings have been restricted.

Following a questionnaire applied to 201 companies in Romania, the authors reached the following conclusions: (Nestian *et al.*, 2020)

- They were introduced methods for physical spacing between employees and teleworking;
- Average monthly revenues for 45% of them decreased by over 51%;
- At 80.60% of companies, the demand is lower than under normal conditions;
- 81% of respondents did not lay off employees due to the COVID-19 crisis, 9% said they fired between 1 and 10% of employees, and 35% of companies sent over 41% of employees into technical unemployment.

The most affected are SMEs that have reduced their activity by more than 50% or even closed it, and the most affected sectors of activity are *tourism, hotels, restaurants, catering (HORECA)*, passenger transport, and to some extent industrial production, and some services.

According to the National Commission for Strategy and Forecast (2020), the impact of the COVID 19 phenomenon on the dynamics of the economy at sectoral level is as follows:

- *Industrial production*: the negative impact on total industry on growth in the 3 months maximum affected (March – May) is about 19%, and the annual impact on the winter forecast for industry is 6.9 percentage points on growth, being affected in especially branches with a high share of exports;
- *Export of goods*: a negative impact at the level of 2020 is estimated at 11.3 percentage points compared to the winter forecast and a reduction of 7.3% compared to 2019;
- *Import of goods*: a decrease in imports of goods at the current year of 10.9 percentage points, and compared to 2019 is a reduction of 6.1%;
- *Transport services*: the negative impact was estimated at 11.2 percentage points compared to the winter estimate and 32.3% for the period March-May 2020;
- *Tourism, hotels and restaurants*: for the months of April and May are estimated reductions in turnover of 60% -70%;
- *Retail trade*: it is estimated that it will have a small decrease of about 4.9 percentage points annually compared to the winter version.

All these decreases led to the revision of the GDP dynamics in the coronavirus scenario by about 6 percentage points, respectively from + 4.1% to -1.9%.

According to the European Commission (2020a), the measures taken by the Romanian authorities include:

- the 2020 budget amendment, with an increase of total expenditures by RON 12.5 billion, from which 6.9 billion on social spending and 3 billion on emergency reserve fund;
- a benefit of 75% of wage but no more than 75% of the average wage to parents who cannot work remotely and have to stay home with kids younger than 12 years;
- supporting local businesses in the context of the crisis caused by the new coronavirus through OUG 29/2020 and OUG 30/2020 what including a package of measures (for example, technical unemployment and Intervention Fund of 15 billion RON to offer guarantees to SMEs for contracting loans for financing investment and working capital) and represents a budgetary effort of 2% of GDP;
- Speeding up VAT reimbursements;

- Suspending (or not starting) the forced execution of amounts due to the state budget;
- The change of the deadline for the payment of the tax on building, land and transport equipment (local taxes), which was postponed from 31 March to 30 June;
- During the state of emergency and +30 days after it has ended, tax obligations that become due and are not paid on time are not considered as being outstanding tax obligations;
- Approval of a draft GEO (33/2020) that stipulates a rebate for taxpayers who pay the corporate income tax by the April 25 deadline (5% for large taxpayers, 10% for remaining taxpayers) and during the period of emergency and 30 days after the cessation of emergency, VAT is no longer required for imports of medicines, protective equipment and other medical and sanitary devices that can be used to prevent, limit and combat COVID-19;
- SMEs with an emergency certificate issued by the Ministry of the Economy can postpone payment of utilities and rent for the duration of the state of emergency;
- Loan payment deferral by up to 9 months for debtors affected directly and indirectly by the coronavirus crisis.

Banks offer certain facilities to clients affected by the coronavirus crisis, too. It is notably a deferral of the repayment deadlines for loans (generally from 1 to 3 months).

The measures taken by the authorities to stop the spread of the virus were to restrict the movement of people and close some sectors of activity, which led to job loss and technical unemployment for many people (according to the Ministry of Labor and Social Protection (2020), on 11 May 2020 there were 337,593 individual employment contracts terminated and 908,346 individual employment contracts suspended).

Companies using information and communication technology (ICT), retail and courier services, and trade in food have not been affected. Moreover, some of these companies recorded an increase in activity during this period.

This crisis affects the state budget both in terms of reducing revenues and increasing certain categories of expenditures. From an income perspective, the reduction of economic activity of companies causes a decrease in household income and rising unemployment, which negatively affects the amounts collected in the form of taxes and fees, because many individuals and legal entities will not be able to pay them on time and in full. In terms of spending, this crisis has led to a considerable increase in spending on social assistance and public health services, and as this pandemic affects more people and extends over a longer period of time, this spending will increase. The reduction of revenues, cumulated with the increase of expenditures leads to the decrease of state investments and other

expenditures meant to support the national economy. If this situation persists for a longer period of time, a rectification of public budgets is needed in order to be able to deal with the exceptional situation caused by this virus and to avoid a financial deadlock at the level of the authorities in the next period.

5. CONCLUSIONS

The main problems generated by this virus worldwide are elements likely to generate the prospects of a potential global crisis. As we have seen in this study, a number of measures have already been taken, both nationally and internationally, in order to keep this pandemic under control and avoid an economic deadlock that could lead to a new crisis. Only through effective collaboration of international organizations, companies, professionals and authorities will be unable to prevent it.

In the future, we intend to analyze the impact of Covid-19 on national and international economic life, as well as to highlight the methods of removing the negative effects generated by this new pandemic.

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THE ROLE OF GREEN FINANCE. AN OVERVIEW

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Abstract

Green finance is a new phenomenon that integrates financial and economic development with environmental protection, emphasizing “green” and “finance”, two of which look as controversial issues, but in essence it creates the context of sustainable development. Firstly, this paper highlights the green finance theory and defines the national and international legal framework of the green finance in the EU; secondly, it establishes the state of the development of green finance in the EU, and identifies, on the one hand, success stories of implemented programs of green finance in Romania and, on the other hand, contradictions existing in the application of green finance in Romania and other states of the EU. The results will show that with efficient public policies, green finance helps to achieve ecological, social and economic balance.

Keywords: *green finance; public policies; economic growth.*

JEL Classification: F64, K32, O13, P48, Q01, Q56, Q58.

1. INTRODUCTION

The green finance approach is becoming more and more necessary in a context of a globally polluted society, which in order to develop sustainably will have to create harmony between the environment, economic and social. The responsibility of the states of the European Union in order to approach green finance is discussed at the international level through the supranational structures of which they are part or by adhering to different international treaties, pacts, agreements or international institutions, and is regulated at the national level through legal framework for all level of government (central and subnational government). Green finance in academics currently is more and more oriented to the detailed studies regarding to mechanism exploration, market research, public policies and so on.

The research focuses in the first part on the green finance theory based on literature review and legal framework and secondly, it establishes the state of the development of green finance in Romania as a member state of the European Union, and identifies contradictions existing in the application of green finance in countries of the EU. The results will show that from the aspects of public policies, green finance helps us to achieve ecological, social and economic balance.

The paper is structured as follows: section 2 provides a general view on literature on green finance; section 3 describes the state of green finance in the

European Union based on legal framework and specific indicators; section 4 focuses on few key facts of green finance in Romania, based inclusively on success stories; and section 5 summarizes the results and develop certain public policy recommendations.

2. LITERATURE AND LEGAL FRAMEWORK REVIEW

Literature defines green finance as comprising “all forms of investment or lending that consider environmental effect and enhance environmental sustainability” (Volz *et al.* 2015). Green finance provides a bridge between global environmental priorities and the financial system (CLC, 2016). The definition of the European Commission (2020a) for Green finance is the process of taking due account of environmental and social considerations when making investment decisions, leading to increased investment in longer-term and sustainable activities. Wang and Zhi (2016) consider that the green finance market is credit intermediary of environmental protection’s capital movement, and it adopts the way of serving to gather and allocate funds, and mandates the capital shortage of businesses and residents. In addition, green finance market can improve productivity. Green finance allows businesses, savers and investors to contribute to tackling pollution and climate change, while safeguarding long-term profitability (CLC, 2016).

Green finance incorporates ‘climate finance’ (clean energy, low-carbon transport, energy efficiency and climate resilience), as well as broader environmental and conservation finance to fund green growth and protect and restore natural environments, forest and water resources, biodiversity and ecosystems. Green finance is the environmental pillar of sustainable finance – the integration of environmental, social and governance (ESG) dimensions into financial decisions (CLC, 2016).

In order to measure sustainability within the financial system, key criteria (Maheshwari, Avendano and Stein, 2016) required include: i) resilience, that means the degree to which sector is capable of bearing risks; ii) efficiency, referring to the degree to which sector operates at cost at a societal level, iii) efficacy, that means the degree to which the sector serves the real economy from a societally appropriate perspective; and iv) transparency which is essential to ensure effective decision making.

According to the literature (Volz *et al.* 2015), on the one hand a combination of market and government failure may obstruct green investments. On the other hand, green finance market is one of the most important levers regarding to macroeconomic regulation and control (Wang and Zhi, 2016). Thus, both public policies are essential and the functioning of the market economy optimally because they intertwine. Tax reform movements imply undoubtedly coming challenges with impact to policy coordination and initiative against heterogeneity of taxes (Tofan and Vatamanu, 2019). Various categories of public expenditures

have a positive impact on sustainable economic growth (Lupu *et al.*, 2018). Even the public debt has its role in substantiating sustainability. Public indebtedness may fuel economic growth, once public debt breaches a certain threshold the effects are negative on economic sustainability (Bilan, 2015; Bilan and Ihnatov, 2015). The governance of public and private institutions, including management structures, employee relations and executive remuneration, plays a fundamental role in ensuring the inclusion of social and environmental considerations in the decision-making process. All three components (environmental, social and governance – ESG) are integral parts of sustainable economic development and finance (European Commission, 2020a).

In the opinion of Wang and Zhi (2016), the policies include two aspects:

- i) the reform and innovation of existing financial tools, an exploration of the type of fiscal policy and the feasible way to raise money for green finance development; and
- ii) the reform of existing fiscal revenue management and distribution policy, namely the efficiency and direction in the use of fiscal funds.

Through financial institutions handling monetary funds, currency funds movement promotes commodities trading according to the market demands, bonds various factors of production rapidly and forms new productivity. Capital supply can adjust social total demand. Through the financial leverage effect, green finance market can adjust the size, speed and structure of economic development. (Wang and Zhi, 2016). Whether it is directly invested for eco-friendly projects, or invested by equity in related industries, it needs relatively long investment cycle. In particular, some projects of large infrastructure construction often do not have money in the early stages of the investment, the recycling condition, therefore, also limits the relevant projects' ability of absorbing funds.

Hence, to deal effectively the contradictions between green finance and ecological protection, first of all, the policies need to find funds that match with the term structure of projects; secondly, the relevant subjects can issue financial derivatives, such as asset securitization products, to change the term structure of the project; finally, the policies should improve green finance market activity through developing ecological finance, constructing climate derivatives market and other secondary financial markets related to ecological protection, thereby directly improving the liquidity of related investment.

Wang and Zhi (2016) identify the types of green financial products as can be seen in Table 1.

Table 1. Types of green financial products

Environmental Funds and Biodiversity Funds	These funds represent financial support directly to the projects of conserving biodiversity or indirectly to business activities of protecting the area of biodiversity (e.g., organic agriculture, ecological tourism, sustainable development of forest and fishery).
Debt-for-environment Swaps	Creditor country and less developed country reach an agreement that the debt of less developed country can be exempted on the premise that less developed country should provide sources of funds to environmental fund that is often important to protect biodiversity.
Forestry Securitized	The enterprises of forestry exploitation which set up securities transfer all of the business profits to a new legal subjects which then will obtain funds from the investors by issuing securities in the capital market and will loan the revenues to the enterprises of forestry exploitation, for instance, the system of mitigation banking of wetland and endangered species in the United States and the system of tradable native vegetation obligations in Brazil.
Weather Derivatives	These new financial products can handle the negative financial losses caused by changes in climate condition. If the level of climate change exceeds the prescribed standard, the enterprise signing weather derivative contract may require a certain amount of compensation.
Nature-linked Securities	It can transfer the risk of natural disasters and climate change to investors in global capital market. The sponsors of the natural disaster securities generally set up a special purpose vehicle (SPV) and then issue debt securities. SPV and the sponsors follow that SPV agrees to pay compensation to sponsors in the event of natural disasters on condition that the sponsors must pay a certain amount of insurance fee to SPV regularly.
Green investment funds	Investment companies and trust funds invest in accordance with the “environmentally friendly”, “moral”, “green”, “social responsibility” or “sustainable” standards, for instance, many investment companies decline investment in securities of companies which produce pollution. The Equator Principles (EPs) (2020) is a risk management framework, adopted by financial institutions, for determining, assessing and managing environmental and social risk in projects and is primarily intended to provide a minimum standard for due diligence and monitoring to support responsible risk decision-making.

Source: (Wang and Zhi, 2016)

The most active countries which develop debt-for-environment swaps projects are the United States, Sweden and Germany, benefiting more than 30 countries. One of the most influential debt-for-environment swaps project is the one between the government of the United States and Poland that achieved the value of about \$370 million.

3. IMPLEMENTATION OF GREEN FINANCE IN THE EU

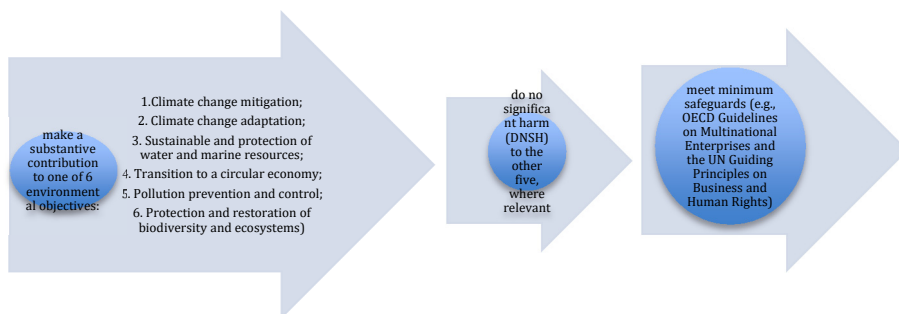
In accordance with the Paris Agreement on climate change (UNFCCC, 2015) and the UN 2030 Agenda for Sustainable Development (United Nations General Assembly, 2015), the EU has committed to three ambitious climate and energy targets by 2030: i) Minimum 40% cut in greenhouse gas emissions compared to 1990 levels, ii) At least a 27% share of renewables in final energy consumption, iii) At least 30% energy savings compared with the business-as-usual scenario. To reach these goals, European Commission needs an extra €180bn a year. This number rises to €270bn when including goals for the energy, transport, water and waste sector as a whole, according to data by the European Investment Bank.

European Commission (2018) adopted The Action Plan on Sustainable Finance (Action Plan on Financing Sustainable Growth) in March 2018, which states that sustainability and the transition to a low-carbon, more resource-efficient and circular economy are key in ensuring the long-term competitiveness of the EU economy and sets out a comprehensive strategy to further connect finance with sustainability and its key actions include:

- i) establishing a clear and detailed EU classification system or taxonomy for sustainable activities, that will create a common language for all actors in the financial system;
- ii) establishing EU labels for green financial products that will help investors to easily identify products that comply with green or low-carbon criteria;
- iii) introducing measures to clarify asset managers' and institutional investors' duties regarding sustainability;
- iv) strengthening the transparency of companies on their environmental, social and governance (ESG) policies;
- v) introducing a *green supporting factor* in the EU prudential rules for banks and insurance companies, which means incorporating climate risks into banks' risk management policies and supporting financial institutions that contribute to fund sustainable projects.

The European Commission (EC) setup a Technical Expert Group on Sustainable Finance (TEG) in June 2018 to support the implementation of measures identified in its 2018 Action Plan on Financing Sustainable Growth and to assist it in developing: i) an EU classification system called EU taxonomy to determine whether an economic activity is environmentally sustainable; ii) an EU Green Bond Standard; iii) methodologies for EU climate benchmarks and disclosures for benchmarks; and iv) guidance to improve corporate disclosure of climate-related information.

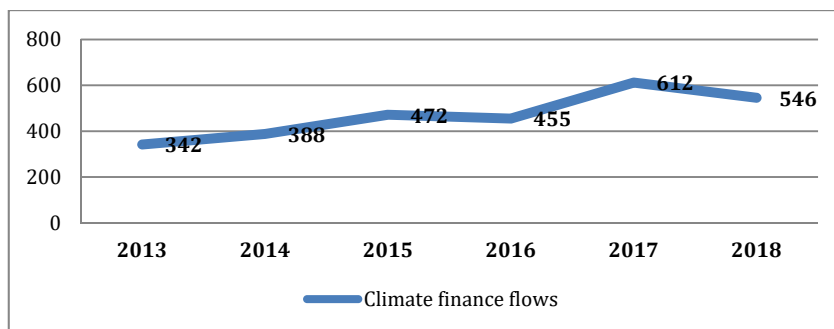
The EU Taxonomy is a tool to help financial market participants (offering financial products in the EU, including occupational pension providers); Large companies (who are already required to provide a non-financial statement under the Non-Financial Reporting Directive); The EU and Member States (when setting public measures, standards or labels for green financial products or green (corporate) bonds) navigate the transition to a low-carbon, resilient and resource-efficient economy. The Taxonomy sets performance thresholds for economic activities in three steps, as can be seen in Figure 1.



Source: computed by the author, based on TEG (2020)

Figure 1. Performance thresholds for economic activities set by the EU Taxonomy

In this context, financial system has a key role to play in that transition by reorienting private capital to more sustainable investments, fostering more transparency and long-termism in the economy.



Source: computed by the author, based on data of Green Finance Platform (2019)

Figure 2. Climate finance flows – global (USD billion)

According to the Figure 2, climate finance flows started from USD 342 billion in 2013, reached a record high of USD 612 billion in 2017, being followed by a 11% drop in 2018 to USD 546 billion.

4. KEY FACTS OF GREEN FINANCE IN ROMANIA

The implementation of green finance in Romania is complex, but in small steps, targeting all aspects mentioned by Wang and Zhi (2016), and moreover it has assumed the fulfillment of certain objectives as an EU member state, such as those established by the Strategy Europe 2020, but also other objectives set by the international agreements to which it has acceded, such as *UN 2030 Agenda and Sustainable Development Goals* and the *Paris Climate Agreement* adopted in 2015. The Paris Climate Agreement, in particular, includes the commitment to

align financial flows with a pathway towards low-carbon and climate-resilient development.

Ecological tourism is developing in Romania more and more. Ecotourism focuses on direct and personal experience in nature, takes place within nature and is based on its use, respectively its geomorphological, biological, physical and cultural characteristics (AER, 2020). For example, ecotourism and its principles are approved and promoted by the Romanian Ecotourism Association (AER) and are based on two international models: Nature and Ecotourism Accreditation Program developed by the Australian Ecotourism Association and Nature's Best, the accreditation system promoted by the Association of Ecotourism in Sweden. From an AER perspective, these principles need to be put into practice by both those who develop ecotourism products and those who plan to develop an ecotourism-based area.

Ecotourism activities and their planning must provide best practices in tourism and planning in terms of nature conservation and sustainable development. Tourism activity must be planned and carried out in such a way as to reduce the impact on nature. Ecotourism involves participation in the conservation of visited natural areas, providing constructive ways for good management and conservation of these natural areas (e.g. providing financial assistance in rehabilitation of natural areas, collection of waste left by tourists or contribution to conservation organizations). The ecotourism provides sustainable contributions to the development of local communities, using local guides, buying local goods and services, and using local facilities, highlighting the cultural component of the area visited and contributing to the conservation of this component. Ecotourism activities and their planning must ensure a reduction of the negative impact on the local community visited and on their lifestyle, while providing long-term constructive contributions to these communities (AER, 2020).

One of the measures approved for energy efficiency indicator of The Strategy 2020 Europe (European Commission, 2010) in Romania is the Thermal Rehabilitation Program of the blocks of flats, based on Fiscal Code (Law 571/2003, art. 456 (m)) and regulated by GEO no. 18/2009, with the subsequent modifications and amendments and the Methodological Norms for the application of GEO no. 18/2009 and Law no. 158/2011 approved by OMRDH no. 163/2009, with subsequent amendments. This program establishes the intervention works to increase the energy performance of apartments of the blocks of flats, built according to projects developed between 1950-1990, as well as the stages necessary to carry out the works, how to finance them and the obligations and responsibilities of public administration authorities and Owners Associations.

The objectives of this program are five, as following: i) Improving the conditions of hygiene and thermal comfort; ii) Reduction of heat loss and energy consumption; iii) Reducing maintenance costs for heating and hot water

consumption; iv) Reduction of pollutant emissions generated by energy production, transport and consumption; v) Preserving the architectural, environmental and chromatic integration value in the urban environment.

The financing from the program is 80% provided from the state and local budget, and the Owners Association finances with 20% of the total cost of the rehabilitation works. The percentage of 20% of the total rehabilitation work is divided between all the owners, each one having a share depending on the individual share that belongs to each owner. If the association, one or more owners cannot pay their share, the local mayor's office can partially or fully take over the costs and can decide how the amount of money will be recovered later. The financing of 80% of the thermal rehabilitation cost is ensured as follows: 50% from the state budget, through the Ministry of Regional Development and Public Administration, within the funds approved annually for the National Program on increasing the energy performance of apartment buildings; 30% from the local budget, within the limits of the funds approved annually for the Local Program on increasing the energy performance of apartment buildings.

The European Bank for Reconstruction and Development (EBRD) developed several programs for Romania (EBRD, 2020):

- i) Green Economy Financing Facility (GEFF) – a credit line facility of up to €70 million to participating financial institutions in Romania to on-lend for energy efficiency and renewable energy in the residential sector;
- ii) Romania Sustainable Energy Financing Facility (RoSEFF) – a €75 million credit line facility to participating financial institutions to on-lend to SME companies and housing associations for energy efficiency and renewable energy projects;
- iii) Municipal Energy Efficiency Financing facility (MFFEE) – a €17 million credit line facility to participating financial institutions in Hungary and Romania for on-lending to municipal borrowers for energy efficiency and renewable energy measures; and
- iv) Energy Efficiency Finance Facility (EEFF) – a credit line facility of up to €100 million to participating financial institutions in Romania and Bulgaria to on-lend to private companies for energy efficiency projects.

For Municipal Energy Efficiency Financing facility (MFFEE) the beneficiary was Bucharest where the €4.03 million investment allowed a reduction in the public lighting energy consumption by 118 MWh per year (38%), the public operator being The Luxten Lighting Company, and bank BRD Société Générale (BRD) for financing of this project.

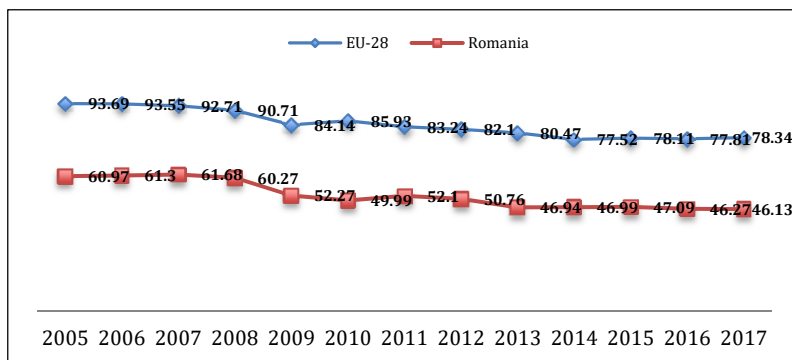
An important application belong to UniCredit Bank Romania SA and UniCredit Consumer Financing IFN SA in 2017 through a loan of up to RON 206 million (€45 million equivalent) (EBRD, 2017) . The funds were on-lent to households seeking to invest in energy efficiency improvements (such as heating, water and electricity, as well as additional building enclosures such as walls,

windows and roofs) for their homes, and expanding the availability of green solutions for the residential sector. The EBRD has channelled some €4 billion in green financing through similar programmes in 24 countries to date. Green Economy Financing Facility (GEFF) is part of the EBRD’s Green Economy Transition approach, under which the Bank aimed to dedicate 40% of its annual investments to climate finance by 2020.

In 2017, the EBRD has invested over €525 million in 26 projects in Romania and will reach almost €8 billion in cumulative investments in the country by the end of the year.

Although there are relevant programs for the energy efficiency/ performance indicator, however for energy efficiency/performance no data are available at the European Commission for Romania. The EU target for 2020 was 1483 Mtoe and for Romania national target for 2020 was 43 Mtoe.

From the perspective of the other two indicators corresponding to green finance theory, based on the 2020 Strategy, Romania is in comparison with the EU according to Figure 3 and Figure 4.



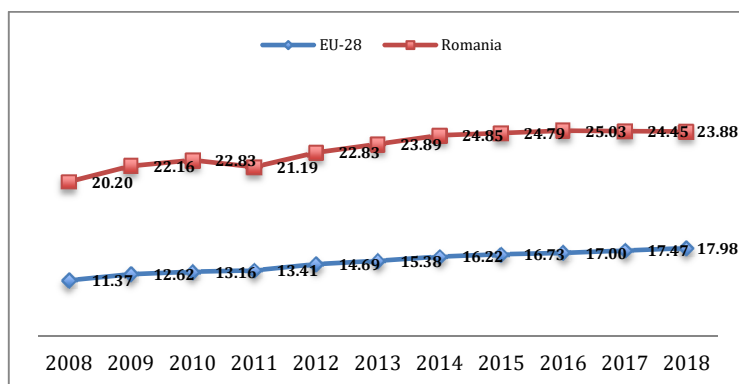
Source: computed by author, based on data of European Commission (2020b)

Figure 3. Greenhouse gas emissions, base year 1990, over the period 2005-2017

According to Figure 3, Greenhouse gas emissions is low in Romania compared to the EU-28 average, this gap being relatively identical over the period 2005-2017. In the case of the EU-28 average, the level of Greenhouse gas emissions decreased from 93.69% in 2005 to 78.34% in 2017. In the case of Romania, the highest level in 2005 is 60.97% and the lowest in 2017 of 46.13%. Under the given conditions, we can say that the level of Romania in 2005 is not yet reached by the EU-28 in 2017. The EU target was 20% less compared to 1990 levels, and Romania target was 19% less compared to 2005 levels. Romania failed to reach the level of 19%, with a decrease of only 14.84%.

Globally, the sun provides 10,000 times the energy consumed by the population – free energy to anyone who wants to capture it. It can be used as solar thermal energy and photovoltaic energy. In the case of Romania, a factor

restricting the development of solar energy is the lack of an adequate financing system. The financing system should take into account renewable energy processors and user demand in order to better promote the widespread use of renewable energy.



Source: computed by author, based on data of European Commission (2020b)

Figure 4. Share of renewable energy in gross final energy consumption

The EU target was 20% more from renewable sources and Romania target was 24% more from renewable sources. According to Figure 2, Romania has a higher share of renewable energy in gross final energy consumption compared to the EU-28 average. Thus, in 2008 the lowest level of 20.20% for Romania and 11.37% for EU-28 was registered. The highest level is registered in 2018 of 23.88% for Romania and 17.98% for EU-28. In the case of Romania, the increase was about 6.5%, and for EU-28 about 4.68%, but nevertheless the EU-28 level in 2018 does not reach the minimum level of Romania registered in 2008.

5. CONCLUSIONS

Green finance becomes inevitable in a society whose principles are based on sustainable development. It is important that states all over the world harmonize globally green finance. From the perspective of public policies and legal framework, it is a real challenge to design effective incentives and guidelines to implement green finance without greater clarity of concept definitions, appropriate baselines, robust measurement of finance flows, impacts and performance on greening the financial sector (Maheshwari, Avendano and Stein, 2016).

Regarding public strategies and policies, EBF (2017) recommends effective public-private cooperation and an alignment of public strategies and policies with the needs of the private sector, including the financial industry. In this context, the EU needs to define a long-term EU sustainability strategy and agenda and pathway up to 2050 to align long-term sustainable finance developments with political

objectives and Member States should answer with coherent national initiatives under the alignment of EU framework (EBF, 2017). Another recommendation to ensure that financial and environmental policies and the relevant regulatory framework are coordinated across government agencies and departments in their promulgation, implementation and enforcement (EBF, 2017). EU develop in present a common taxonomy.

Romania is a country that has already a strategy on green finance and is trying to implement it, the progress being in 'in small steps'. Romania, however, needs significant progress in sustainable finance, and the interactive effect of green finance of the European Union will determine a positive evolution of Romanian green finance.

In conclusion, the EU sustainable finance developments should be aligned with political objectives, clarity and certainty of policies and regulatory environment combined with an appropriate industrial strategy. Each sector of activity should be included in EU Environmental Climate Change (ECC) risk classification and based on this to set high-level policies for credit allocation. Each sector of activity should benefit by technical assistance of public entities. Monetary policy should be oriented through specific measure such as accepting certain green assets as collateral for central bank loans.

Green Finance can be stimulated via harmonization through: a common accepted taxonomy; a common disclosure framework; a common standard and labelling on green bonds; green lending principles; and standardization of contracts and risk performance analysis.

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REGIONAL DEVELOPMENT AND SUSTAINABLE LOCAL FINANCES – A COMPARATIVE STUDY

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Abstract

Regional economic development and social cohesion have been always subjects of great interest among global issues. Despite the numerous international and national policies and the huge amounts of funds allocated to this matter, the European landscape still reflects very large inter- and intra-regional disparities, where the GDP per capita in rich regions may be two thousands higher than GDP per capita in the poorest regions. In this regard, a crucial role for alleviating regional disparities and stimulating social and economic development belongs to local finances and the public local policies. Sustainable local finances may play a very important role for stimulating the potential of territorial economy and social cohesion, in respect of the fiscal federalism theories and its principles. In this context, the aim of our paper is to analyse the links between local finances sustainability and regional development (measured through specific indicators), using dates from Eurostat and other international reports in the European context. Our results confirm that sustainable local finances could positively influence regional development and social cohesion, validating local policies as parts of the macroeconomic policy vision and the role of local budgets as financial levers with an important potential for economic and social development.

Keywords: *sustainable local finance; regional development; social cohesion; public policies.*

JEL Classification: H11, H72, I31

1. INTRODUCTION

Differences in regional development have always existed and the resolving process of this issue will persist for a long time to come, given its complexity by the scientific meaning of the term, the fact that there is no unanimous form of measuring the level of development, but especially that a certain level of development may be perceived differently by certain groups of people.

The current realities make it clear that all over the world there is a permanent challenge in terms of aligning policies to reduce disparities in regional development to the evolution of the economy, characterized by rapid growth trends in parallel with stagnant or declining trends. To these are added the involuntary, uncoordinated or inadequate actions of public authorities of the

allocation of financial resources, which can also increase inequalities in regional development and social cohesion.

In this context, we rely on the potential of local authorities, which in the conditions of a multi-level governance and in the conditions of sustainable management of local public finances and by taking advantage of opportunities for horizontal collaboration between municipalities, these would be able to conduct regional policies in order to reduce regional disparities and improve regional competitiveness in the spirit of the principles of democracy, equality, solidarity, equity and cohesion.

2. LITERATURE REVIEW

The state has a crucial role regarding regional development and social cohesion and there could be many ways in achieving these targets and also the results can differ for each and one case (Capello and Nijkamp, 2019). According to Capello and Nijkamp (2019) the most important public policies in matter of regional development relate to stimulating job creation in lagging regions by supporting in various ways private enterprises.

The major role of the state in regional development and social cohesion is also reflected from the perspective of the moment when it acts in this sense. Firstly, public authorities can be directly involved by conceiving and leading public policies in the domain, through regulation, public reforms and public resources specially allocated with this purpose. Secondly, the state is also responsible for regional development through the pre-conditions created in local areas in the various domains of social and economic life, until the moment of leading those intended development policies. In other words, the catching up process also depends on these preconditions: the levels of basic and advanced education, good social infrastructure (Datt and Ravallion, 2002), rural and human resources development, a more egalitarian distribution of the land (Datt and Ravallion, 2002; Nayyar, 2002), good governance (Nayyar, 2002). Unfortunately, the same researches also revealed that the so-called pre-conditions may maintain or increase the inequality among regions and that these actions are rather unintended. However, in addition to these, regional incomes have deepened quite a lot in the context of globalization, as wealthy regions have been able to attract domestic and foreign investment, contrary to poor regions, which were lagging behind. Similar point of view could be found at Capello and Nijkamp (2019) and Krugman and Venables (1995), sustaining globalization as a very powerful factor promoting regional disparities.

Directly addressing the relationship between local budgets and regional development suggested by the title of this article, we found research in the field confirming the role of local governments in regional development. Dollery and Johnson (2005) stated that local budgets have a critical role in the economic efficiency of municipal service delivery, considering the main functions of local

authorities: administration, representation and participation. In line with this, Kelly, Dollery and Grant (2009) also claimed that local councils are confident in building up partnerships with other public local authorities, private sector and other social organisations, suggesting practical actions through which local governments can influence economic and social life. Regarding the interrelationships between various local actors (municipal associations, public-private partnerships), Bercu, Tofan and Cigu, (2015) argued that territorial development represents “*the manifestation of local solidarity, creating new social relation which manifest will of the residents of a region to capitalize on local resources*” and for certain the local authorities have a crucial role in stimulating social and economic development.

Further on this issue, there are many researches in the field arguing for a connection between fiscal decentralization (which could be interpreted as result of local budgets consolidation and as promoting local finances sustainability) and regional disparities. Kyriacou, Muínelo Gallo and Roca Sagalés, (2015) found that fiscal decentralization stimulates regional convergence but only in countries with quality governance, whereas in poor governance settings, fiscal decentralization may deepen regional disparities. Similar results were found also by Bednářová and Laboutková (2014), legitimating the fact that decentralized public competences and local fiscal powers could be better administrated and could promote local financial sustainability only in condition of respecting the principles of good governance. However, Curto and Dias (2014) believe that the decentralization process promotes economic growth.

From another perspective (Rodríguez-Pose and Ezcurra, 2010) claimed that fiscal decentralization has positive effects on regional development in high-income countries, whereas in medium income countries this leads to an increase in region disparities and the positive effects of political decentralization can't counteract its effect. On the other side, in the research of Sacchi and Salotti (2011) high degrees of tax decentralization are associated with high income inequality and lower degree of expenditure decentralization is associated with high regional disparities. Overall, Laboutková, Bednářová and Valentová (2016) concluded that among the countries with the same degree of decentralization the economic imbalances varies consistently, meaning that the decentralization is not the only factor influencing the regional economic imbalances or that a high degree decentralization automatically promote regional cohesion. Regarding political decentralization, Ezcurra and Rodríguez-Pose (2013) found that there is no empirical evidence between this and economic growth in the countries of OECD.

Along decentralization of public expenditures and revenues, local finances sustainability can also be expressed through the local budget balances, the level of local debt and especially through the fiscal autonomy.

Local indebtedness, as an alternative of consolidating local resources, holds a very important role in gathering additional resources at local budgets. Some

authors (Oprea and Bilan, 2011) claim that these additional resources may be vital for financing the development needs. Therewith, it is recommended that these resources to be used only for public investment (Shah, 2007; Swianiewicz, 2004) that permits to local budgets to recover the amounts invested and to pay back their loans. Otherwise, an inappropriate local financial management, disregarding the “the golden rule” of public borrowing, would lead to dramatic increases of local debt, which in the end, accordingly to Wu (2010) and Tsui (2011), would affect the sustainability of local finances.

Local financial autonomy, expressed through own financial resources as large as possible, is argued to lead to a better allocation of resources, participation of citizens in the decision making-process, more accountability of the public authorities and local competition (Andrews and De Vries, 2007; Hankla, 2009). Also, accordingly to Ladner *et al.* (2019) local autonomy manifest positive effects in society regarding the democracy, the stability of politics and economic growth and development. The same researchers also believe that municipalities are very important actors in many states and societies and that their role is reinforced by the fact that citizens manifest a higher level of trust in local authorities than central ones.

In line with the above and by the virtue of fiscal federalism theories we also agree that fiscal (and political) decentralization and local autonomy leads to a better allocation of local financial resources, which further conducts to higher quality public goods and services provision at territorial level. In the end, we claim that local finances in conditions of sustainability (local budgets equilibrium, local sustainable debt, local fiscal autonomy, capacity of self-financing) may promote regional development and social cohesion.

3. IMPLICATIONS OF LOCAL BUDGETS ON REGIONAL DEVELOPMENT

Local and regional development nowadays includes complex aspects of economic, social, political, cultural and environmental life, and a significant obstacle in this regard is the lack of territorial competitiveness associated with unused development potential at this level, as Laboutková Bednářová and Valentová, (2016) claim, that territorial development and cohesion is related to potential mobilization. Economic and social development is very important and is always a current topic because in the end it is associated with the welfare of the citizen, but it should be noted that wellbeing is different perceived, function what people consider to be valuable for them and their community, the same actions and the same results may be considered appropriate “development” for ones and inappropriate or insufficient for others.

Generally, it is believed that policies as liberalizing economies, promoting competition and reducing the role of the state will lead to the convergence of regions (Pike, Rodríguez-Pose and Tomaney, 2007) while good governance was

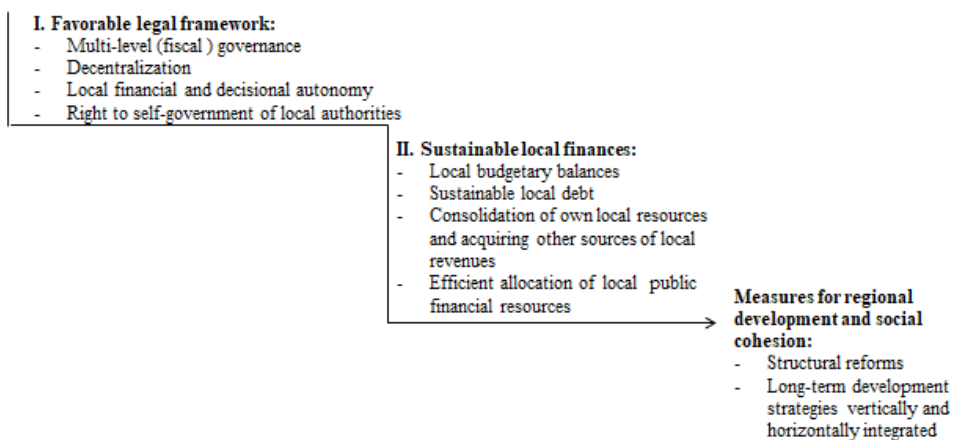
associated since few decades ago with the economic liberalism (Hewitt de Alcántara, 1998). From a personal perspective, the fear that the state could have an exacerbate expansion in the economy it is not justified, as the state intervention should be permanent accounted according to the values and virtues of the private sector and especially it is for stimulating, supporting and enhancing the private sector without leading or substituting it. The local and regional development policy aims to tame and regulate the markets in order to ameliorate their tendencies of instability and their tendencies towards unequal results from an economic and social point of view, against to the common aspirations of both the private and public sectors on balanced, cohesive and sustainable local and regional development (Pike, Rodríguez-Pose and Tomaney, 2007).

In a personal view, the way in which the public sector and (local) public finances play a crucial role in economic development and social cohesion is as follows. First of all, there is a need for a legal framework to establish multi-level (fiscal) governance, in which to prioritize modern democratic principles, such as: decentralization, local autonomy (financial, decision-making) and the right to self-government. On this background, the specific weight regarding the design of regional development policies must fall to local and regional authorities, giving the background of the current reality according to which “the region becomes to a certain extent the common factor for reporting different socio-economic developments” (Oprea, 2011). In this sense, we note that local budgets are no longer small components in the budgetary system or just a chapter included in the state budget, the area of their manifestation being much amplified, which implies a greater role in development policies and basically transforming local budgets into financial levers for economic and social development. In other words, it is necessary to note a shift of the central vision of macroeconomic policy at the territorial level, so that it reflects the sum of local visions, different from the situation in which decisions in this area belong exclusively to the central area of government. In the new configuration of the budgetary-administrative system, the macroeconomic policy reflects the summation of the provisions for the development of local budgets as main actors, and the central authorities have the role of ensuring their harmonious merger and ensuring a stable and predictable legal support.

Secondly, after justifying and accepting the role of local budgets as actors of social and economic life, there is an essential need for sustainable management of local public finances in order to support economic development policies and social cohesion at the regional level. The sustainability of local finances includes several facets of their manifestation, namely: maintaining a budgetary balance, sustainability of local public debt, consolidating own financial resources and obtaining revenues from other sources than their own (loans, non-reimbursable financial resources, public-private partnerships etc.), the efficient allocation of public financial resources by destinations (optimal proportions between current

and investment expenditures, the allocation of sufficient resources for education, as human capital is a primary development factor, along with material and financial capital).

Having the above described legal framework and the mentioned operational instruments, the public authorities in the territory must conceive and implement structural reforms and long-term development strategies, vertically integrated with the national and international ones (as they may depend on the financing from these levels of governance), but also horizontally coordinated, through the initiation of metropolitan, inter-municipal or inter-regional associations.



Source: the author

Figure 1. The influence of the public sector on development and social cohesion

The objectives of the long-term regional development policy must be oriented towards increasing competitiveness and territorial equity and to integrate broad economic and social areas in investment projects, having confirmed that the efficient allocation of public financial resources contributes to economic growth (Oprea *et al.*, 2019; Aydin and Esen, 2019; Easterly and Rebelo, 1993) and that the level of the development of a territory is almost entirely assimilated to the finalities (results) of public policies (Pike, Rodríguez-Pose and Tomaney, 2007).

4. GOOD PRACTICES OF REGIONAL DEVELOPMENT AND SUSTAINABILITY OF LOCAL PUBLIC FINANCES

Being a dynamic concept, development has different meanings for different people. This can be perceived as an increase in income, as a quality of life, and for some people it can only mean meeting basic needs. However, it seems unanimously accepted that development refers to growth, expansion, use of potential (of something/ someone) at its full capacity to achieve certain goals. If

it is planned by the state, development has the role of economic growth but also of social structural change, so that often, the most used indicator in measuring it is the GDP, as we find in many researches: Maddison (1983), Fratesi and Perucca (2019), Kubiszewski *et al.* (2013).

Table 1 reflects the rank of the GDP/ capita for the richest and the poorest regions (NUTS 2) of the Member States, in order to reflect the current discrepancies in matter of development on the European Union territory.

According to these ranks there are considerable differences in the GDP/ capita indicator at European regional level. Inner London is the richest region in Europe with a GDP per capita more than double compared to the next region on the rank. Other rich regions in the European context are in Ireland, Belgium, Denmark, Germany, Sweden, France, the Netherlands, Finland and Austria. The poorest regions are in general in Eastern countries (Bulgaria, Romania, Poland and Hungary). Besides the visible interregional disparities (at European level), it also must be mentioned that there are noticeable intra-regional disparities (at country levels).

Table 1. GDP per capita in European regions, 2018

No. crt.	Region (NUTS2)	GPD/ capita	No. crt.	Region (NUTS2)	GPD/ capita
1	UKI3 – Inner London – West	213,400	1	BG31 – Severozapaden	5,200
2	LU00 – Luxembourg	98,600	2	BG32 – Severen tsentralen	5,400
3	IE05 – Southern	78,700	3	BG42 – Yuzhen tsentralen	5,600
4	IE06 – Eastern and Midland	73,400	4	BG33 – Severoiztochen	6,400
5	BE10 – Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest	69,400	5	BG34 – Yugoiztochen	6,500
6	DK01 – Hovedstaden	66,800	6	RO21 – Nord-Est	6,600
7	DE60 – Hamburg	64,800	7	RO41 – Sud-Vest Oltenia	7,900
8	SE11 – Stockholm	62,600	8	RO31 – Sud – Muntenia	8,100
9	FR10 – Île de France	59,700	9	PL81 – Lubelskie	8,700
10	NL32 – Noord-Holland	58,700	10	RO22 – Sud-Est	8,700
11	DE21 – Oberbayern	58,600	11	HU32 – Észak-Alföld	8,800
12	UKI4 – Inner London – East	57,000	12	PL62 – Warminsko-Mazurskie	8,900
13	NL31 – Utrecht	55,000	13	PL82 – Podkarpackie	9,100
14	FI1B – Helsinki-Uusimaa	54,800	14	PL84 – Podlaskie	9,200

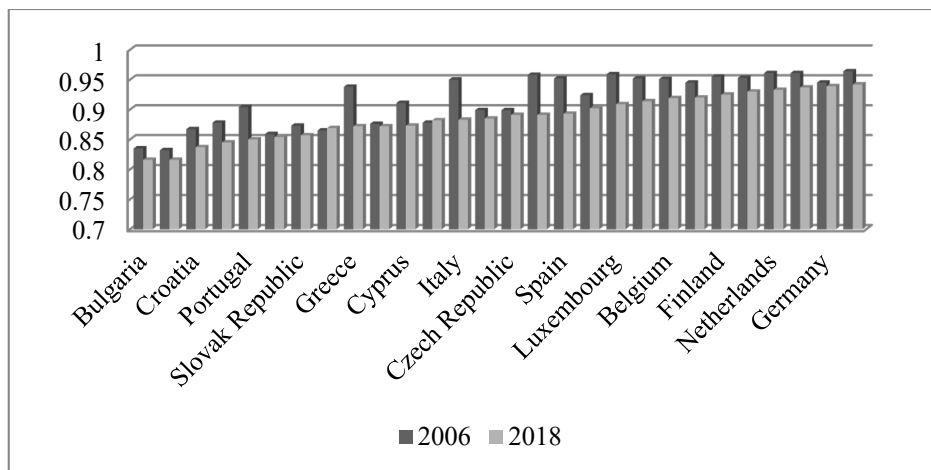
No. crt.	Region (NUTS2)	GPD/capita	No. crt.	Region (NUTS2)	GPD/capita
15	AT32 – Salzburg	52,400	15	PL72 – Swietokrzyskie	9,300
16	DE71 – Darmstadt	52,100	16	HU23 – Dél-Dunántúl	9,400
17	DE11 – Stuttgart	51,600	17	HU31 – Észak-Magyarország	9,400
18	AT13 – Wien	51,000	18	RO11 – Nord-Vest	9,800
19	UKJ1 – Berkshire, Buckinghamshire and Oxfordshire	49,900	19	RO12 – Centru	9,900
20	DE50 – Bremen	49,400	20	FRY5 – Mayotte	10,000

Source: (European Commission, 2020)

The GDP per capita divergence began to worsen after the financial crisis of 2008, but recent studies (Alcidi *et al.*, 2018a, 2018b) show that inequalities have diminished, driven by rapid economic and productivity gains in large cities with the suburbs left behind. In this regard, the European Committee of the Regions emphasizes the crucial role of territorial development policies and the importance of implementing the sustainable development objectives at this level.

Beyond the level of the GDP, many authors argue that it cannot reflect the true measure of a community's development or progress (Fleurbaey, 2009; Aitken, 2019; Costanza *et al.*, 2009). According to the academic literature, the GDP indicator can very well measure the material well-being of a community, but it cannot reflect the inequalities of the quality of life in social terms, environment, health, education, etc. In this sense, we found recent researches (e.g. Hoekstra, 2019) that even propose a replacement of this indicator with another based on a multidisciplinary Wellbeing and Sustainability Sciences.

Another indicator that measures regional development is the Regional Human Development Index (HDI), which is computed by geometric mean of three indices describing key features of human development: a long and healthy life (measured by life expectancy at birth), being knowledgeable (measured by expected years of schooling and mean years of schooling) and have a decent standard of living (measured by gross national income (GNI) per capita). This was also used in another researches in order to reflect the measurement of development (Lind, 2019; McGillivray and White, 1993).



Source: (United Nations Development Programme, 2006-2018)

Figure 2. Regional Human Development Index (HDI) in European member states, 2006 and 2018

For many countries, the HDI recorded in 2018 is lower than the HDI recorded in 2006 (Figure 2). Similar to the GDP/ per capita distribution, the HDI has high values in Western and North European countries and lower values in Eastern countries, representing another barometer that highlights the development discrepancies between European regions. According to the Human Development Report (2018), the inequalities in human development represent significant prejudices in a society, which weaken social cohesion and the trust of citizens in government, institutions and even in each other.

Given the fact that education is a key factor in the progress of a society, local authorities need to identify the education needs of children from poor families and provide more support in this process. And in general, in poor regions, the public authorities must intervene with financing schemes for education at any level of it in order to develop human capital. Similar strategies should be applied regarding health also.

Many international organizations have manifested and still manifest concerns regarding regional development. The United Nations is one of them and in 2015 it has established a list of 17 goals in the field of sustainable development, called the *Sustainable Development Goals* (SDG) in order to achieve and ensure better future life – economic prosperity, environmental sustainability, social inclusion and peaceful societies – for all, which can be seen in Table 2.

Table 2. Sustainable Development Goals (United Nations)

1. No Poverty	7. Affordable and clean energy	13. Climate action
2. Zero hunger	8. Decent work and economic growth	14. Life below water
3. Good health and well-being	9. Industry, innovation and infrastructure	15. Life on land
4. Quality education	10. Reduced inequalities	16. Peace, justice and strong institutions
5. Gender equality	11. Sustainable cities and communities	17. Partnerships for the goals
6. Clean water and sanitation	12. Responsible consumption and production	

Source: 2019 Europe Sustainable Development Report (Institute for European Environmental Policy, 2019)

To measure countries' performance in meeting these objectives, the European Union has calculated the SGD Index, whose score has values from 0 to 100, where 100 is the best performance (Table 3).

Table 3. The SGD Index in European member states

Rank	Country	Score	Rank	Country	Score
1	Denmark	79.8	15	Portugal	66.2
2	Sweden	79.4	16	Poland	66.1
3	Finland	79.1	17	Luxembourg	66.0
4	Austria	76.7	18	Italy	65.3
5	Germany	75.3	19	Slovak Republic	65.2
6	France	74.7	20	Latvia	65.2
7	Netherlands	71.8	21	Hungary	65.1
8	Czech Republic	71.8	22	Croatia	63.2
9	Slovenia	71.7	23	Lithuania	62.6
10	Estonia	70.4	24	Malta	62.3
11	Belgium	70.3	25	Greece	58.9
12	United Kingdom	70.2	26	Bulgaria	57.1
13	Ireland	68.2	27	Romania	55.9
14	Spain	66.8	28	Cyprus	55.0

Source: 2019 Europe Sustainable Development Report (Institute for European Environmental Policy, 2019)

According to the 2019 Europe Sustainable Development Report (Institute for European Environmental Policy, 2019), no country in the European Union has

reached and nor is about to reach all the SDGs. Denmark, Sweden and Finland are the top three countries in the rank with the highest score, but they also face major challenges to achieve all the development goals. On the other side, the weakest performers regarding SDGs achievement are Cyprus, Romania, Bulgaria and Greece.

The best performances obtained in the Member States are: SGD 1 – No Poverty, SDG 3 – Good Health and Wellbeing and SDG 8 – Decent Work and Economic Growth. Also, 2019 Europe Sustainable Development Report is disclosing that in Europe the poverty and inequality are the lowest compared to other regions of the world, and access to care and treatment is almost universal. On the other hand, the less performed objectives are SDG 2 – No hunger and sustainable agriculture and SDGs 12-15 which refer to responsible consumption and production, climate and biodiversity, as no country has made any significant progress in this regard.

The European Agenda for 2030 is also guided by the principle “Leave no one behind” which refers to the inequalities in each country in terms of wealth, access to public infrastructure and public services, access to food, education, health, inequalities in terms of gender and other aspects of social life. And in this case, the European leaders calculated an index – the LNOB Index – containing some indicators that also are part from the SDG index.

Table 4. The Leave No One Behind (LNOB) Index European member states

Rank	Country	Score	Rank	Country	Score
1	Finland	86.4	15	Estonia	71.5
2	Netherlands	83.1	16	Poland	70.7
3	Denmark	82.5	17	Malta	70.0
4	Sweden	81.2	18	Italy	68.5
5	Slovenia	79.8	19	Slovak Republic	68.4
6	Austria	78.8	20	Portugal	65.4
7	Germany	76.7	21	Latvia	63.3
8	United Kingdom	75.9	22	Croatia	63.3
9	France	75.7	23	Hungary	62.6
10	Ireland	75.4	24	Lithuania	61.8
11	Luxembourg	75.2	25	Cyprus	60.2
12	Belgium	73.7	26	Greece	53.2
13	Czech Republic	73.0	27	Bulgaria	49.6
14	Spain	71.9	28	Romania	49.2

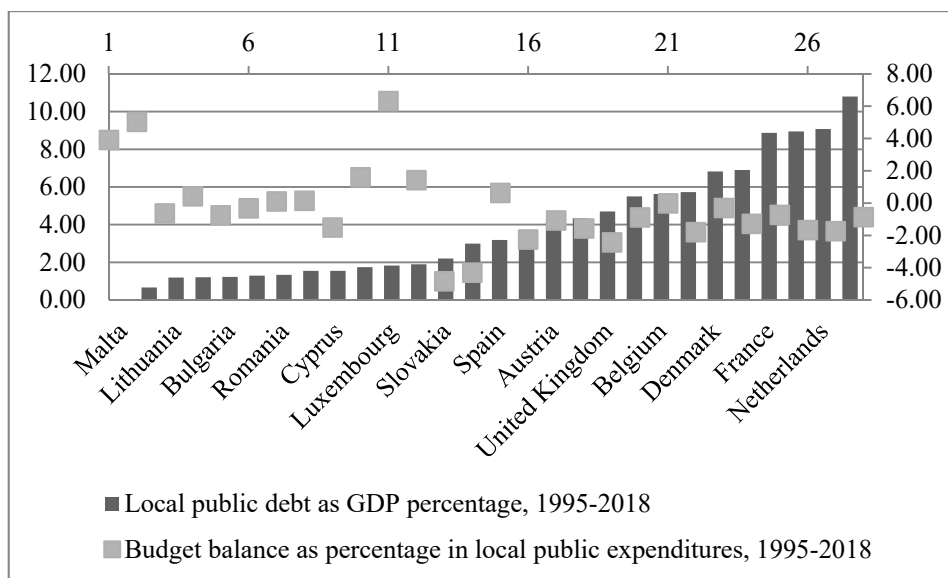
Source: 2019 Europe Sustainable Development Report (Institute for European Environmental Policy, 2019)

The highest score of the LNOB Index is obtained by Finland, the Netherlands, Denmark and Sweden and the lowest performers are generally

countries from Eastern and Southern Europe: Romania, Bulgaria, Greece and Cyprus (Table 4). In these countries there are great inequities in terms of poverty rate, material deprivation, quality education and infrastructure. According to the 2019 Europe Sustainable Development Report, the Member States have made poor progress in reducing these inequities and supporting the lagging regions and communities.

The implementation of development objectives must follow a coherent strategy and local public budgets must be aligned with it. The decision-makers in the matter must ensure a consistent reporting and monitoring in the implementation of the development objectives, so as to reduce more and more the difference between the current reality and the established development targets.

Regarding the practices in matter of local public finances sustainability, in this article we analyzed some indicators, such as: local public debt, local budgets balance, fiscal autonomy and self-financing capacity.



Source: (European Commission, 2020)

Figure 3. Local debt and local deficit/ surplus in European member states, 1995-2018

The highest local public debt was recorded in the most developed countries Sweden, the Netherlands, Finland and France, reflecting their high legal borrowing capacity (Figure 3). Paradoxically, although these states record a higher local debt level, the regulations in the field are strict enough and precise. In the Netherlands, local authorities can borrow on the capital market and issue bonds (without approval from the central government), but in compliance with the so-

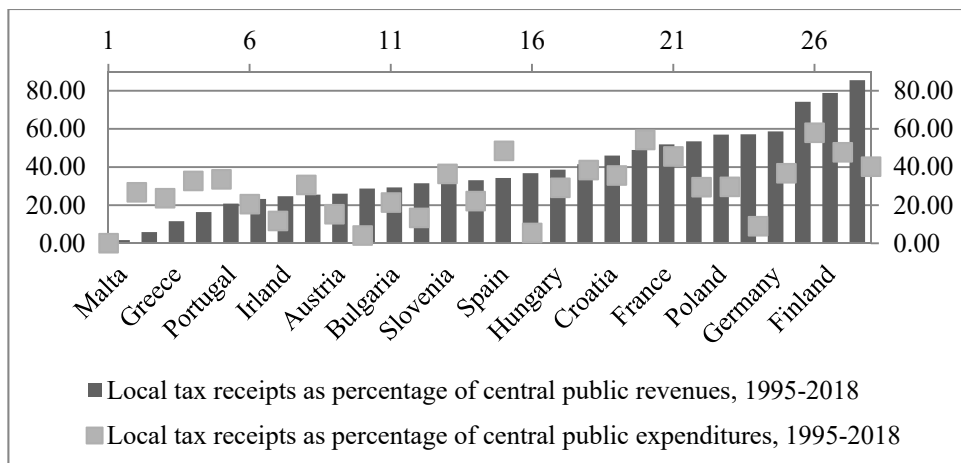
called “golden rule”, according to which the destination of the borrowed resources is only for financing investment expenditure. The same rule applies to French local authorities, but unlike the case of the Netherlands, any decision in this regard occurs only after a rigorous control from central level, which despite the intentions to avoid irregularities represents also a limitation of local autonomy. In Finland, the most of the local loans are granted on market terms and conditions by a credit institution owned by the state and local municipalities (Municipality Finance Corporation) and being guaranteed by a municipal body (Municipal Board Guarantee). According to the opinion of The Committee of the Regions the loans granted to local authorities has never been underperforming.

In contrast, the lowest local debts were recorded in Malta, Greece, Lithuania, Croatia, Bulgaria, Slovenia and Romania reflecting either poor regulation in the field or reduced lending capacity of the local authorities in these countries. Malta represents a particular case, where because of the almost non-existent decentralization, the local councils have an extremely low borrowing capacity, the loan agreements being authorized and signed by the representatives of the line ministries. Legal permissive framework led to the fact that some local authorities in Greece to be rescued by the state against bankruptcy and in Lithuania with the authorization of the central authorities, the borrowed resources are not only used to finance investment projects or to refinance debts, but also to cover temporary income shortfalls and provide loan guarantees to companies controlled by municipalities. Similar cases occur in Romania also, where, according to the legal framework, the destination of borrowed resources should be used only for the financing of investment projects and debt refinancing, in overwhelming proportions, they are also used to finance current expenses.

Besides the regulations, the limited level of local public debt can be associated with other several factors: limited local (financial and decisional) autonomy, limited or inexistent borrowing capacity for poor municipalities.

In terms of the balance of local public budgets, the countries with the highest surplus are Luxembourg, Greece, Malta, Hungary and Czech Republic and in contrast, the countries with the highest deficit are Slovakia, Poland, United Kingdom, Estonia and Latvia. The local balance of local budgets may depend also by the level of financial and decisional autonomy, as where these are limited, local budgets are the beneficiaries of strong transfer schemes from the state budget. In such cases, it should be noted that discretionary transfers and the dependence of local budgets on them lead to the unsustainability of local public finances and severely hamper their ability to contribute to the development of local communities and to stimulate social cohesion.

In Figure 4 is reflected local financial autonomy and self-financing capacity in the European member states.



Source: (European Commission, 2020)

Figure 4. Local financial autonomy and self-financing capacity in the European member states, 1995-2018

Denmark, Finland and Sweden are the countries with the highest level of financial and decision-making autonomy, enshrining into practice the right to local autonomy and to self-governing guaranteed by the Constitution of each of them. According to the Figure 4, the three countries manage (autonomously) significant financial resources in order to meet the local needs. Their local autonomy consists in a flexible legal framework of application the taxes established at the central level, the right to set other local tax rates on a fully autonomous basis, responsibility for allocation the local budget expenditures.

However, it should be noted that although some countries have high financial autonomy, the capacity to self-finance local expenditures (calculated as ratio between total tax receipts and total local expenditures) is lower, which raises new queries about the sustainability of local public finances. The difference between the financial autonomy and the self-financing capacity of the local budgets hides local budget imbalances and betrays the dependence of local budgets on transfers from the state budget.

On the other side, Malta, Cyprus, Greece, Luxembourg, Portugal Slovakia are some countries where the fiscal capacity of local governments is limited, so that local finances heavily depend on transfers from central governments under various balancing mechanisms in each state, basically representing the unsustainability characteristic of local public finances. In such conditions, the allocation of amounts is made to those destinations set by the state, inducing the risk that local budgets will be associated with simple vehicles through which the provision of public goods and services is made by the central authorities, in fact. Definitely, this approach limits the efficient allocation of public financial

resources, the central government not knowing the real needs of local authorities and discourages the responsibility and proactivity of the authorities at this level, and consequently, the possibilities for local growth and development.

Counteracting such practices and trends can be achieved by leading budget consolidation processes, the intensity of which may depend on the level of decentralization and the sphere of local autonomy, but also depending on the level of local deficit and public debt (based on the fundamental principle of balanced functioning of public budgets).

A higher capacity of self-financing than financial autonomy shows the registration of a surplus of financial resources at the disposal of local authorities, which is not necessarily a positive situation from the perspective of the effective and efficient allocation and use of public financial resources. In this sense, unused financial resources must be immediately allocated to destinations for the development of local communities.

Overall, in terms of the regional level of development in the European Union, we identified that the most developed regions are in the countries of Northern, Western and Central Europe, while the poorest regions are those in the East and South of the continent. Also, according to the Global Competitiveness Report (World Economic Forum, 2019), Sweden, Denmark and Finland are the most developed countries in the world and they conducted the very coherent development strategies with sustainable results and provide better social protection. These countries are the countries that have the best performance in terms of sustainability of local public finances, confirming the validity of their theoretical implications on regional development. Although, at least because of different perceptions of development, there will always be discrepancies in this regard, local and regional authorities should conceive and lead strategies promoting development and economic growth, as this is indeed a very effective way to tackle poverty and improve the quality of life.

5. CONCLUSIONS

In the context of fiscal federalism framework, local budgets are no longer small components in the budgetary system or just a chapter included in the state budget, the area of their manifestation being much amplified, which implies a greater role in development policies and basically transforming local budgets into financial levers for economic and social development. The sustainability of local public finances (understood by maintaining a budgetary balance, sustainability of local public debt, consolidating own financial resources and obtaining revenues from sources other than their own and by the efficient allocation of public financial resources by destinations) represents their ability to contribute and sustain really regional development policies by implementing structural reforms and long-term and integrated development strategies.

According to the analysis in this article, there are still huge regional development discrepancies in the European Union, but in terms of practices in the field, we have identified that, frequently, in countries where local budgets have characteristics of sustainability of local public finances, regional development indicators also have high scores. In this regard, all states with lagging regions must follow the examples of good practice (adapted internally) of more developed states on the sustainability of local public finances and make efforts to strengthen the processes of decentralization and local autonomy, but also to maintaining the local budgetary balance and supplementing the existing local revenue resources with additional ones to be used efficiently in territorial development projects.

Overall, through this article, we claim that sustainable local finances can successfully provide conditions and initiate appropriate measures for the well-functioning of the local economy in the spirit of the principles of democracy, equality, solidarity, equity and cohesion.

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THE CONFUSION – A PERFECT INTERFERENCE BETWEEN COMPETITION AND INDUSTRIAL PROPERTY

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Abstract

Industrial property and competition are indissoluble in terms of the legal manner in which the unfair competition act of confusion is committed. The regulation of confusion within the competition legislation of the Republic of Moldova (Law no. 183/2012 on Competition) is in an explicit connection relationship with industrial property, given the fact that the trademarks, industrial designs and other industrial property objects are protected through the provisions of the Law no. 183/2012 on Competition as well. Thus, there is a double protection of industrial property objects: through the rules of industrial property and, at the same time, through those of unfair competition. In the same context, it is important to specify that under competition law are protected even industrial property objects that are not protected under industrial property division law. At the same time, in order to benefit from effective legal protection in accordance with the rules of unfair competition, there is a stringent need for a complex and effective bilateral evidentiary process. In order to validate the theoretical aspects stated above, the practice of the national competition authority of the Republic of Moldova (Competition Council) is essential.

Keywords: *object; unfair competition; industrial property; confusion; protection.*

JEL Classification: K29

1. THE ORIGIN OF THE CONFUSION

The concept of confusion was first regulated in the context of the provisions of the Paris Convention for the Protection of Industrial Property of 1883 by means of amendments to the text of the Convention on 06.11.1925 in The Hague, with subsequent amendments made on 02.06.1934 in London.

Subsequently, through the Model Provisions on Protection Against Unfair Competition (1996), WIPO (World Intellectual Property Organization) developed a set of framework provisions on the system of unfair competition actions, which included confusion.

At national level, through the provisions of art. 8 para. (1) letter d) of Law no. 1103 of 30.06.2000 on the protection of competition (currently repealed), there

have been only the ways of creating confusion, without expressly indicating the name of the respective action of unfair competition.

At the current stage, the unfair competition action of confusion is enshrined in the text of art. 19 of the Law on competition no. 183 of 11.07.2012.

2. PRESENT TIME

In the sense of defining confusion as an act of unfair competition, there is a need to appeal initially to the definition of the term “confusion” as a generic notion.

Thus, according to the Explanatory Dictionary of the Romanian language, the confusion (from the Latin “confusio”) derives from the verb to confuse, which is explained as “the action of taking one person as another or one thing as another, to resemble, to form one whole, to merge” (Dicționar român explicativ, 2020).

In the context of defining confusion in the form of unfair competition, the doctrine provides a relevant answer. Thus, "Confusion is the act of unfair competition, which consists from the credible concealment of the author's own market activity under the guise of the distinctive signs of the injured competitor or a group of competitors" (Căpățână, 1996).

At legislative level, art. 19 para. (1) of the Law on competition no. 183 of 11.07.2012 provides: “Any actions or facts that are likely to create, by any means, a confusion with the enterprise, products or economic activity of a competitor, carried out by:

a) illegal, in whole or in part use of a trademark, service emblems, company names, an industrial design or other objects of industrial property likely to create confusion with those legally used by another enterprise;

b) unlawful copying of the shape, packaging and/or external appearance of an undertaking's product and placing that product on the market, unlawful copying of an undertaking's advertising, if it has harmed or is likely to harm the legitimate interests of the competitor. "

3. REASON FOR BEING

The need for express and distinct regulation of confusion as an unfair competition act is explained by the possibility for protected and/or unprotected industrial property rights holders to receive protection through unfair competition rules as well, for situations where an industrial property right is infringed by the non-holder competitor of the respective infringed right.

4. DIFFERENT APPROACHES

The double protection that holders of protected and/or unprotected industrial property rights may enjoy is, however, conditional (with reference to protection through unfair competition rules).

Thus, if, according to the rules of industrial property, the protected industrial property object is susceptible to protection even if the field of activity (market on which it operates) of the usurper of the rights of the rightful owner is different from the latter, then in case of unfair competition, the essential condition is the existence of the legal relationship of competition between the holder of industrial property rights and the usurper of these rights. In other words, they must operate on the same market, or the Law on competition, through the provisions of art. 4, defines unfair competition as “any action taken by undertakings in the competition process that is contrary to honest practices in economic activity”, and competition is defined in the same context as existing or potential economic rivalry between two or more independent undertakings on a relevant market, when their actions effectively limit the possibilities of each of them to unilaterally influence the general conditions of movement of the products on that market, stimulate technical-scientific progress and increase consumer welfare”.

By contrast, as an example, the corresponding norms of Law no. 38 of 29.02.2008 on the protection of trademarks (in this case, the provisions of art. 9 paragraph (1) letter c) of the specified legislative act), indicates the following: “The trademark owner is entitled to prohibit third parties from using in their activity without its consent: ... a sign identical or similar to the trademark for products and/or services other than those for which the trademark is registered when the latter has acquired a reputation in the Republic of Moldova, and the third party, following the use of the sign, without justified reasons, takes advantage of the distinctive character or the reputation of the trademark or harms them.”.

We note that even in this case, the protection of the registered trademark for products and/or services other than those for which the usurping mark was registered is conditioned by the circumstance of acquiring a national reputation of the first.

5. STATISTICAL ASPECTS

In the practice of the national competition authority, the numeric weight of confusion cases, in the period May 2017 – May 2020, is more significant than the numeric weight of other types of infringements of unfair competition rules (discrediting the competitor, misleading the competitor’s clients, instigation to terminate the contract with the competitor, obtaining and/or illegally using the competitor's trade secret). Thus, during the nominated period, within the Competition Council, there were/are under preliminary examination/ investigation over 20 complaints which have as object the alleged violation manifested by the unfair competition action of confusion.

6. QUALIFYING ISSUES

From the practice of the Competition Council, the following ways of qualifying the confusion action can be deduced according to the criterion of the

existence of a registered industrial property right. Thus, the action for unfair competition is qualified, in accordance with the order of arrangement of alternative ways of confusion realizing:

- the existence of a protected intellectual property right;
- the existence of an unprotected intellectual property right;
- mixed (combined) version.

6.1. The existence of a protected industrial property right

The criterion of the existence of a protected industrial property right represents the criterion of delimitation between the two alternative ways of realizing the confusion, taking into account the practice of the Competition Council in this respect. This fact results expressly from the provisions of art. 19 para. (1) letter a) of the Law on competition no. 183 of 11.07.2012, provisions according to which “Any actions or deeds that are likely to create, by any means, a confusion with the enterprise, products or economic activity of a competitor, carried out through the illegal, integral or partial use of a trademark, service emblem, company name, an industrial design or other objects of industrial property likely to create confusion with those legally used by another enterprise”.

The trademark. With reference to the trademark, the provisions of art. 3 of Law no. 38 of 29.02.2008 on trademark protection are relevant. Thus, according to the provisions given in the specified normative act, the rights over the trademark are acquired and protected on the territory of the Republic of Moldova by:

- a) registration under the respective law;
- b) international registration under the Madrid Agreement Concerning the International Registration of Marks of April 14, 1891 or according to the Protocol to the Madrid Agreement Concerning the International Registration of Marks of June 27, 1989;
- c) recognition of the trademark as notorious.

Therefore, the proprietor's right to the trademark is protected, alternatively, by:

- national or international registration;
- recognition of the trademark as notorious.

The procedure for recognizing the trademark as notorious is regulated through the provisions of Section 11 of the nominated normative act. The basis of recognition is the provisions of art. 32. Thus, according to par. (1) of the specified article, “The trademark may be recognized as notorious following a request for notoriety, filed in the court in whose jurisdiction is the seat of AGEPI, or a counterclaim in an action for protection of rights, filed in the same court”.

Industrial design. Concerning the industrial designs, the provisions of art. 4 of Law no. 161 of 12.07.2007 on the protection of industrial designs are relevant. Thus, according to the provisions of par. (2) of the art. specified above, on the

territory of the Republic of Moldova are recognized and protected, under the conditions of the respective law:

a) the industrial designs registered and confirmed by the registration certificate of the industrial design;

b) international industrial designs registered under the Hague Agreement Concerning the International Registration of Industrial Designs, adopted on November 6, 1925;

c) unregistered industrial designs if they have been made public in accordance with the respective law.

Therefore, industrial designs are protected, alternatively:

- in case they are registered at national or international level;
- they have been made public in the established manner.

In the sense of the second way of benefiting from legal protection, the provisions of art. 10 of the same normative act are relevant, provisions according to which "... an industrial design is considered to have been made public if it has been exhibited or published, used, marketed or otherwise disclosed, unless such actions do not could become reasonably known in the normal course of business of natural or legal persons of the Republic of Moldova, specialized in the respective field:

a) in the case of the registered industrial design, before the filing date or, if priority is invoked, before the priority date;

b) in the case of an unregistered industrial design, before the date on which it was first disclosed."

At the same time, in accordance with the provisions of par. (2) of the same article, "A design shall not be considered made public if it has been disclosed to a third party under explicit or implicit conditions of confidentiality."

In the same context, in accordance with the provisions of art. 4 para. (4) of Law no. 161/2007, the recognition of the rights provided by the respective law does not prejudice and does not exclude the protection granted to the same person or, with his consent, to another person by other legal provisions regarding intellectual property, especially those regarding trademarks, geographical indications, patents, utility models, typographic characters, topographies of integrated circuits and unfair competition.

This means that the holder of rights over an industrial design enjoys the legal protection offered by the legislation related to the concept of unfair competition, regardless of the existence of protection in accordance with the provisions of the nominated normative act. It is in this way that the holder of rights over an unprotected industrial design can be protected in accordance with the provisions of art. 19 para. (1) letter b) of the Law on competition no. 183 of 11.07.2012.

Service emblem. Regarding the service emblem, we specify that the relevant local legislation does not contain any regulations. Therefore, the service emblem can be qualified as an object of industrial property only in the context of the

provisions of the Law on competition no. 183 of 11.07.2012. By way of comparison, in the Romanian legislation, art. 15 letter a) of the Law on the trade register no. 26 of 1990 provides that: “The matriculation of an autonomous direction, national company or national society in the trade register will include: establishment, name, registered office and, where appropriate, its emblem...”.

Thus, the emblem is an optional identification attribute in addition to the company name, which is registered in the trade register to the detriment of its registration in a certain industrial property register. (Gorincioi, 2019)

In the light of local legislation and doctrine, the legal regime for the protection of trademarks is considered to apply to the service emblem. In other words, the rightholder will enjoy protection if that emblem is protected as a trademark. At the same time, we also share the opinion that the service emblem could possibly be protected to the extent that it is protected as an industrial design. Moreover, the protection criteria offered by the legislation on the protection of industrial designs extend the number of cases in which such an object of industrial property can be protected, which, taking into account the specific use of emblems, can significantly facilitate the task of the holder of rights.

Company name. Regarding the company name, according to the provisions of art. 182 para. (1) of the Civil Code of the Republic of Moldova, “The legal person participates in legal relations only under its own name, established by the articles of incorporation and registered in the appropriate manner.” Thus, the law, along with the relevant doctrine, considers the name of the company as one of the identifying attributes of the legal person.

In this context, similar to the situation of service emblems, the company name can be registered as a trademark under the provisions of art. 24 point 5 of Law no. 845 of 1992 on entrepreneurship and enterprises, provisions according to which “The company name may also be used as a trademark, provided that it is registered according to Law no. 38-XVI of February 29, 2008 on trademark protection.”

With regard to other objects of industrial property, it is considered that such objects may constitute geographical indications, designations of origin, guaranteed traditional specialties, plant varieties, topographies of integrated circuits. (Gorincioi, 2019)

The legal regime of geographical indications, designations of origin and guaranteed traditional specialties is determined through the provisions of Law no. 66 of 27.03.2008 on the protection of geographical indications, designations of origin and guaranteed traditional specialties. Thus, according to the provisions of art. 4 of the nominated act, the legal protection of geographical indications, designations of origin and guaranteed traditional specialties on the territory of the Republic of Moldova is ensured based on their registration at AGEPI, in the manner established by law or based on international treaties, including bilateral agreements, to which the Republic of Moldova is a party. Therefore, the industrial

property objects specified above are protected following a proper registration at AGEPI.

Concerning the plant variety protection, in accordance with the provisions of art. 4 para. (1) of Law no. 39 of 29.02.2008 on the protection of plant varieties, the rights over a variety are obtained and protected on the territory of the Republic of Moldova by granting a patent for plant variety by the State Agency for Intellectual Property in accordance with the law and normative acts subject to law, as well as with the international treaties to which the Republic of Moldova is a party. Therefore, the criterion for the protection of plant varieties is related to their registration at AGEPI.

In regard to the topographies of the integrated circuits as an object of industrial property, the provisions of art. 1, para. (3) of Law no. 655 of 29.10.1999 on the protection of topographies of integrated circuits are relevant, provisions according to which the right on topography is recognized and protected on the territory of the Republic of Moldova by registration, under the law, at State Agency for Intellectual Property and issuance of registration certificate.

Therefore, it is found that, regardless of the type of object of industrial property, the holder of rights over that object enjoys legal protection, as a general rule, in case of state registration at AGEPI of the given object of industrial property. Namely in the situation of the existence of a legal protection offered by the necessary normative provisions, an enterprise is liable to administrative liability in case of full or partial illegal use of a certain industrial property object expressly or implicitly stated at the disposal of the norm from art. 19 para. (1) letter a) of the Law on competition no. 183 of 11.07.2012.

It should also be noted that the illegal, full or partial use of a protected industrial property object can also be realized in the case of the use of industrial property objects other than those legally used by another enterprise. In other words, it is possible, for example, to use a company name illegally, in full or in part in the context in which the competing undertaking uses a similar or identical trademark.

An eloquent example in this regard can be considered the case “Totul pentru copii (Everything for children)” LLC against “Daybegin” LLC. Thus, through the Decision of the Plenum of the Competition Council no. CN-46 of 02.07.2015, the enterprise “Daybegin” LLC was fined in a total amount of 8142.68 lei for violating the provisions of art. 19 para. (1) letter a) of the Law on competition no. 183 of 11.07.2012. According to those alleged in the complaint, the alleged unfair competition actions realized by Daybegin SLLC are manifested by the latter's partial use of the trademark “BABY-BOOM” (which belongs to the complainant) as a means of redirection on the website www.bimbo.md, through which the products of the complainant are promoted and marketed.

As a consequence of the preliminary examination of the complaint in accordance with the relevant provisions of the Law on competition no. 183 of

11.07.2012, the Plenum of the Competition Council ordered the initiation of the investigation through Disposition no. 10 of 20.03.2015 regarding the alleged violation of the provisions of art. 19 para. (1) letter a) of the Law on competition.

In the course of the preliminary examination and investigation, the following was found:

- The trademark 'BABY-BOOM', which belongs to the complainant, is registered at AGEPI;
- The complained company uses the respective trademark as a domain name with the title www.babyboom.md, without having adequate protection through the industrial property norms;
- The complained party undertook actions likely to create confusion with the complainant undertaking, in particular the trademark owned by the latter;
- These actions are manifested by the use of the domain name www.babyboom.md to the detriment of the complainant, who has protection in so far as he registered the 'BABY-BOOM' trademark at AGEPI;
- These actions are likely to harm the legitimate interests of the complainant.

In the operative part of the Decision of the Plenum of the Competition Council no. CN-46 of 02.07.2015, the qualifying approach considered at the time of the adoption of the Disposition for initiating the investigation no. 10 of 20.03.2015 regarding the alleged violation of the provisions of art. 19 para. (1) letter a) of the Law on competition no. 183 of 11.07.2012 was maintained.

Therefore, the unfair competition action was found to be confusing in the context of the existence of a protected industrial property right in accordance with the rules of industrial property law and the appropriate legal qualification was realized.

Another significant feature of the given way of manifesting the confusion lies in the realization of the implicit negative condition of non-benefit of legal protection of the holder of the object of industrial property. In other words, the illegal user, in whole or in part, of the object of industrial property must not benefit from legal protection within the meaning of the provisions of the laws tangent to the field of industrial property.

However, there is a possibility of generating the situation in which the registration of the object of industrial property is made in bad faith and the use of this object in full or in part, provided that the latter reproduces in whole or in part the object of industrial property legally used by to the usurper's competitor. In such a case, it is debatable the qualification of such facts according to the provisions of art. 19 para. (1) letter a) or the registered the object of industrial property by the usurper establishes a presumption of legality. However, we consider that depending on all the relevant circumstances of the case (including

the existence or lack of good faith in the process of registration of the object of industrial property), the existence or absence of the constitutive signs of the stated infringement is to be determined.

6.2. The existence of an unprotected intellectual property right.

Concerning the alternative way of realizing the confusion enshrined in art. 19 para. (1) letter a) of the Law on competition no. 183 of 11.07.2012, the provisions of letter b) of the same paragraph of the same article enshrine the manner of realizing confusion in the context of the existence of an unprotected intellectual property right.

Thus, in accordance with these provisions, “Any actions or facts which are likely to create, by any means, confusion with the enterprise, products or economic activity of a competitor, carried out by ... illegal copying of the form, of the packaging and/or the external appearance of an undertaking's product and the placing on the market of that product, the unlawful copying of an undertaking's advertising, if it has harmed or is likely to harm the legitimate interests of the competitor.”

Therefore, as indicated above, the object of protection for that confusion is a legitimate interest which is not protected by industrial property law. Namely the phrase “legitimate interest” generates the conclusion according to which the object of protection is an unprotected industrial property right according to the special law tangential to the field of industrial property, or the legitimate interest in such contexts lies in the fact that the potential holder of protection of rights over industrial property objects is interested in obtaining effective legal protection in the sense that the special domain law grants such a prerogative. In principle, by giving the correct meaning to all the terms of the provision of that rule, it can be concluded that the object of protection may be an unprotected trademark or design by means of the Law on Trademark Protection and the Law on the Protection of Industrial Designs, given the fact that the shape, packaging and/or appearance of the product of an undertaking may alternatively or at the same time constitute unprotected trademarks or designs.

In the same context, we consider that an unprotected guaranteed traditional specialty may be subject to protection within the meaning of the provisions of art. 19 para. (1) letter b) of the Law on competition no. 183 of 11.07.2012. It is true that according to the provisions of art. 6 para. (2) of Law no. 66 of 27.03.2008 on the protection of geographical indications, designations of origin and guaranteed traditional specialties, “The characteristic or set of characteristics that determine the specificity of the product must be related to its intrinsic properties, such as its physical, chemical, microbiological or organoleptic properties, the production method or the specific conditions prevailing during production. The external appearance of an agricultural or food product is not considered to be a characteristic of its specificity.”

We emphasize that in the context of the external aspect of the unprotected guaranteed traditional specialty, the latter cannot be the object of protection within the meaning of the provisions of art. 19 para. (1) letter b) of the Law on competition, but may, per a contrario, constitute an object of protection in terms of its form, because the law does not contain a prohibition in this regard. At the same time, the illegal copying of a company name or service emblems is not excluded as they can be registered as a trademark or industrial design.

Regarding the illegal copying of advertising, the provisions of art. 1 of Law no. 1227 of 27.06.1997 on advertising are relevant. These provisions define advertising as public information about persons, goods (works, services), ideas or initiatives (advertising information, advertising material) meant to arouse and support the public interest compared to them, to contribute to their commercialization and to raise the prestige of the producer. The definition of the above-mentioned term shows its defining elements:

- advertising is a public information;
- this public information is about people, goods (works or services), ideas or initiatives;
- this public information is intended, cumulatively, to arouse and support the public interest in the object of advertising, to contribute to their marketing and to increase the prestige of the manufacturer.

Therefore, there is a need to meet 3 positive conditions in order to qualify certain information as advertising.

In the context of the same way of realizing the respective unfair competition act, we mention that the provision of the respective norm establishes the condition of illegality of copying the object of unprotected industrial property and of the advertising. But, we consider that in addition to the condition of illegality, the copying can be both complete or partial. Therefore, it is sufficient a partial copy of an unprotected industrial property or of an advertisement in the sense of qualifying the respective unfair competition act according to the provisions of art. 19 para. (1) letter b) of the Law on competition no. 183 of 11.07.2012.

In this sense, the circumstances of the case “Bucuria” JSC against “Nefis” LLC are relevant. By the Decision of the Plenum of the Competition Council no. CN-48/18-74 of 31.10.2019, the enterprise “Nefis” LLC was fined in total amount of 152,100, 24 lei for violating the provisions of art. 19 para. (1) letter b) of the Law on competition no. 183 of 11.07.2012.

According to those alleged in the complaint, the alleged unfair competition actions realized by the company “Nefis” LLC are manifested by copying the packaging and placing on the market the products of boxed candies “Meteorit 320 g”, “Meteorit 400 g”, “Chișinăul de seară” and “Pasărea Măiastră” for the products “5 minute”, “Fortuna”, “Prună Delicioasă” and “Lapte de vis”.

As a consequence of the preliminary examination of the complaint in accordance with the relevant provisions of the Law on competition no. 183 of

11.07.2012, the Plenum of the Competition Council ordered the initiation of the investigation through Disposition no. 48 of 20.12.2018 regarding the alleged violation of the provisions of art. 19 para. (1) letter b) of the Law on competition.

In the course of the preliminary examination and investigation, the following were found:

- There is no evidence of a record of the packaging of the products marketed by the complainant and complained undertaking claimed as a design;
- The complained undertaking took steps to create confusion with the complainant, in particular the products of the latter;
- These actions are manifested by the fact of copying the packaging and placing on the market the boxed candies “Meteorit 320 g”, “Meteorit 400 g”, “Chișinăul de seară” and “Pasărea Măiastră” for the products “5 minute”, “Fortuna”, “Prună Delicioasă” and “Lapte de vis”.
- These actions are likely to harm the legitimate interests of the complainant.

In the operative part of the Decision of the Plenum of the Competition Council no. CN-48/18-74 of 31.10.2019, the qualifying approach considered at the time of the adoption of the Disposition to initiate the investigation no. 48 of 20.12.2018 regarding the alleged violation of the provisions of art. 19 para. (1) letter b) of the Law on competition no. 183 of 11.07.2012 was maintained.

Therefore, the unfair competition action was found to be confusing in the absence of a protected industrial property right in accordance with the rules of industrial property law and the appropriate legal qualification was realized.

6.3. Mixed version (combined)

In the practice of the national competition authority (Competition Council, Republic of Moldova), there are cases that were finalized with decisions to sanction the authors of unfair competition actions of confusion, decision acts through which the anti-competitive conduct of active subjects was qualified in accordance with the provisions of both alternative ways of realizing the confusion (generic or general qualification). Such qualifications are likely to be operated in contexts such as:

- the existence of an uncertain situation generated by the impossibility of determining the degree of similarity between protected and unprotected industrial property rights;
- the existence of a pending application for registration at AGEPI regarding the unprotected industrial property object;
- the actions of the same undertaking show signs of both alternative ways of realizing the act of unfair competition;

- the need to match the final qualification solution with the possible qualification solution considered at the stage of initiating the investigation.

In this sense, the case of “Sevex-Prim” LLC against “Buelo” LLC is relevant.

By the Decision of the Plenum of the Competition Council no. CN-56 of 02.11.2017, the enterprise “Buelo” LLC was fined in a total amount of 77,197, 29 lei for violating the provisions of art. 19 para. (1) letter a) and b) of the Law on competition no. 183 of 11.07.2012 in relation to the company “Sevex-Prim” LLC

Thus, according to those invoked in the complaint, the alleged unfair competition actions realized by the enterprise “Buelo” SRL are manifested by the fact of the partial illegal use of the trademark with no. 17829, copying the packaging and placing on the market the products of corn sticks 'CRISTINUȚA', 'CRISTINEL' for the products 'SĂNDUȚA', 'SÂNDEL', which could create confusion with the complainant's products.

As a consequence of the preliminary examination of the complaint in accordance with the relevant rules of the Law on competition no. 183 of 11.07.2012, the Plenum of the Competition Council ordered the initiation of the investigation by Disposition no. 20 of 16.11.2016 regarding the alleged violation of the provisions of art. 19 para. (1) letter a) and b) of the Law on competition. In the context of the preliminary examination of the complaint and the investigation, the following were found:

- The trademarks belonging to the complainant 'CRISTINUȚA' and 'CRISTINEL' are registered at AGEPI;
- The packaging of the products 'CRISTINUȚA' and 'CRISTINEL' are registered at AGEPI as industrial designs;
- The complained undertaking registered only the trademark 'SĂNDUȚA';
- The complained enterprise undertook actions likely to create confusion with the complainant, in particular with the economic activity and the products of the latter;
- These actions are manifested by the partial illegal copying of the packaging of the corn sticks product 'CRISTINUȚA', 'CRISTINEL' for the products 'SĂNDUȚA', 'SÂNDEL' and their placing on the market;
- These actions are likely to harm the legitimate interests of the complainant.

In the operative part (resolutive) of the Decision of the Plenum of the Competition Council no. CN-56 of 02.11.2017, the qualifying approach considered at the time of the adoption of the Disposition to initiate the investigation no. 20 of 16.11.2016 regarding the alleged violation of the provisions of art. 19 para. (1) letter a) and letter b) of the Law on competition no. 183 of 11.07.2012 was maintained.

7. GENERAL ASPECTS OF THE PROBATIONARY PROCEDURE

In the course of the activity, within the competition authority, depending on certain varieties of the elements of the unfair competition system, certain implicit standards of probation have been created, standards that are inherent to one or another type of violation of the concept of fair competition. Those standards are determined on the basis of certain criterias:

- the stages of the administrative proceedings;
- the type (species) of the alleged unfair competition action;
- the object of the alleged unfair competition action or its effect.

7.1. The specifics of the probation according to the stages of the administrative procedures

The administrative procedures involve a special specificity in terms of establishing special procedural provisions through the respective norms of the Law on competition no. 183 of 11.07.2012.

In the current system of domestic competition law, the start of the procedure for examining a case of alleged infringement of competition law, in accordance with the provisions of art. 49 para. (1) of the Competition Law no. 183 can be realized in two alternative ways:

- the complaint of a natural person or companies affected by the alleged violation of the law;
- ex officio, except for the provisions of art. 15-19 of the specified legislative act.

Therefore, the alleged cases of unfair competition are examined only in the after the submission of a complaint. This circumstance is confirmed in the light of the provisions of art. 14 para. (2) of the same legislative act, provisions according to which “Unfair competition actions prohibited by the provisions of art. 15–19 shall be examined by the Competition Council, upon the complaint regarding the alleged unfair competition actions filed by the enterprise whose legitimate interests have been harmed...”.

Regarding the actual procedure of examination of the alleged case of violation of competition law, the provisions of art. 50 of the Law on competition no. 183 of 11.07.2012 are relevant. In accordance with these provisions, “The procedure for examining cases of infringement of competition law shall include preliminary examination and/or investigation. The investigation on the case is ordered under the conditions of art. 55. In other cases, the stage of the investigation shall be omitted.” In the light of these provisions, it is concluded that the procedure for examining alleged infringements of competition law (in this case unfair competition proceedings) includes two consecutive stage:

- the preliminary examination stage (which will be mandatory in all cases where a complaint concerning unfair competition is received by the Competition Council, unless it is ordered ex officio to initiate the

investigation when no complaint in accordance with the formalities laid down in the wording of Article 51 para (1) of the Law on competition – for alleged anti-competitive actions and in the wording of Article 14 para (3) – for alleged unfair competition actions);

- the investigation stage (which is optional and starts only in the event that during the preliminary examination are identified signs of violation of the rules of unfair competition laid down by the provisions of art. 15-19 of the Law on competition no. 183 of 11.07.2012).

We turn our attention to the plurality of administrative procedures, or the stages of the preliminary examination and the investigation must be approached, in our opinion, as two distinct administrative procedures. Thus, according to the provisions of art. 6 para. (1) of the Administrative Code of the Republic of Moldova no. 116 of 19.07.2018, “The administrative procedure is the activity of public authorities with external effect, aimed at examining the conditions, preparing and issuing an individual administrative act ...” So, an administrative procedure, in the spirit of the provisions of the Administrative Code is concluded by issuing a individual administrative act.

Giving adequate meaning to the provisions of art. 55 para. (1) of the Law on competition, it can be concluded that the administrative procedure for preliminary examination of the complaint is in itself an administrative procedure, or according to the provisions mentioned above, “If after the preliminary examination of the complaint it is considered that, based on the information submitted by the complainant and those accumulated during the preliminary examination, there are reasonable grounds to suspect a violation of competition law, the Plenum of the Competition Council adopts a provision to initiate the competition investigation” (emphasis is ours).

The eventual disposition to initiate the investigation bears all the signs of an individual administrative act, signs deduced from the provisions of art. 10 para. (1) of the Administrative Code, provisions according to which “The individual administrative act is any provision, decision or other official measure taken by the public authority to regulate an individual case in the field of public law, in order to directly produce legal effects, by , the modification or extinction of the legal relations of public law ”.

The same solution is maintained if during the preliminary examination stage of the complaint no reasonable grounds for initiating an investigation have been identified, which is likely to be followed by the adoption of a decision rejecting the complaint based on the provisions of art. 53 para. (5) letter. a) of the Law on competition.

Thus, depending on the concrete stages of the concrete proceedings, certain evidence could be presented on the initiative of the complainant and/or the complained undertaking or at the request of the Competition Council which would confirm/deny the existence of signs of alleged unfair competition.

7.2. Specificity of the probation according to the species (type) of the alleged unfair competition action

In the context of the current way of regulating unfair competition actions to the text of art. 15-19 of the Competition Law (rigid system, which does not allow the finding of other types of unfair competition actions than those expressly regulated) (Gorincioi, 2019), each category of unfair competition action has a certain probative specificity, which is assessed in each case separately depending on a multitude of factors, such as the subject matter of the legitimate interest alleged to be affected, the subject matter of the alleged unfair competition action, its effect or other circumstances relevant to the case.

The specifics of the probation depending on the object of the alleged violation or its effect. We find that this criterion is one derived from the one analyzed above and is a reference point of the variation of probation that is based on the characteristic of the object of attack and, as the case may be, the characteristic of effects (assuming such effects).

7.3. General evidence of confusion

In case of confusion, the practice of the Competition Council derives a triple standard of probation (three levels):

- primary level: assessment of the investigative body of the risk of creating confusion among consumers by placing the product on the market or by another form of illegal use of the object of industrial property protected or unprotected by means of industrial property rules;
- secondary level: presentation to the investigative body of information attesting the actual creation of confusion among consumers;
- tertiary level: the existence of injurious consequences as a result of the effect of the unfair competition action.

7.4. Primary level of probation

We consider that such a level is mainly specific to the administrative procedure of preliminary examination, or this is typical to the incipient time interval of accumulation of evidence by the Competition Council. We specify that at the stage of submitting the complaint regarding the alleged unfair competition actions, the burden of proof belongs to the complainant, or according to the provisions of art. 52 para. (1) of the Law on competition no. 183 of 11.07.2012, “Upon notification of the alleged anti-competitive actions, the complainant must present evidence in support of the facts on which he bases his complaint” (the emphasis belongs to us).

Therefore, the Competition Council, at the stage of the preliminary examination has a passive role in the accumulation of evidence, accumulation that can be achieved, alternatively, by requesting appropriate information based on the provisions of art. 54 para. (1) and (2) of the Law on competition, provisions that

have a general applicability (both at the stage of the preliminary examination and after the initiation of an investigation). At the same time, although the legal reversal of the burden of proof is made only after the Plenum of the Competition Council adopts the order to initiate the investigation (argument confirmed by the provisions of Article 52 paragraph (3) of the Law on competition), we believe that the national competition authority may play an active role in all the cases.

Taking into account the provisions of art. 52 para. (4) of the Law on competition, provisions according to which "... The Competition Council may use as evidence any element of fact and law, including confidential information obtained in the manner provided by law, which serve to establish the existence or absence of infringement", we conclude that the law does not limit the range of evidence that may contribute to a more effective examination of the alleged unfair competition actions claimed through the complaint.

For the purposes of the above, by reference to the specifics of the unfair competition action, the Competition Council may, for example, access the AGEPI database, request the presentation of information which concerns the existence of certain complaints from the complainant's customers which would suggest confusion or other relevant information.

As an example, we mention the findings from the Decisions of the Plenum of the Competition Council that were analyzed above:

- Decision of the Plenum of the Competition Council no. CN-56 of 02.11.2017: "The database of the State Intellectual Property Agency was also accessed, as a result of which it was found that the logos of both companies are registered as trademarks, which indicates on the legality of using them."; in the same context: „According to the data of the State Agency for Intellectual Property, the packaging of the products “CRISTINUȚA” and “CRISTINEL” are registered in the Register of designs with no. 1370 of January 6, 2012.”.

- Decision of the Plenum of the Competition Council no. CN-48/18-74 of 31.10.2019: "The database of the State Agency for Intellectual Property was also accessed, as a result of which it was found that the logos of both companies are registered as trademarks, which denotes the legality of their use. "; in the same context: "According to the same letter, the company “Bucuria” JSC mentioned that there are 2 complaints from consumers and many phone calls from them regarding possible collaboration with the company “Nefis” LLC.

7.5. Secondary level of probation

As progress is made within the stages of administrative procedures, by reference to the provisions of art. 19 applicable to both ways of creating confusion, provisions according to which "Any actions or facts that are likely to create, by any means, confusion with the enterprise, products or economic activity of a competitor..." (emphasis added), we find that the unfair competition action of confusion has a legal character of formal-material infringement (the infringement

is harmful by its object and does not require the actual occurrence of the injurious consequence; the existence of the risk of confusion is sufficient).

In this regard, we are of the opinion that the secondary level of probation would come to finalize the formal-material character of the respective unfair competition action and to attribute to it a material character. Therefore, for example, the complainant (on its own initiative or at the request of the Competition Council) may submit a possible consumer opinion poll, which would confirm the actual realization of the confusion. In the same context, the defendant has the possibility to present a counter-survey which would refute the hypothesis of actually creating confusion among consumers. In terms of the stages of the administrative procedure, such a means of proof could be used both in the preliminary examination stage of the complaint and in the investigation where the investigation was initiated on the basis of the information available at the time of the adoption of the relevant provision.

From a practical perspective, the following findings made by means of the same decision-making acts addressed above can be mentioned:

- Decision of the Plenum of the Competition Council no. CN-56 of 02.11.2017: “Sevex-Prim” SRL by letter no ... presented: “National survey – stick trademark testing”, conducted by “IMAS INVEST” S.R.L.; “Consumer Perception Study”, carried out at the request of the Chamber of Commerce and Industry of the Republic of Moldova and the State Agency for Intellectual Property by the National Marketing Association, between April 27 and May 15, 2017 ”.

- Decision of the Plenum of the Competition Council no. CN-48/18-74 of 31.10.2019: “At the same time, at the complaint of the enterprise „Bucuria” JSC the result of the opinion poll conducted by the Independent Sociology and Information Service “Opinia” was also attached, poll which indicates the existence of a certain degree of confusion among consumers regarding the commercial affiliation of the specified packaging”; in the same context: “Thus, through the new study, the company “Nefis” LLC refutes the results of the survey carried out at the request of “Bucuria” JSC, claiming the non-existence of the confusion of the packaging under which the confectionery products are sold, a fact found in the Technical-Scientific Research Report no. 1-03/19 regarding the similarity/difference of the packaging of boxed candies products of the producers “Nefis” LLC and “Bucuria” JSC ”.

7.6. Tertiary level of probation

We suggest that from the point of view of substantive law, the most advanced degree of probation in terms of confusion could be the provision of information that would confirm the existence of the effect or result of the confusion among consumers. One way of achieving the most advanced degree of probation could be, for example, the presentation of information on the evolution of the company's sales whose legitimate interests were potentially harmed by the alleged unfair

competition of claimed undertaking. We suggest that a negative evolution of sales may accentuate the existence of a causal link between the alleged unfair competition actions and its consequences. The same finding could be made in the event of a positive development of the complained undertaking's sales. At the same time, we note that such a means of proof could ideally be the subject of correspondence between the complainant and the Competition Council following the adoption of the provision of initiation of the investigation of the alleged unfair competition actions of the claimed undertaking.

In this regard, the findings extracted from the Decision of the Plenum of the Competition Council no. CN-48/18-74 of 31.10.2019 are relevant: Therefore, there is a positive evolution of sales of its products by the company "Nefis" LLC, which is in contrast with the negative evolution of sales of the company "Bucuria" JSC in the same time frame. Such a circumstance denotes a possible causal relationship between the fact of placing on the market of its products by the complained party and the effect of the diminished sales of the complainant or, it is attested that the sales of the company "Bucuria" JSC have registered a decrease in the context in which the process of selling boxed candies by its competitor increased".

8. SPECIFIC TRENDS

From the above-mentioned facts, the following essential trends are outlined in the cases of examination of the alleged violations of the provisions of art. 19 of the Law on competition no. 183 of 11.07.2012:

- In terms of quantity, the numerical weight of the complaints through which is claimed the violation of the provisions of art. 19 of the Law on competition is superior to the situations in which the unfair competition actions regulated by means of the provisions of art. 15-18 of the same legislative act are claimed;
- In terms of qualification, most of the times at the stage of adoption of the final Decision by the Plenum of the Competition Council, the qualifying hypothesis considered at the adoption of the Provision to initiate the corresponding investigation is maintained;
- In terms of probation, following the initiation of the investigation, as a rule, the tertiary level of probation is used.

9. CONCLUSION

In conclusion, we specify that unfair competition act of confusion is, in principle, an increased degree of complexity in relation to other acts of unfair competition both in terms of quantity (weight of qualifying elements) and in terms of quality (probationary procedure), or the respective unfair competition action implies a polyvalent nature, given the interference between the concept of unfair competition and that of industrial property. Thus, there is a need for a complex and multi-aspectual research of each case viewed separately.

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PROMOTION OF RENEWABLE ENERGY IN THE EUROPEAN UNION

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Abstract

In the face of the 21st century's global energy challenges, the EU is leading the clean energy transition: striving for a more secure, competitive and sustainable energy system which will address the existential challenge of our time – climate change. By setting ambitious energy and climate targets for 2030, the EU is giving a clear sense of direction; in addition to these targets, it provides a stable legal framework to foster the necessary investment. But this is not the end of the road: with its 2050 long-term climate neutrality strategy, the EU is also looking further ahead than 2030, and setting the foundations for what a cleaner planet will look like by the middle of the century and beyond. Energy efficiency is considered to be one of the main aspects of the energy strategy in the European Union because aims to achieve not only clean, efficient and smart energy but also to improve the health of European citizens. In this context, the European Union has adopted important rules in the energy sector aimed at integrating renewable energy sources into the European energy market. These actions aim to increase cooperation between Member States on this sector and to establish a minimum of certainty that European citizens will not be at risk of running out of electricity.

Keywords: *energy; efficiency; renewable energy; European policy; durability; regulation.*

JEL Classification: P37, P48, L84

1. INTRODUCTION

Since the genesis of the European Union, once with the creation of the European Coal and Steel Community in 1951 by the Treaty of Paris, with the

European Economic Community and the European Atomic Energy Community originating from the Treaty of Rome from 1957, to the Treaty of Lisbon from 2007, we have noticed that the energy issue has always been one of the basic pillars on which the European energy policies are based. From the constitutive treaties of the European Union it results that the energy issue has been intensely tackled since the very beginning of its creation. However, the energy sustainability policy has acquired an obligatory character for all its Member States with coming into force of the Lisbon Treaty (Volintiru, Stoian and Diaconu-Pințea, 2015). This legal instrument promotes the principle of solidarity in the matter of electrical energy supply, a principle which is also found in the Declaration of Robert Schuman of 1950, which stated that “Europe will not be made all at once, or according to a single plan. It will be built through concrete achievements which first create de facto a solidarity”.

2. THE EUROPEAN ENERGY SYSTEM

The European energy system is currently facing a number of challenges that jeopardize the achievement of pre-set targets in the context of energy efficiency and the development of renewable energy sources. In this regard, the European institutions, including the Member States of the Union, meet many difficulties in achieving them. These difficulties which are caused by the economic, social, as well as by political and climate risks are recognized and identified by the European Parliament, the institution which is responsible for adopting and implementing the policies in the energy field. At the same time, the Parliament recognizes the fact* that, as human society evolves, these risks diversify and increase depending on the population needs, due to threats raised by the climate change, slow progress registered in the field of energy efficiency and renewable resources, but also due to lack of transparency and interconnection on the energy markets.

In relation to this, the European Union has taken and continues to take a range of varied and exact measures aimed at integrating the energy market into a single assembly. In this way, it is pursued to guarantee the electrical energy supply and, respectively, to ensure the sustainability of the energy sector.

At the same time, the European Union aims to impose on the energy market an economic and competitive model regarding the supply and commercializing the energy obtained from renewable sources. By pursuing the establishment, including, of an environmentally sustainable model in the energy sector, the Union has as its central objective among the current development strategies – the transition of the energy towards a smart, flexible and just system in regard to the consumer, both in terms of price and sources. In this regard, a series of strategic directions have been developed and a series of political synergies have been designed, including at the level of financing means, which aim at transforming the

European energy system through innovation, reflected primarily by the development of the energy sector from renewable sources (Efremov, 2019).

In order to ensure the legislative and normative framework in the field of energy efficiency and the renewable energy sources since the beginning of 1990, there has continued the process of elaboration and promotion of normative acts in the field. To this end, there have been taken measures related to promote the Directive 90/377/CEE of 29th of June 1990 regarding the community procedure meant to improve the transparency concerning the prices for natural gas and electricity charged to industrial end-users and the Directive 91/226/CEE of May 31st 1991 considering the transit of natural gas through networks. These two directives laid the foundations of the third energy package, which was adopted by the Parliament and the Council of the European Union on 21st of April 2009. By means of this package, the European Union has clearly set out the common objectives, methods and mechanisms in order to improve between its Member States the performances from the energy sector. At the same time, it comes to complement those measures and provisions in the energy field that were foreseen in the first and the second packages.

We cannot avoid mentioning the fact that the development of the energy sector and the exploitation of renewable energy sources has also become a priority in the European Community policy, which was exposed in the Green Paper (European Commission, 2013) and White Paper (European Commission, 2017), both being drafted by the European Commission. Subsequently, the European Union continued to promote the applicability and the necessity of the tackled subject, also within the Lima Conference held in 2014. At this conference, the Member States demonstrated their will and determination concerning the global climate changes, agreeing to strengthen their efforts and reduce the domestic emissions at least by 40% till 2030 compared to 1990. Even the US and China committed to achieve this rate by decreasing the greenhouse gas emissions in the context of climate changes. (European Commission, 2015a)

In February 2015, the European Commission (2015b) launched a new strategy for a resilient Energy Union with a forward-looking climate change policy. The goal of the Energy Union is to give EU consumers – households and businesses – secure, sustainable, competitive and affordable energy. Achieving this goal will require a fundamental transformation of Europe's energy system.

The Energy Union Strategy is made up of five closely interrelated and mutually reinforcing dimensions, designed to bring greater energy security, sustainability and competitiveness:

- Energy security, solidarity and trust: Diversifying Europe's sources of energy and making better, more efficient use of energy produced within the EU.
- A fully-integrated internal energy market: Using interconnectors which enable energy to flow freely across the EU – without any technical or

regulatory barriers. Only then can energy providers freely compete and provide the best energy prices.

- Energy efficiency contributing to moderation of demand: Consuming less energy in order to reduce pollution and preserve domestic energy sources. This will reduce the EU's need for energy imports.
- Decarbonising the economy: Pushing for a global deal for climate change and encouraging private investment in new infrastructure and technologies (European Commission, 2015c).

The pre-established objectives in the field of energy, even if they brought the innovative element in the field of legal regulation regarding the energy and renewable energy sources, they were not enough to solve the global problems in this field. In this context, the Member States have initiated new negotiations concerning the conclusion of a new agreement legally compulsory, more concise and more ample.

In this regard, there was adopted the Climate Change Agreement which was concluded in Paris on 22nd of April 2016 and ratified by the European Union on 5th of October 2016 (European Commission, 2016). It has a special significance for the promotion of renewable energy sources as it is the first legal instrument with mandatory legal power that is applied globally.

In order to comply with the Paris Agreement and to achieve the EU targets of emission decrease after 2020, the Union has updated its legislative framework as follows:

a) In 2018, it was adopted a new accounting and reporting framework for anthropogenic greenhouse gases, for emission projections, for the development strategies of lowered carbon emissions and for the mitigation policies and measures, applicable framework from 2021 onwards. (the new Regulation on the governance of the Energy Union and Climate Action);

b) Modified the system of commercializing the certificates of emissions and adopted new legislation acts on national objectives on emission decreasing for each year until 2030 (the new regulation concerning the efforts sharing);

c) Adopted the Regulation (EU) 2018/841 of the European Parliament and the Council on the inclusion of greenhouse gas emissions and absorptions resulted from the activities related to lands exploitation, the change of land destination and forestry within the climate and energy policies for 2030. (European Court of Auditors, 2019)

Despite the measures taken in the context of promotion of alternative energy sources, it is important to mention that in the summons of the European Economic and Social Committee on “Paris Protocol – a detailed Project for combatting the climate change after 2020”, the Committee puts forward the proposal or idea according to which all countries should quickly get involved in a transformation process, renouncing to fossil fuels in favor of increasing the resource and energy efficiency and in favor of renewable energy sources.

These ideas have acquired a legal value with the adoption of the Directive (EU) 2018/2001 on the promotion of the energy use from renewable sources. This Directive lays down the legislative basis for renewable resources in the context of:

- rules on financial support for energy produced from renewable sources;
- rules on supporting and protecting existing projects in the field;
- mechanisms governing cooperation between EU countries and between EU and non-EU countries;
- rules simplifying administrative procedures for projects to promote renewable energy sources;
- as well as rules establishing a system of guarantees to protect and support all forms of energy from renewable sources, including rules for the protection and support of consumers who produce their own energy from renewable sources (Directive (EU) 2018/2001).

Although the Directive for renewable energy sources is a complex document in terms of promoting renewable energy, however, in the context of the discussions initiated by the European institutions which took place on 18th of June 2018, it was concluded that it is necessary to be substantially revised.

The revised Directive is currently containing a much more ambitious legal framework for the promotion of alternative energy sources of the European Union within the period of 2021-2030. At the same time, in this legal instrument were mandatorily included the achievement of the renewable energy quota in the energy consumption of the Union by 32% for all signatory states, following in this regard, much stricter criteria concerning the ecological sustainability. After the official approval in December 2018. The revised Directive entered into force on 24th of December 2018. Member States are obliged to transpose all its provisions into national law by 30 June 2021. As a result, the Directive includes:

- a mandatory EU headline target with a share of at least 32% of renewable energy sources in EU final energy consumption by 2030 (this is well above the target set by 27% in October 2014 by the European Council and reiterated in the original European Commission Proposal 2016);
- a 14% target for the share of renewable energy in the transport sector (which the Commission intends to remove altogether from the directive). (Directive (EU) 2018/2001)

In addition, Parliament has introduced a review clause in this legal instrument that would allow the Commission to present a new legislative proposal in 2023 with more ambitious and binding targets. These could be justified for three probable reasons:

- 1) to achieve global climate change goals,
- 2) whether renewable technologies generate significant cost reductions or
- 3) if the increased efficiency leads to a substantial decrease in energy consumption (European Parliament, 2019).

The precision of the objectives formulated by the European Union in supporting and promoting the renewable energy sources, have a strategic character because they are the basis of the programs aimed at solving certain problems that were set out in the Package of Measures called “Clean Energy for All Citizens”. The package comes to establish a right balance between the decision-making on the energy sector at the European, national and local level. Although the Member States of the European Union still have the opportunity to choose their own energy mix, they must respect their commitments on improving the energy efficiency and the use of energy from renewable sources.

Despite the geopolitical uncertainties, Europe continues to move forward concerning the transition towards clean energy. This is the opinion of the former European Commissioner for Environment and Energy Miguel Arias Canete. Canete is one of the architects who has implemented one of the most ambitious energy and climate legislation.

The use of renewable energy is currently supported by both the European Commission and the European Parliament. In this regard, both institutions have made considerable efforts to advance this field of activity, by promoting projects in this regard, and providing financial resources for their implementation. Regardless of this, the development of renewable energy sources has been uneven, in conditions when the onshore wind energy has grown faster than photovoltaic energy.

However, the Community Executive emphasizes that in the following years the Member States must redouble their efforts to accomplish stricter targets in this area. In this regard, the European Parliament comes to encourage the decentralized production of the electricity from renewable sources, to promote a detailed framework for effective implementation of renewable self-consumption principles and renewable energy communities, to reduce the authorization period for only one year for small-scale electrical installations and to be exempted from certain market requirements. In this context, the Member States of the European Union are now obliged to draw up long-term programs of their renewable assistance schemes and to provide information about their contributions on a platform for the development of renewables in Europe.

3. CONCLUSIONS

In conclusion, we can mention that the energy has been part of the European projects since its foundation, and still remains today, more than before. Considering the fact that half of the European energy is imported into Europe, the European policies remain fragmented as companies pay much more for the imported energy, by around 20-30% than international companies. In this way, the climate change threatens the future of our planet, and respectively, the future of our children. From this point of view, within its Strategic Agenda for 2019-2024, the European Council has established that one of its four priorities is to build a

green, fair, social and neutral Europe from the view of impact on climate, a priority which directly influences the development of renewable energy sources.

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IMPLEMENTATION OF THE GDPR IN THE ROMANIAN ENTREPRENEURIAL BUSINESS

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Abstract

Until the implementation of the GDPR, many unintentional data breaches were reported, which compromised the safety, confidentiality and security of the users. This is exactly how the GDPR was born, when the European Parliament approved on April 27, 2016, the EU General Data Protection Regulation, and from May 25, 2018, the EU General Data Protection Regulation (abbreviated GDPR) was implemented.

The need to implement the GDPR was to impose a single set of rules throughout the EU, given that data has become a central element of trade.

The purpose of this study was to analyze the way in which the GDPR was implemented in the activity of the Romanian business enterprises.

From this study we found out the 7 measures and procedures that the entrepreneurs applied in the companies, in order to avoid fines.

We also learned about the myths regarding GDPR, which were 7, we will refer to two of the most discussed myths, such as: any business needs a data protection officer (DPO) or high fines will cause many entrepreneurs to give up their business.

Keywords: *GDPR; entrepreneurial business; technology; EU; IT field.*

JEL Classification: L26, O33, Q55, O52

1. INTRODUCTION

The need to implement the GDPR was to impose a single set of rules throughout the EU, given that data has become a central element of trade (Crayon, 2018).

The main purpose of this type of GDPR regulation is to protect personal data and to protect the right to privacy of EU citizens, both customers and employees, and it is addressed to companies, organizations and institutions. Also, this regulation refers to how their data is processed and protected (your Europe).

With the adoption of the GDPR, the stress factor for entrepreneurs also increased, because they had to be informed about how to properly implement it within their business model. The point is that stress cannot be definitively

overcome, but it can be lessened so that they can control it, knowing what is going on around them and what to expect.

Basically, organizations had to re-establish order for their own operations, which led to a number of challenges (Krystlik, 2017).

2. LITERATURE REVIEW

As people's dependence on technology increased steadily from day to day, so did the traces of information that people left behind. Data breaches and leaks led to a major set of consequences (Beckett, 2017), so it was quite difficult and troublesome for users to gain control over their personal data (Ooijen and Vrabec, 2019).

Prior to the implementation of the GDPR, “information systems exploited data because they could access, manage and record sensitive user data” (Ferrara and Spoto, 2018).

Thus, weekly, until the implementation of the GDPR, many unintentional data breaches were reported, which compromised the safety, confidentiality and security of the users (Ferrara and Spoto, 2018).

This is exactly how the GDPR came into being, when the European Parliament approved on April 27, 2016 the EU General Data Protection Regulation (Ferrara and Spoto, 2018), and from May 25, 2018, the EU General Data Protection Regulation was implemented (GDPR abbreviated).

The adoption of the GDPR regulation, intends to impose new rules on organizations in the EU and on those who offer goods and services to people located in the EU or who collect and analyse data related to these people, regardless of their geographical location (your Europe).

When establishing the GDPR regulation, it was taken into account both transparency and trust in national and international codes of best practices, in order to make organizational measures more effective and to be incorporated throughout the organization (Goddard, 2017).

The goal of the GDPR is to provide essential guidance for balancing the interests of providers and users (Wachter, 2018). Thus, it was necessary to establish some principles of the GDPR, which were published in Article 5 EU General Regulation on data protection, “Principles related to the processing of personal data” (Art. 5 of the GDPR, paragraph 1), which refer to:

- integrity and confidentiality regarding data security;
- legality, fairness and transparency;
- minimizing the collected data to be adequate, limited, but also relevant;
- checking the accuracy of the data, as well as updating them;
- limitations related to the storage part, since the data should be kept only as long as they are necessary for processing;
- responsibility – the company is directly responsible for the data it processes;

- limitations related to the purpose, namely to be legal, fair and transparent.

When the GDPR regulation was made, the confidentiality part of the users was taken into account. Thus, companies and organizations had to adapt and make changes in the data collection process and in their infrastructure, regarding what is collected, where data is collected, how data is used and especially how data is secured. Because all this is now done according to the GDPR regulation 2018.

As a result, organizations had to learn how to treat and protect the personal data of customers and employees, as if they were their own. It's not only necessary to ask for permission, users have the right to even update their data or request rectification (Art. 16 of the GDPR).

We can provide an example in this regard, so that when an organization collects personal data from EU citizens, the company must provide them with the right to easily request access to their personal data, the right to delete their personal data, the right to update personal information, the right to stop processing their own data and the right to have their data delivered by themselves or by a third party (your Europe).

GDPR applies to personal data of the individuals, does not apply to data about the companies, although it applies to data like employees' emails or phone numbers (European Commission, 2020a).

Therefore, GDPR entered into force to improve the rights of individuals, regarding the part to privacy and to oblige organizations, to implement best practices for online business, digital marketing and the use of their customers' data.

3. METHODOLOGY

The purpose of this study is to analyze the way in which the GDPR was implemented in the activity of the Romanian business enterprises.

Through this study, we want to find out what measures and procedures they apply in companies, in order to avoid fines.

For this, we applied a focus group on 8 entrepreneurs, all male, which have 3-5 years experience in the business environment in the IT field, in Iași, aged 28-33 years.

We chose to have the number of participants to be 8 because this is the maximum recommended number.

The focus group was held on March 2, 2020, lasted for 1 hour, and included two parts:

In the first part, we asked the entrepreneurs only one question: *What are the measures you have applied in your company, starting from the period when the Regulation came into force?*

In the second part of the focus group, we asked another question: *What are the myths about GDPR, which you have heard so far?*

We chose the focus group because we wanted entrepreneurs to learn from each other and develop new ideas together (Jackson, 2003).

Thus, through this study we intend to come to the assistance of the managers and entrepreneurs at the beginning of the road, in order to correctly implement the GDPR.

The role of the moderators was to control the observance of the topics of discussion.

4. RESULTS AND DISCUSSIONS

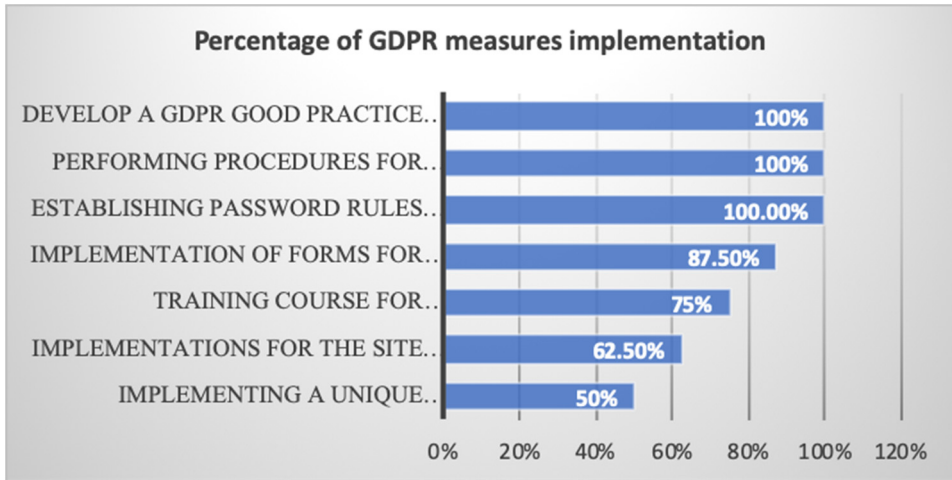
After asking the question: *What are the measures that you have applied in your company, starting from the entry into force of the Regulation?*, we have obtained the following results (Table 1):

Table 1. Measures applied by entrepreneurial business

No.	Measures applied by entrepreneurial business	No. of implementations
1.	Develop a GDPR good practice guide to which all employees of the company have access.	8 out of 8
2.	Establishing password rules for: PC, Laptop, Phones, email, file archiving folders with personal data. Change the password every 6 months.	8 out of 8
3.	Performing procedures for storing documents containing personal data in headquarters, shops and other archive premises.	8 out of 8
4.	Training course for employees regarding the protection of personal data.	6 out of 8
5.	Implementations for the Site – the privacy policy, terms and conditions.	5 out of 8
6.	Implementation of forms for employees – information processing activities, obligations for employees with access to applications containing personal data of clients.	7 out of 8
7.	Implementing a unique address for communication with clients who make requests or complaints and carrying out a procedure with the solution mode.	4 out of 8

Source: the authors

We aim to exemplify the data obtained in percentage terms, as follows in Figure 1:



Source: the authors

Figure 1. Percentage of measures implemented by the entrepreneurial business

After about 2 years after the implementation of the GDPR, following this focus group, we find that all 8 entrepreneurs have designed a guide of GDPR good practices to which all the employees of the company have access, so we have a 100% percentage.

Being in the IT field, it was natural for all 8 entrepreneurs to set their password rules for: PC, Laptop, Phones, email, file archiving folders with personal data. And change the password to take place every 6 months.

Also, in this 100% percentage is also the implementation of procedures for keeping documents containing personal data in headquarters, shops and other archive premises.

In contrast, 87.5% of the entrepreneurs said that they have implemented forms for employees regarding information on data processing activities, obligations for employees with access to applications containing personal data of customers.

75% of the entrepreneurs stated that they had conducted training courses for employees regarding the protection of personal data.

The least frequent activities are the implementations for the Site – the privacy policy, terms and conditions for 62.5% of the entrepreneurs and the implementation of a unique address for communicating with the clients who make requests or complaints and carrying out a procedure with the way of solving for 50% of the entrepreneurs.

Which this means that these entrepreneurs need support in the correct implementation of the GDPR in companies, either from professionals outside the company or they need to hire a DPO, in case the employees who were sent to training courses failed to do their job.

The entrepreneurs also stated that the GDPR initially influenced their activity to a great extent, because it involved a greater consumption of time, more work and there were potential conflict elements.

They said that they made a series of efforts to prepare and to engage the employees into this change.

At first, the employees seemed hostile to this situation, because they were out of their comfort zone. They just had no choice and had to comply.

For example, let's take the case of an employee, who according to the job description was sending weekly reports. The application exported the reports in standard format and contained many columns, showing the client's name, phone number, email address, identity card data and many more. The employee emailed the report and sent it to the accounting office.

According to the GDPR, now the employee must delete all columns with personal data so that we can insert it and be passworded. Because now only the useful information and as little as possible must be processed.

Regarding the second part of the focus group, to the question: *What are the myths about GDPR that you have heard so far?*, the entrepreneurs referred to the following:

Myth no. 1: GDPR targets only EU companies.

The truth: The GDPR regulation targets any company regardless of their headquarters in Asia, the US or anywhere in the world) that provides services or products to EU citizens or monitors their behavior, regardless of their servers or location (European Commission, 2020b). Any company that operates the personal data of EU citizens must comply to the subject of GDPR, no matter where the company is from, e.g. a Japanese company selling products in France (European Commission, 2020a).

Myth no. 2: GDPR is limited to information that leads to the identification of a person.

The truth: According to the GDPR, the IP address or cookies represent personal data, although before the regulation came into force, the marketing agencies considered cookies and IP addresses as anonymous (your Europe).

Myth no. 3: High fines will cause many entrepreneurs to give up their business.

The truth: The maximum fines that can be given to a control, represent 4% of the global turnover (ANSPDCP, 2020).

Only that the purpose of the Supervisory Authority is not to close the companies, but rather to sanction the deviations from the GDPR provisions. The authority may issue warnings or reprimands, order the deletion of data held by an operator, impose administrative fines, etc. (ANSPDCP, 2020).

Myth no. 4: Every business needs a Data Protection Officer (DPO).

Truth: The data protection officer may be a member of the operator's personnel or the person authorized by the operator or he may perform his tasks under a service contract (Art. 37 of the GDPR).

Myth no. 5: I have developed policies and procedures, which means I am in compliance.

Truth: It is not enough to develop policies and procedures. The operator must demonstrate the principles of the processing of personal data (Article 5 paragraph 2 of the GDPR and WP 173 – Opinion 3/2010 on the principle of accountability) (Data Protection Working Party, 2010).

It is necessary to have a process of testing, assessment and periodic evaluation of technical and administrative measures (Art. 32 of the GDPR, paragraph 2).

Myth no. 6: Newsletter campaigns can only be sent to people who have given their consent after May 2018.

Truth: In order to send newsletters campaigns, the express consent of each person is required to store and process their data, regardless of whether it was obtained before or after the entry into force of the GDPR (Regulation No. 679 of April 27, 2016 on the protection of natural persons in regarding the processing of personal data and on the free movement of such data and repealing Directive 95/46/EC, the General Data Protection Regulation and Article 13 (1) of Directive 2002/58/EC).

Myth no. 7: I have a small business or I am at the beginning of the road and I don't have to worry about GDPR.

The truth: Regardless of the size of the company or whether it is at the beginning of its activity, the GDPR applies to all companies (European Commission, 2020b).

5. CONCLUSIONS AND RECOMMENDATIONS

The present paper presented us how the GDPR was implemented in the activity of the Romanian business enterprises.

From this study we found out the 7 measures and procedures that the entrepreneurs applied in the companies, in order to avoid fines.

Of these, the most common were: designing a GDPR good practice guide to which all the employees of the company have access, so we have a 100% percentage, setting rules for: PC, Laptop, Phones, email, archiving folders file with personal data. And change the password to take place every 6 months. But also carrying out procedures for keeping documents containing personal data in headquarters, shops and other archive premises.

We also found out about the myths regarding GDPR, which were 7, we will refer to two of the most discussed myths, such as: any business needs a data

protection officer (PDO) or high fines will cause many entrepreneurs to give up their business.

As a result of this study, we have come to the conclusion that any type of company can receive fines, as long as it does not comply with the GDPR rules, whether they are on the market for a long time or are just at the beginning of the road.

We recommend entrepreneurial firms to turn to various professionals, such as specialized law firms, to use online legal instruments, to consult with auditors, corporate architects, who can provide solid guidance to comply with GDPR rules (Krystlik, 2017).

Also, entrepreneurial firms can call on data protection officers (DPOs), information security officers, project managers and developers (Ferrara and Spoto, 2018).

Therefore, GDPR is not a new concept launched in May 2018, but there were many GDPR provisions in force even before May 2018, based on a European Directive transposed into national law.

We also found out that the GDPR contains a series of rules regarding the part of collecting, storing and using personal information about European residents.

Through this study we set out to help the managers and entrepreneurs at the beginning of the road and not only, regardless of the size of the company, to correctly implement the GDPR.

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MODERATING EFFECT OF MARKET OPENNESS AND REGULATORY EFFICIENCY ON THE RELATIONSHIP BETWEEN INTERNATIONAL TRADE AND POLLUTION IN EU

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Abstract

In recent years, the positive relationship between economic freedom and rising levels of innovation has encouraged economies to meet various environmental challenges as effectively as possible. This paper provides a moderation analysis to capture the impact of international trade on pollution as economic freedom increases. Data from secondary sources were collected to analyze the relationship. Data on economic freedom index variables were collected from the Heritage Foundation website, data for imports and exports, as well as for greenhouse gas emissions were collected from the Eurostat website. The sample of the study includes all European countries for which data is available (1996-2017 period). The findings suggest that economic freedom measured through two main indexes, market openness and regulatory efficiency, positively moderate the relationship between trade and pollution. Most significant results are revealed in the case of the moderating effect of business freedom used as an indicator of the efficiency of regulations and investments freedom used as an indicator of market openness.

Keywords: *economic freedom; regulatory efficiency; market openness; international trade; pollution.*

JEL Classification: F18, Q5

1. INTRODUCTION

In countries around the world, mostly developed ones, economic freedom has been shown to increase countries' capacity for innovation and thus to improve overall environmental performance (Miller, Kim and Roberts, 2019). The positive relationship between economic freedom and increasing levels of innovation

encourage economies to deal with various environmental challenges in most efficient ways. Following the same logic, the latest improvements in clean energy use and energy efficiency can be attributed to advances in economic freedom as well as freer trade.

In order to analyze the moderating effect of economic freedom on international trade and pollution we focused on market openness and regulatory efficiency using five different indexes that compose the overall economic freedom index developed by The Heritage Foundation: business freedom index, monetary freedom index, trade freedom index, investment freedom index and financial freedom index. First two indexes are used to account for regulatory efficiency, while the rest determine the degree of market openness of an economy.

The novelty of our study consists of introducing moderation analysis in order to capture the impact of international trade on pollution under the circumstances of increasing economic freedom of countries in Europe.

2. LITERATURE REVIEW

Much of the debate on the implications of international trade on the environment focuses on the level of trade openness in relation to pollution measured by the greenhouse gas emissions. Among the researchers that explored the relationship between trade and CO₂ emissions are: Grossman and Krueger (1991); Antweiler, Copeland and Taylor (2001); Omari (2013); Cole and Elliott (2003); Copeland and Taylor (2004); Managi, Hibiki and Tsurumi (2009); Naanwaab and Diarrassouba (2013); Sebri and Ben-Salha (2014); Shahbaz *et al.* (2017); Sohag *et al.* (2017); Sun *et al.* (2019); Danish (2019); Muhammad *et al.* (2020); Pantelaiou, Hatzipanayotou and Konstantinou (2020); and Xu, Dietzenbache and Los (2020).

Sun *et al.* (2019) contribute to the literature by examining the immediate and long-term economic effects of international trade, income and energy consumption on environmental quality by using data from countries within Belt and Road regions over the period of 1991–2014. In an attempt to investigate the performance of trade on the environment a Granger causality approach was employed revealing that higher emissions do not always involve more trade and more trade does not necessarily means more emissions. These results confirmed the study conducted by Copeland and Taylor (2004), pointing that East Asia and Europe showed an inverse significant relationship between trade and CO₂ emissions.

Among the favorite topics of the field it is the impact of trade liberalization on the environment since environmental sustainability represents a key component in adopting trade policies. Different empirical models have been developed in order to capture the impact of trade on the environment. Omari (2013) used the simultaneous equation model to estimate the impact of CO₂ emissions on trade openness, energy consumption and economic growth for

MENA nations between 1990 and 2011 showing that the effect of open trade on pollution in these countries was inverse and statistically insignificant. Using data from middle-income countries between 1980 and 2012, Sohag *et al.* (2017) showed that a percentage increase in trade reduces CO₂ emissions by 0.3%. Other empirical studies have found evidence that trade openness is actually improving pollution since free trade is associated with higher foreign direct investments (Shahbaz *et al.*, 2013; Shahbaz *et al.*, 2017). Even though we find discrepancies on the positive or negative impact of trade on the environment, most of the studies conclude that non-advanced countries are much affected by the increased emissions due to free trade. One example is offered by Danish (2019) in regard to Pakistan which is considered to be an open economy and its free exchange long term agreements are seriously affecting the environment due to too much relaxing criteria on behalf of companies willing to relocate for a preferential treatment on technology transfers. In an attempt to estimate the overall effect of trade on the environment, Managi, Hibiki and Tsurumi (2009) find that international trade increases emissions in non-advanced nations; while in advanced countries the results are contradictory. Also, there is much evidence on the increase of CO₂ emissions in countries where the energy industry is more developed (He *et al.*, 2020) with a quite fast increase in pollution levels.

One of the approaches in explaining the influence of trade on the environment uses the pollution heaven hypothesis developed by Copeland and Taylor (2004) which assumes that if a country has strict environmental regulations, the companies in that country will choose to relocate to countries with less rigid environmental laws that can also be considered to have a comparative advantage. In the same essay, the authors argue that the impact of trade liberalization on the environment can well be explained by composition, scale and technology effects, first introduced by Grossman and Krueger (1991). The composition effect means that countries are encouraged to change the production process by taking into consideration their comparative advantage. The scale effect assumes that economic growth as a consequence of free trade is degrading the environment contributing to more pollution due to a higher demand for energy as a result of the expansion of economic activities in a specific country. And last, the technique effect assumes that while trade increases between countries, pollution reduces due to shared knowledge and environmentally friendly production methods and that on long-term can contribute to a reduction in greenhouse gas emissions. Thus, if the scale effect tends to increase pollution, the technique effect has the exact contradictory reaction, and while the composition effect depends mainly on the comparative advantage, it is not clear if the sign is positive or negative. In this view, freer trade will generate positive environmental consequences if the scale effect and composition effect are outweighed by the technique effect if a country has comparative advantage in dirty industries; also, if a country has comparative

advantage in clean industries, the technique effect and the composition effect should outweigh the scale effect.

According to Muhammad *et al.* (2020), exports have a different impact on CO₂ emissions when taking into account national income levels. In low-income countries, CO₂ levels decrease and the quality of the environment increases. This can be seen as a consequence of the technique effect where an increase in trade facilitates the transfer of ecological technology. The same paper concludes that imports increase carbon emissions in low-income countries. Low-income countries could import more pollution-intensive goods and second-hand products, such as cars, telephones and old-fashion cars, which consume more fuel to operate. Because low-income countries are the least developed and income levels are very low, which impose restrictions on importing new and technologically advanced equipment. However, imports reduce carbon emissions in middle- and high-income countries. This supports the commercial theory of the technique effect, mainly because an increase in trade facilitates the transfer of green technologies. These countries could also import less polluting goods, newer products and even green technologies, only if the level of investments would be high enough. In addition, low-income countries export less polluting products, as the major exports of low-income countries are fruits, vegetables and precious metals. Exports increase environmental pollution in lower middle-income countries, which support the scale effect theory. In addition, there are countries that could export more polluting products, which leads to increased environmental pollution. For high-income countries, the results show that exports tend to reduce carbon emissions. This relationship between CO₂ and exports can be justified by the composition effect, which explains why exports from high-income countries reduce environmental pollution through the use of green technologies and strong government policies.

To summarize, the pollution haven hypothesis suggests that relatively low-income developing countries will experience an increase in dirty industries as a consequence of trade liberalization. As a result, the simple factor endowment hypothesis is seen as an alternative and suggests that dirty capital-intensive economic activities should relocate to the relatively capital abundant developed countries. Notable work by Grossman and Krueger (1993), Jaffe *et al.* (1995) and Tobey (1990) argue against the pollution haven hypothesis because trade flows in their view are responsive to factor endowment and not to changes in abatement costs (which are the costs of reducing environmental negative consequences such as pollution).

Kuznets environmental curve (Grossman and Krueger, 1993) offers another perspective on the consequences of economic growth on the environment and it is of interest for our study because international trade plays an important role in economic development and we can enlarge our assumption further that increases in international trade of economies will have a negative effect on the environment

but up to a specific level of economic growth when countries start to experience reductions in environmental degradation.

The impact of economic freedom on international trade using the indexes developed by the Heritage Foundation is not so well documented in the literature. Naanwaab and Diarrassouba (2013) investigated the impact of economic freedom on international trade of 33 African countries using the Fraser Institute's economic freedom of the world index to show that there is a clear positive relationship between economic freedom and imports and exports of these countries. A similar approach is embodied by Depken and Sonora (2005) who look at the asymmetric effects of economic freedom on imports and exports between the U.S. and its trading partners by employing a gravity model. They find that the economic freedom of trading partners has a significant positive effect on U.S. exports to those specific countries while there is an insignificant impact on the imports from those countries to the U.S.

According to Xu, Dietzenbache and Los (2020) the damage associated with international trade is considerable and cannot be neglected. His research in the U.S. concludes that most of the damage is generated by the production of intermediate products. The damages associated with the emissions generated by intermediate producers/products incorporated in US exports and imported products, if it had been produced domestically, accounted for about half of the total damage: the main finding of the paper is that the US avoided more damage on its own territory through imports than through production and that the volume of exports is closely linked to the massive trade deficit. Still, Xu, Dietzenbache and Los (2020) found that for some sectors a trade deficit and positive damages due to trade coexisted. This is the consequence of differences in the compositions of imports and exports. Even within rather homogeneous sectors, products sold by industries can vary considerably in terms of the damages they cause.

The sensitivity analysis performed by Xu, Dietzenbache and Los (2020) showed that differences in the ratios between damages and value added are quite small in the whole economy and are small and even moderate in most sectors. They showed that the real US trade deficit is about 3% lower if we take into account the pollution costs for society. By importing more, the US avoids the damage caused by pollution that would have suffered if the imported products had been produced in that country.

Pantelaiou, Hatzipanayotou and Konstantinou (2020) aimed to answer whether the clean environment can promote international trade. To this end, they have built an international duopoly model to assess how different environmental policies affect trade flows, resource use, welfare levels and pollution emissions. Their approach offers interesting perspectives on the impact that these policies can have on international trade and resource use, through competition from exports between countries on world markets. Their results indicate that, in general, reducing pollution appears to be a more effective mechanism for promoting

exports in relation to the recycling of emissions. They conclude that when a country's public sector is efficient in its pollution abatement activity and regardless of the level of pollution abatement activity in the private sector, the total net pollution decreases both in the country following this policy as well as abroad. And revenue recycling works largely as a mechanism for contracting exports and conserving resources. It encourages the reduction of individual pollution, but its effect on reducing emissions is ambiguous. However, environmental standards are always conducive to the overall wellbeing, on the society wellbeing and on the economy wellbeing.

Finally, the objective of this paper is to analyze the moderating impact of economic freedom on international trade and pollution. The logic of this approach is based on two assessments: 1) there is a clear positive relationship between economic freedom and international trade and 2) there are mixed findings on the relationship between international trade and pollution.

3. MAIN HYPOTHESIS AND ANALYSIS

H1: International Trade is associated with pollution in most European countries.

H2: *Regulatory efficiency* positively moderates the relationship between *International Trade* and *pollution* and *Market openness* positively moderates the relationship between *International Trade* and *pollution*.

3.1. Variables of the study:

Independent variable: International Trade (IT)

Dependent variable: Pollution (GHG emissions)

Moderating variable: Economic Freedom Index (EFI) with 5 index components: business freedom index (BFI), monetary freedom index (MFI), trade freedom index (TFI), investment freedom index (IFI) and financial freedom index (FFI).

The business freedom index is based on the World Bank's Doing Business annual report that measures the extent to which the regulatory environments constrain the efficient operation of businesses. The index provides an objective measure of regulations applied to business, domestic small and medium-size companies, and the way these regulations are enforced at national and subnational level. The score is derived from different factors that affect the starting, operating, and closing of a business which cover the entire life cycle of a company. The business freedom score for each country is between 0 and 100, where 100 indicates the freest business environment.

The monetary freedom index combines inflation and price controls by using the weighted average inflation rate for the most recent three years and price controls. As for the previous index, a score of a 100 indicates the freest monetary environment.

Trade freedom is a complex measure that covers the tariff and non-tariff barriers that affect imports and exports of goods and services worldwide. Tariff barrier is calculated as the trade-weighted average tariff rate, while the non-tariff barriers include quantity restrictions, price restrictions, regulatory restrictions, customs restrictions, as well as direct government intervention mostly taking the form of government industrial policies.

The investment freedom index measures the restrictions on investment for both individuals and firms. Some of the restrictions on investment take into account access to foreign exchange, capital transactions, transfers and even payments, different regulation for foreign and domestic investment, and no access in selected industries for foreign investment. The flow of investment capital depends on the country's investment regime on the following areas: national treatment of foreign investment, restrictions on land ownership, sectoral investment restrictions, expropriation of investment, foreign exchange controls and capital controls.

The financial freedom index measures the banking efficiency as well as the government interference in the financial services. The index is a composite measure of the extent of government regulation of financial services, state intervention in the banking sector or financial firms through direct or indirect ownership, government intervention in the allocation of credit, the level of development of the financial and capital market and the degree of openness of this sector to foreign competition.

To measure pollution we used the greenhouse gas emissions (GHG) index available in the Eurostat database which allows us to follow the evolution of all man-made gas emissions as compared to the reference year, 1990. Also called the 'Kyoto basket' of greenhouse gases, the indicator includes carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and other F-gases. These gases are aggregated using gas-specific global warming potential factors and are expressed in units of CO₂ equivalents.

For imports and export we used data on the total volume of both imports and exports of goods and services for each separate European country then transformed it into logs.

3.2. Methodology

The objective of current study is to test the relationship between two variables i.e. Pollution and International Trade and the extent to which Economic Freedom affects this relationship. To analyze the above relationship data was collected mainly from secondary sources. Data about the economic freedom index variables has been collected from The Heritage Foundation website (2020), data for imports and exports, as well as for greenhouse gas emissions, has been gathered from Eurostat website (European Commission, 2020).

The sample of the study include all the European countries for which data is available for the analysis period, 1996-2017. Following 31 European countries were selected based on data availability i.e Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, România, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

3.3. Specification of the model:

The research model to test the relationship consists of two equations which are:

$$GHG_{it} = \alpha_0 + \beta_1 IT_{it} + \epsilon_{it} \text{ (Model 1)}$$

$$GHG_{it} = \alpha_0 + \beta_1 GHG_{it} + \beta_2 EFI_{it} + \beta_3 EFI_{it} * IT_{it} + \epsilon_{it} \text{ (Model 2)}$$

Where:

IT_{it} = International Trade of ith country for the time “t”

GHG_{it} = Pollution for ith country for the time “t”

EFI_{it} = Economic Freedom Index ith country for the time “t”

EFI_{it} * IT_{it}= Interaction between Economic Freedom Index and Pollution.

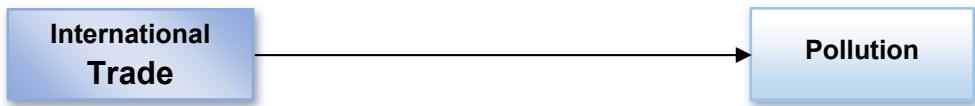


Figure 1. Model 1

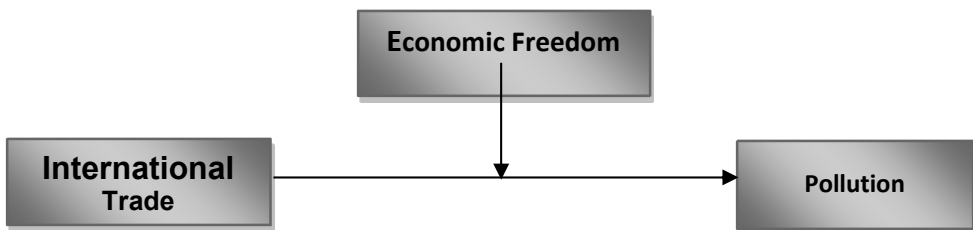


Figure 2. Model 2

3.4. Analysis and main results:

Moderation analysis is often used in behavioral sciences to study the relationship between two variables by introducing a third variable that acts as a moderator on this relationship. In order to test our hypothesis, we used moderation analysis with a continuous dependent variable (Pollution) and a continuous independent variable (International Trade), which is modified by a continuous moderator variable (Economic Freedom). The moderation effect can be of three

types: enhancing – when an increase in the moderator value would increase the effect of the predictor on the outcome; buffering – in the opposite case; and antagonistic – when the relationship between the predictor and the outcome would be reversed by increasing the moderator (Elite Research LLC).

Our assumption is that *Economic Freedom* will act both as an enhancing moderator as well as an antagonistic one because more economic freedom tends to increase international trade along with increasing levels of pollution but up to a point if we consider Kuznets environmental curve. Assuming that international trade plays a substantial role in economic development, even though the economies will experience an initially deterioration of the environment including higher pollution, after a certain level of economic growth, countries will experience a reduction in pollution as a result of increasing levels of investments in cleaner industries.

Table 1. Descriptive Statistics

	LEXP	LIMP	GHG	BFI	FFI	IFI	MFI	TFI
Mean	24.98	24.98	93.17	76.85	67.92	73.02	79.98	82.20
Median	25.14	25.14	94.80	75.70	70.00	70.00	81.30	84.20
Minimum	21.60	21.69	39.90	53.70	30.00	30.00	0.00	46.80
Std. Dev.	1.56	1.50	27.67	10.40	13.86	12.53	9.61	6.87
Jarque-Bera	24.2***	20.8***	4.7**	7.5**	17.5***	15.8***	21994.7***	918.3**
N	682	682	682	682	682	682	682	682

***, **, * denotes the level of significance at 1%, 5%, and 10%

Source: computed by the authors

Table 1 presents the results of descriptive statistics of overall countries. Mean, Median and Standard deviation of all the eight variables are given for the 31 European countries.

Where LEXP represents natural log of exports and LIMP – natural log of imports, GHG – greenhouse gas emissions, BFI – business freedom index, FFI – financial freedom index, IFI – investments freedom index, MFI – monetary freedom index TFI – trade freedom index.

Table 2 reports the results of correlations between variables used in the study. The results reveal that correlation between Imports and Exports is very high at 1% significance level. Imports and Exports also have significant positive correlation with all the variables accounting for economic freedom. GHG emissions variable is positive correlated with business freedom index and monetary freedom index

and negative correlated with financial freedom index, investments freedom index and trade freedom index. These significant correlations provide initial evidence regarding the proposed hypothesis. However, further powerful tests are conducted to reveal the deeper relationship.

Table 2. Pearson Correlations

	LEXP	LIMP	GHG	BFI	FFI	IFI	MFI	TFI
LEXP	1							
LIMP	0.995	1						
GHG	0.086	0.075	1					
BFI	0.286	0.265	0.135	1				
FFI	0.286	0.267	-0.085	0.382	1			
IFI	0.372	0.350	-0.174	0.367	0.481	1		
MFI	0.347	0.330	0.228	0.288	0.331	0.227	1	
TFI	0.381	0.369	-0.058	0.356	0.200	0.455	0.444	1

Source: computed by the authors

First row of Table 3 shows that in total there are 10 models used in the panel regression analysis. The dependent variable in all models is pollution (GHG emissions).

Model Ia reveals the negative relationship between exports, business freedom and pollution. For each unit increase in exports there is a 2.91% decrease in the level of pollution determined by GHG emissions and for one unit increase in business freedom there is a 0.15% decrease in pollution. Model Ib uses the business freedom index as a moderator for the relationship between exports and pollution and therefore, we can observe a turn in a significant positive relationship between the variables in that one unit increase in exports will increase pollution by 5.41%.

Table 3. Panel Regression Analysis (fixed effects), Dependent variable GHG

Variables	Model									
	I a	I b	II a	II b	III a	III b	IV a	IV b	V a	V b
C	177.67 (15.4)***	-31.04 (53.2)	182.81 (15.3)***	135.76 (41.7)***	149.16 (15.7)***	-104.43 (44.0)**	183.22 (15.5)**	347.21 (67.0)***	150.35 (20.0)***	-687.70 (80.9)***
LEXP	-2.91 (0.65)***	5.41 (2.1)**	-3.96 (0.63)***	-2.01 (1.73)	-1.37 (0.68)**	8.92 (1.8)***	-3.70 (0.65)***	-10.85 (2.9)***	-1.58 (1.01)	34.04 (3.5)***
BFI	-0.15 (0.05)**	2.69 (0.70)***								
BFI*EXP		-0.11								

Variables	Model									
	I a	I b	II a	II b	III a	III b	IV a	IV b	V a	V b
FFI		(0.03)***	0.14 (0.04)**	0.86 0.60						
FFI*EXP				-0.03 0.02						
IFI					-0.30 (0.04)***	3.21 (0.57)***				
IFI*EXP						-0.14 (0.02)***				
MFI							0.03 0.05	-2.10 (0.85)**		
MFI*EXP								0.09 (0.04)**		
TFI									-0.22 (0.09)**	9.12 (0.88)***
TFI*EXP										-0.40 (0.04)***
R Square	0.90	0.90	0.90	0.90	0.91	0.91	0.90	0.90	0.90	0.92
F-statistic	(186.5)***	(185.7)***	(186.9)***	(181.4)***	(197.8)***	(203.8)***	(184.04)***	(180.1)***	(185.8)***	(214.7)***

***, **, * denotes the level of significance at 1%, 5%, and 10%

Source: computed by the authors

Model IIa shows that there is a significant negative relationship between exports and pollution (a unit increase in exports decreases pollution by 3.96%) and a positive relationship between financial freedom index and pollution. Model IIb shows the mediated relationship between exports and pollution (using financial freedom index). In this case, the relationship remains negative but the coefficient loses the significance.

In Model IIIa we can observe a similar situation, a negative relationship between exports and pollution and also a negative relationship between financial freedom index and pollution. Model IIIb shows that when financial freedom index is included, the relationship between the variables change dramatically in that, a unit increase in exports will increase pollution by 8.92%

Model IVa and Model IVb show the relationship between exports, monetary freedom index and pollution. The relationship between exports and pollution is significant negative in both models. When the monetary freedom variable is included in the model, the negative significant impact of exports on pollution increases from 3.7% to 10.85%.

Last two models reveal the relationship between exports, trade freedom index and pollution. From Model Va we can observe a negative relationship between exports and pollution while Model Vb (with trade freedom index as a moderating variable) show a significant positive relationship between exports and pollution (a unit increase in exports increases pollution by 34.04%).

R squared values at the bottom of the tables shows that all the models explain more than 90% of variations in the variables. Chi-square and F-statistic values of the Likelihood ratio test at the bottom of the table show that country fixed effect model is the best fit model for our study.

Table 4. Panel Regression Analysis (fixed effects), Dependent variable GHG

Variables	Model									
	I a	I b	II a	II b	III a	III b	IV a	IV b	V a	V b
C	169.40 (16.3)***	-61.32 56.01 (16.2)***	178.55 (16.2)***	113.51 (44.5)**	139.03 (16.6)***	-141.05 (45.8)**	176.77 (16.4)***	342.48 (68.6)***	130.18 (21.2)***	-742.82 (83.0)***
LIMP	-2.55 (0.69)***	6.67 (2.25)**	-3.79 (0.67)***	-1.11 1.84	-0.92 0.72	10.44 (1.87)***	-3.42 (0.69)***	-10.62 (2.9)***	-0.53 1.06	36.50 (3.6)***
BFI	-0.16 (0.05)**	2.95 (0.73)***								
BFI*IMP		-0.12 (0.03)***								
FFI			0.14 (0.04)***	1.13 (0.63)**						
FFI*IMP				-0.04 0.03						
IFI					-0.31 (0.04)***	3.56 (0.59)***				
IFI*IMP						-0.16 (0.02)***				
MFI							0.02 0.05	-2.15 (0.87)**		
MFI*IMP								0.09 (0.04)**		
TFI									-0.29 (0.09)***	9.43 (0.90)***
TFI*IMP										-0.41 (0.04)***
R Square	0.90	0.90	0.90	0.90	0.91	0.91	0.90	0.90	0.90	0.92
F-statistic	184.5)***	184.3)***	184.7)***	179.6)***	197.0)***	204.6)***	181.8)***	177.8)***	185.1)***	215.1)***

***, **, * denotes the level of significance at 1%, 5%, and 10%

Source: computed by the authors

Table 4 reports the results for the relationship between imports, economic freedom indexes and pollution. Similar to Table 3, there are a total of 10 models used in the panel regression analysis and the dependent variable in all models is pollution (GHG emissions).

Model Ia shows there is a significant negative relationship between exports and pollution and that a unit increase in imports will decrease pollution by 2.55%. Anyhow, when business freedom index is included in the model, the relationship between imports and pollution totally changes (Model Ib) and the results show that a unit increase in imports will increase pollution by 6.67%.

The results in Model IIa also reveal a negative relationship between imports and pollution. Similar to the case of exports, the interaction effect of financial freedom make the variable to lose from significance (if the negative impact of imports on pollution is significant in Model IIa, in Model IIb we can see is much less significant).

Model IIIa show a negative relationship between imports and pollution while Model IIIb shows a strong positive relationship as a result of the investment freedom moderation effect.

Both Model IVa and Model IVb reveal significant negative relationships between imports and pollution. In Model IVa, without the moderating effect of monetary freedom, a unit increase in imports will decrease pollution by 3.42%. In Model IVb, monetary freedom interaction decreases pollution by 10.62%.

In Model Va we can observe the negative relationship between imports and pollution in the absence of the moderating variable. Model Vb shows the results under trade freedom interaction and the significant positive relationship between imports and pollution (a unit increase in imports causes 36.5% increase in pollution). These results, as well as those in which exports are used as independent variable, with the significant change caused by the interaction variable can well be explained by the fact that most European countries enjoy a high level of trade liberalization and trade freedom index is mainly composed by tariffs and non-tariffs barriers.

4. CONCLUSIONS AND MAIN LIMITATIONS

This paper provides an empirical investigation of the role of economic freedom on the relationship between international trade and pollution. Using the index of economic freedom developed by The Heritage Foundation, we focused on two of the components, market openness and regulatory efficiency, and try to see how the relationship between international trade and pollution changes in the presence of these interaction variables. The findings suggest that in both panel regressions, using exports and imports alternatively as independent variables, market openness and regulatory efficiency positively moderates the relationship between trade and pollution, thus confirming our hypotheses. Most significant results are revealed in case of the moderating effect of business freedom used as proxy for regulatory efficiency and investment freedom used as proxy for market openness.

Main limitations of our study consist of the shortcomings attributed to the use of the economic freedom index since the majority of the existing studies use the Economic Freedom of the World (EFW) index developed by the Fraiser Institute, and also the poor and somehow mixed literature on the impact of economic freedom on international trade and pollution.

Further research is needed in order to shed some light on the implications of international trade on the environment and specifically, on pollution. Since the literature presents mixed findings on this relationship it is necessary to have more replications but also to consider additional factors that can mediate this relationship. Also, using mediation analysis to capture the effect of economic freedom on international trade and pollution can reveal interesting findings.

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THE EFFECTS OF HUMAN RESOURCES MIGRATION FROM THE ROMANIAN HEALTH SYSTEM ON THE ECONOMY

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Abstract

This paper aims to highlight the economic impact of the migration of qualified medical personnel from the perspective of the labor force exporting country in this field, namely the case of Romania. It will also examine the reasons that have prompted this phenomenon to grow in recent years. The association of causal relationships between the migration of healthcare professionals, the provision of health care and the financing of the sector illustrates how the scope of the global health economy should be understood in the context of current conditions and the effects of these issues on the national economy. The importance of understanding migration as an issue of unequal global development, rather than a delineated problem of labor, is made with reference to the reasons for the medical staff to make this decision. It is known that there is a close link between the economy of a country, the level of performance of existing hospital units, the professionalism of the medical staff, and the health of the population. Thus, the lack of human resources, as well as the low financing of the health sector, lead, over time, to an increase in the population's illness.

Keywords: *economy; migration; health services; human resources.*

JEL Classification: A12, H51, I15

1. INTRODUCTION

The approach of the topic is motivated by the fact that at present the health of the population is directly proportional to the level of the national economy and is an essential point in the appreciation of the economic evolution, by the level of the migration of medical professionals from Romania; an important aspect is the possibility of monitoring the effects of migrating healthcare professionals on the

economy and, on the other hand, the influence of the economy on the migration of health professionals. Employees decide to temporarily or permanently migrate to more economically developed countries, where they have the opportunity to evolve professionally in an expanded environment and receive salary compensation as expected. Migration also takes place across the country, from rural to urban, a phenomenon that has widened in Romania, with the rural areas facing an acute shortage of medical staff, according to statistics. This phenomenon has grown and is impossible to stop, however, with the support of the authorities, there would be the possibility of diminishing it.

The national economy, through sub-financing of this sector, has a decisive role in the decision of the human resources to leave the national system of health services. Employees in the health care system are the key element in developing a prosperous and balanced society, and the training and retention of health professionals in this sector have direct effects on every member of the community. As we will show in the second part of this paper, the national health care system, influenced by economic, political and social transformations, has been manifested by strong labor migration, both highly qualified and unskilled, which in the long run has negative effects on the state of health of our country's population. Thus, the insufficient financial resources, as well as their efficient management, lead to the impossibility of keeping the medical staff in the system that has formed them.

As the health of the population is the most valuable asset given to the society, it is necessary that the human resources within this system to hold a high level of education and professionalism. In this respect, educational and vocational training would be regarded with seriousness and dedication, both by future health professionals and the relevant institutions in forming young people in this area. Training of human resources in health services begins with attending faculties or sanitary college schools and practice in hospital units, where once motivated, students practise upon their professional training.

In contrast to the other professional categories emigration of health professionals directly affect society by reducing the availability and quality of healthcare services. Although the number of graduates and young people moving towards this profession is growing, our country is facing an acute lack of medical staff. This is possible because of emigration that has grown in recent years and the negative effects have an impact on the entire national public health system.

2. LITERATURE REVIEW

The first significant wave of international migration of medical staff was in the 1960s when physicians from large Asian states such as the Philippines and India and Iran migrated mainly to the United States. Physicians and nurses in the Philippines and South Asia have begun to work in the UK too and, over time, migratory flows have become routine and stimulated by active recruitment (Connell, 2010, p. 5). In the context of accelerated evolution, with the abundance

of information and knowledge they benefit from, people are increasingly expecting lifestyles demanding more and more financial resources, and so their options are moving towards immediate gains, and migration offers the prospect of a secure gain.

The literature presents numerous studies on the link between the economy and the migration of healthcare professionals, as well as the effects of this phenomenon (Fraser 1977; Ahmad 2005; Rutten, 2009; Habermann and Stagge, 2010; Bradby, 2014). Eastwood *et al.* (2005) and Clark, Stewart and Clark (2006) consider that developing countries are constantly facing a shortage of medical staff due to their migration. Bhatnagar (2004) argues that the migration of unskilled workers leads to gains and well-being for developing countries, which are usually labor-exporting countries; instead, the migration of health workers contributes to increasing the mortality rate for developing countries.

In some studies, the authors (Bundred and Levitt, 2000; Martineau, Decker and Bundred, 2002; Alkire and Chen, 2004; Chen *et al.*, 2004; Eastwood *et al.*, 2005) describe the phenomenon of medical migration as a "carousel" in which physicians and nurses migrate from one country to another, which provides better working and living conditions. Other studies use the term "conveyor belt" to describe medical migration flows (Padarath *et al.*, 2004; Schrecker and Labonte, 2004).

3. THE DECISION OF HEALTH PROFESSIONALS TO MIGRATE

As health care has become increasingly commercialized, migration has become the same, encompassing most countries, as importing and exporting labor in the medical system. In particular, the need for greater earnings has led healthcare professionals away from the areas most in need of health care, such as the Democratic Republic of Congo, Zimbabwe, Madagascar, Haiti, etc., and few parts of the world have remained unaffected by this phenomenon. The most affected countries are poor, underdeveloped countries, whose population continues to grow, thus putting pressure on health systems. On the opposite side, the main beneficiary countries are developed countries, focusing on the health system as a prerequisite for a healthy population (Connell, 2010, p. 6).

Maintaining and providing stability for healthcare professionals is difficult to achieve, given the poor economic situation in the national context and envisages two categories of factors:

- external, that distinguishes the internal evolution of the labor market from the international one and makes the character of the economic resources to put its imprint on the behavior of human resources;
- internal, that generate the modification of the motivational hierarchy of the healthcare professional, because the organization no longer has the ability to provide it with the social and material situation to which it aspires.

Thus, we can talk about the factors that lead to the decision of qualified healthcare professionals to leave the system that has formed them. Ahmad (2005) in „Managing medical migration from poor countries” focusing on the reasons for migrating healthcare workers have identified two major categories of factors:

- existing factors in the country of origin, which have the role of determining the migration: low wages, low motivation, lack of basic medical supplies, unreliable working conditions, outdated equipment, lack of supervision, limited career opportunities; as well as factors such as inequalities in human rights, lack of ethics in certain segments, religious tensions, political persecution, wars, and economic collapse, have an important role in the medical staff's decision to leave their origin country;
- existing factors in the host country, which have the role of attracting health professionals: economic reasons, access to professional development opportunities and job security are the most important factors (Ahmad, 2005, p. 43). The decision to migrate is a combination of these categories of factors.

Increased demand for qualified healthcare professionals in developed countries influences and guides migratory flows so that employment in health services accounts for about 10% of total workforce in developed economies and around 6% in countries with developing economies, thus having a significant influence on the global labor markets (Connell, 2010, p. 68).

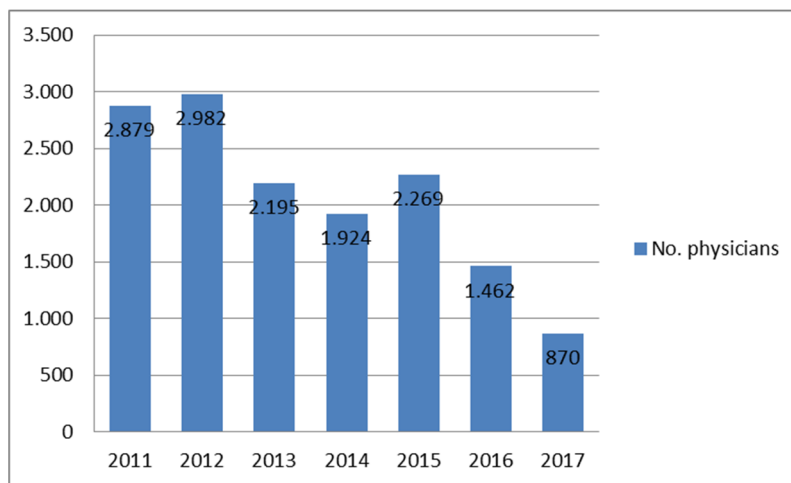
The migration of medical professionals are found:

- **from Romania to the EU member states:** the phenomenon of migration of medical staff has intensified in the context of Romania's accession to the European Union; the right to freedom of movement for professional purposes is guaranteed by national and international law, so that the migration of health professionals has grown in the first years after joining the EU, but according to statistics has been diminished in recent years; however, the number of qualified healthcare professionals leaving the national health service system is high, emphasizing the differences in this segment between our country and the EU member states.

According to statistics (Figure 1), in recent years, the number of physicians who have left the national health care system has dropped considerably. Of the analyzed years, in 2012, most physicians left the country, 2982, 103 more than in 2011, 787 more than in 2013 and 2112 more than in 2017. Also, the year 2015 registered a large number of physicians in our country, namely 2269, and in 2016 this figure will be considerably reduced by 807 and 2017 by 870 physicians who left our country. Thus, between 2011 and 2017, 14,581 physicians have left Romania for the EU Member States.

- **from the public system to the private system:** taking into account differences in pay and working conditions, health professionals prefer to practice in the private sector, to the detriment of the public sector; thus, we find a discrepancy in the number of healthcare professionals in the two

sectors, as seen in the health status of the population; in the public health system, a low number of health professionals means waiting lists for patients who have to pay the value of the consultations in the private health system.



Source: authors' elaboration based on data from Eurostat (2018)

Figure 1. Number of physicians who left the Romanian health system, 2011- 2017

During the analyzed years, it can be noticed that the number of physicians in the public system is steadily decreasing, while the number of physicians in the private system is increasing (Table 1). The public health system also has very few dental practitioners, compared to the private system. The situation is similar in terms of the number of pharmacies, which in the private system is much higher compared to the public health system. Private sector pharmacies are of major importance for the economy because they have a very high profit. The profit of pharmacies is directly proportional to the health of the population, which means steadily rising earnings, while hospitals receive lower funding from the public budget. The differences between the number of qualified health professionals working in the two systems are very high. In the public health system, there are very few physicians compared to the private system, although most of the population access the public health system.

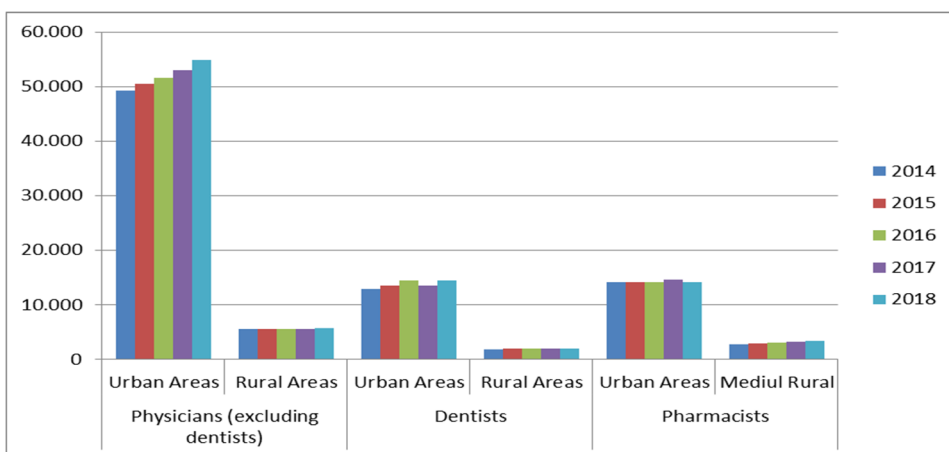
Table 1. The number of qualified healthcare professionals in the public system compared to the private system

Year	Physicians (excluding dentists)		Dentists		Pharmacists	
	Public System	Private System	Public System	Private System	Public System	Private System
2014	40.658	14.271	3.032	11.847	991	16.108

Year	Physicians (excluding dentists)		Dentists		Pharmacists	
	Public System	Private System	Public System	Private System	Public System	Private System
2015	34.976	21.134	1.631	13.925	1.025	16.110
2016	35.680	21.624	1.643	14.799	1.103	16.077
2017	36.788	21.795	1.619	14.034	1.161	16.672
2018	38.064	22.521	1.603	14.854	1.208	16.412

Source: authors' elaboration based on data from the National Institute of Statistics (2014, 2015, 2016, 2017, 2018)

- from rural to urban areas:** lack of institutions, infrastructure to travel to and from rural areas and the prospect of professional development lead to the desire of health professionals to choose to work in the urban areas, thus giving society new cases of villages without the possibility to access the system national health services. Significant disparities between urban and rural areas are mainly due to the lack of sanitary institutions in some villages, as well as the lack of specialized medical staff. Although it is known that consumers' needs and demands determine the development of systems, this is not the case in rural areas, given the possibility of traveling in the urban areas to solve medical problems. The health instability provided by the rural areas authorities leads to the inability to overcome the precarious living standards in some villages of Romania.



Source: authors' elaboration based on data from the National Institute of Statistics (2014, 2015, 2016, 2017, 2018)

Figure 2. The number of qualified medical professionals in the urban areas compared to rural areas

There is a major difference between rural and urban areas in terms of the number of healthcare professionals (Figure 2). There is a major difference

between rural and urban areas in terms of the number of healthcare professionals. In rural areas, the number of medical staff is continuously decreasing, so that in 2017 there were 5,656 physicians in the rural area, compared to 52.927 in the urban area. The situation is similar in terms of dentists and pharmacies, so the urban environment faces an acute shortage of medical staff. In 2018, the number of medical staff increased compared to 2017, registering the highest number. Thus, the year 2018 registered an increase in the number of physicians, dentists, as well as the number of pharmacists, both in rural and urban areas.

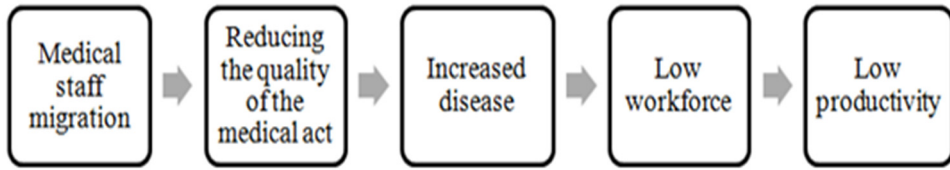
4. THE EFFECTS OF MEDICAL STAFF MIGRATION FROM ROMANIA

The consequences of medical migration can be subdivided into costs and benefits for source and destination countries. The general effects on the economy will depend on the interaction of several factors that influence the decision of the human capital to leave the source countries and to choose the country of destination. The effects of this phenomenon include the number of remittances from the country of destination to the source countries, the impact on the labor market in the source and destination countries, the consequences for the quality of the provision of health services and the state of health of the population in the source and destination countries (Rutten, 2009, p. 305).

Demographically, economically, politically, socially and, of course, from a medical point of view, the phenomenon of migration has a significant impact at local, regional and global level. Migration also has benefits such as providing health care to the population, improving health professionals through experience exchange, and the ability of countries, through their populations, to engage in the global economy and society (Vujicic, Ohiri and Sparkes, 2009, pp. 87- 88).

Health care workers directly improve the quality of life of the population, which can contribute to the economic prosperity of a country through people who have labor. The key issue affecting countries in the crisis of health care professionals is that health workers are different from other skilled workers by keeping people alive and ensuring the welfare of communities and nations (Shah, 2009, p. 79).

The migration of healthcare professionals has an impact on society as a whole, by reducing the quality of the medical act, increasing the degree of illness of the population and thus reducing the workforce, which diminishes economic development (Figure 3).



Source: authors' elaboration

Figure 3. The effect of migrating medical staff on the economy

The effects of migrating medical staff on Romania can be divided into:

- **costs of training:** in Romania, the level of professional training of future health professionals is high and expensive, and more young people opt for the profession in this system, taking into account as the main possibility the qualification in the country and the occupation abroad. Thus, at the national level, there are numerous universities of medicine, dentistry, and pharmacy, as well as post-graduate healthcare schools, whose graduates are physicians, pharmacists, nurses, pharmacy assistants, as well as nursing and physiotherapy nurses.
- **unskilled medical staff:** once the phenomenon of migration has become more prominent, especially skilled health professionals have expressed their willingness to leave the country for professional development; thus, in the public system of health services in Romania, we meet unskilled medical staff or qualified medical personnel on a certain segment but who, due to lack of staff, they have to cover other specialties.
- **overworked medical staff:** the lack of medical staff leads to overworking of the existing ones in the system and thus, the quality of the medical act is diminished; Romania is facing health facilities lacking specialist physicians so that the healthcare units that can offer certain types of consultations are overwhelmed by waiting lists.
- **reducing the quality of the medical act:** is a consequence of both the existence of unskilled personnel in the system and the overworking of medical staff; also, the public health system in our country does not allow to invest in high-performance equipment and in a safe environment for both healthcare professionals and patients; these issues lead to an increase in the population's illness, a decrease in productivity and thus a decline in economic growth.

Given its positive and negative effects on healthcare systems, medical tourism remains a significant and challenged phenomenon, due to its potential to serve as a powerful force for unfair healthcare provision globally.

- **increasing the degree of illness of the population:** is a consequence of the large number of patients who suffer from a medical background and the lack of investment in the public health system, which leads to a low labor force and thus an impossibility of economic growth;

In addition to these direct pressures, there are side effects of migratory healthcare, such as diminishing health outcomes, diminishing economic growth, and government revenue from taxes paid by healthcare professionals.

5. CONCLUSIONS

In the long term, the result of migrating health professionals will mean hard access to basic health services, which will lead to overworking of staff remaining in the system, the increase in the costs of these services and, last but not least, the disease index, mean listing of patients seen in a hospital organized by a specific criterion. By investing in training human resources and maintaining them in the national health care system, society should aim to increase the health of the population for economic development.

The steady increase in medical staff migration is reflected in the expansion, internationalization and accelerated the globalization of the health services sector over the past two decades, and is driven by rising demand for skilled workers in developed countries where health care is increasingly expensive. Thus, professional healthcare services are part of the new internationalization of the workforce and are increasingly driven by demand, resulting in disparities between developed and less developed countries, which in the long run leads to increased disease of the population.

Globally, the phenomenon of migration can reduce health inequalities by covering the shortage of health professionals in the destination countries and may increase inequalities in the difficult access to health services in source countries. The effects of the lack of medical staff are felt in the decrease in the availability and quality of health services.

However, the migration of medical staff can also have beneficial effects on the source country, which can also be felt in the health system. Physicians leaving abroad can help establish collaboration contacts between institutions and specialists from developed countries, which fosters the development of the medical system in disadvantaged countries. Also, the experience of working abroad involves the acquisition of new skills and competencies, which can then be valued in the source country. Thus, the return of physicians who have worked abroad can have the effect of working experience, which can favor investments in technology, changes in organizational management, increase the quality of the doctor-patient relationship, and favor the development of the public health service system. Advantages for the source country are more important in the case of temporary migration. The return of medical staff allows the recovery of the state's investment in their training and adds the experience and qualification obtained by the human resource. Given the positive and negative effects of the migration of medical staff, we can say that the negative effects are more numerous and affect the whole population.

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THE ROLE OF GREEN FINANCE IN ENVIRONMENTAL PROTECTION. EVIDENCE FROM THE EU

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Abstract

During recent years, the European Union (EU) has encouraged investments in sustainable activities meant to bring environmental and social benefits on a long term. This process was named sustainable finance and it has become one of the drivers of EU environmental strategy and one of the EU policies.

The objective of this paper is to analyse how green finance, as part of the sustainable finance strategy, can help to improve environmental protection.

The first part of the paper reviews the literature regarding the concept of green finance, sustainable finance and also how green finance relates to environmental protection.

The second part of our paper pays attention to the institutional initiatives regarding green finance at EU level and their impact on environment protection.

As research method, we use table and graphical method in order to show the impact of green finance legislation on environmental protection, measuring the carbon emissions and also the progress in accomplishing the Sustainable Development Goals (SDGs). The EU is already showing that it is possible to have economic growth and also to reduce carbon emissions at the same time (European Commission, 2019b). Regarding the EU's performance on the SDGs, EU member states are already leading the implementation of the SDGs. Yet, no single country in the world has reached all the agreed objectives. At the same time, the EU's performance results on the SDGs show that the EU needs to continue its efforts in this direction.

Finally, we conclude that green finance encompasses innovative financial instruments aimed at the environmental protection and the accomplishment of sustainable use of resources.

Keywords: *green finance: environmental protection; sustainable development; European Union.*

JEL Classification: F64, K32, O13, P48, Q56, Q58

1. INTRODUCTION

During recent years, the European Union (EU) has encouraged investments in sustainable activities that will bring environmental and social benefits on a long term. This process was named sustainable finance and it has become one of the drivers of EU environmental strategy and one of the EU policies.

Persuading private investors to support low carbon and climate-resilient activities has required the creation of a legal and bureaucratic infrastructure. Thus, the European Commission has established a High-level expert group on sustainable finance (HLEG) in December 2016, after the adoption of the United Nation (UN) 2030 agenda (United Nations, 2015a) with its sustainable development goals and the Paris Climate Change Agreement in 2015 (United Nations, 2015b). Under the supervision of the expert group, the Commission (European Commission, 2018) has developed an action plan on sustainable finance that was adopted in March 2018. The main objectives of the plan were: the creation of a detailed classification system for sustainable activities, EU labels for green financial products, measures meant to clarify and strengthen the sustainability duties of managers and investors, and also the transparency of Environmental, Social and Governance (ESG) policies of the companies, and introduce the “green supporting factor” in the EU prudential rules for banks and insurance companies. A package of measures has been adopted in order to implement the action plan and a technical expert group on sustainable finance was created to assist the Commission with the development of a unified classification system for sustainable economic activities, an EU green bond standard, methodologies for low-carbon indices, and metrics for climate-related disclosure (European Commission, 2020a).

Continuing its work, in December 2019, the Commission has also adopted the European Green Deal (European Commission, 2019a), a climate-neutral growth strategy that incorporated a Green Investment Plan, which will mobilize at least EUR1 trillion of sustainable investments in public and private sector over the next decade.

Even there are a lot of studies analyzing the subject of green finance, Zhang, Zhang and Shunsuke (2019) make a brief review of the recent and advances in green finance research. Using a bibliometric analysis approach, they analyzed 381 relevant papers and they found that all journals are of environmental and resource economics and no one from finance journals.

The paper is organized as follows: section 2 reviews the literature regarding different approaches of the concepts of “green finance”, “sustainable finance” and the importance of them for the environmental protection. In order to capture the impact of green finance on environmental protection, section 3 focuses on the initiatives taken at EU level and a comparison of the SDG indices is done with the aim of studying the progress made by EU members in the considered areas.

Finally, section 4 presents the conclusions of the present research, highlighting the necessity of making improvements to environmental policies in the EU.

2. LITERATURE REVIEW

2.1. Defining green finance

There are many definitions of green finance showing there is not agreement among researchers. One of these definitions states that green finance includes “any financial initiative, process, product or service that is either designed to protect the natural environment or to manage how the environment impacts finance and investment” (CBI, 2018, p. 5).

Related terms include: responsible investment (RI), environmental, social and governance (ESG), sustainable finance and climate finance (European Commission, 2017, p. 2). However, in spite of being usually used as synonyms, these terms have slightly different meanings, especially in relation to whether they solely include environmental issues or also, social, economic, and governance ones.

Thus, the terms “sustainable finance” or “responsible investments” addresses all of these issues, while the terms “green finance” is used only when environmental issues are taken into account by investors, companies and other issuers. Also, when investments target only climate change, the right term that could be used is “climate finance”.

The term “green finance” was defined in many ways and there is no unanimity when it comes to choosing one standard definition. G20 group, Organisation for Economic Co-operation and Development (OECD), UN, European Banking Federation have advanced their own definitions at international level.

The G20 (2016) defines green finance as the “financing of investments that provide environmental benefits in the broader context of environmentally sustainable development”.

One of the UN reports (UN Environment Inquiry, 2017), which is a contribution to the G20 Green Finance Study Group, makes an insertion and specifies the fact that these environmental benefits include reductions in air, water and land pollution, reductions in greenhouse gas emissions, improved energy efficiency while utilizing existing natural resources, as well as mitigation of and adaptation to climate change and their co-benefits. Also, the report mentioned that this type of green investments requires tens of trillions of dollars in the coming decade.

The OECD considers green finance to be “stand-alone, a sub-set of a broader investment theme or closely related to other investment approaches such as SRI (socially responsible investing), ESG (environmental, social and governance

investing), sustainable, long-term investing or similar concepts.” (Inderst, Kaminker and Stewart, 2012).

According to the European Banking Federation (2017), “Green finance includes, but is not limited to: a. Environmental aspects (pollution, greenhouse gas emissions, and biodiversity, water or air quality issues); b. Climate change-related aspects (energy efficiency, renewable energies, prevention and mitigation of climate change connected severe events).”

Also, national states have defined green finance differently. For example, the government of Germany (CBI, 2018, p. 3) defines green finance as a strategic approach that an organization has to take into account referring not only to the financial implication of a business decision but also to its impact on the economy, society and the environment. Thus, to achieve such a goal, every aspect of the business has to be adapted, such as product design and pricing, risk management, marketing, investment strategy, transportation, research and development.

However, a few main elements can be identified in all of these definitions: capital is allocated for sustainability purposes; environmental friendly investments are meant to reduce pollution of all kind, to facilitate the use of new alternative energy resources, non-diesel transportation, to enhance waste management technologies, to reforest, to recycle etc.; the recognition and management of present and future environmental risks that could affect the financial sector and the society as a whole; the need for adequate green finance policies and infrastructure; and the major link between sustainable development and economic growth (CBI, 2018, p. 8).

In essence, we consider that green finance is a strategic approach in the financial sector meant to deal with climate change and, in consequence, with the transition to a low-carbon economy.

Literature provides few definitions of green finance. Sachs *et al.* (2019) consider that if “we want to achieve sustainable development goals, we need to open a new file for green projects and scale up the financing of investments that provide environmental benefits, through new financial instruments and new policies, such as green bonds, green banks, carbon market instruments, fiscal policy, green central banking, financial technologies, community-based green funds, etc., which are collectively known as “green finance”.

Thus, green finance encompasses various financial products and services. Some of them though are not considered green such as credit cards that link spending thresholds to donation for environmental purposes, calamity insurance, financial products that minimize the environmental impact of the issuer such as the use of recycle paper or the offset of carbon emission generated by air travel (CBI, 2018, p. 9).

Lindenberg (2014) proposed a definition of green finance as comprising “the financing of public and private green investments (including preparatory and capital costs), the financing of public green policies and components of the

financial system that deal specifically with green investments”. Also, she clarified the concept of green investments which include climate related investments (climate change adaptation, renewable energies, energy efficiency other climate change mitigation (e.g. reforestation) but are not limited to them, because she takes into consideration also waste processing and recycling, biodiversity protection, water sanitation and industrial pollution control.

According to Wang and Zhi (2016), green finance is a new financial pattern to integrate environmental protection with economic profits, emphasizing “green” and “finance”, two of which are controversial issues.

Also, Zhang, Zhang and Shunsuke (2019) agree that it is often hard to distinguish between green finance and climate finance. Though subtly different in definitions, they consider that at the heart of both terms is the financing tools for coping with climate change and others for sustainability.

Green finance has led to increasing interest among academic researchers. The definitions that are proposed in the literature vary significantly with no consensus achieved on its definition among researchers. Even so, green finance clearly has paramount policy importance, reflected by the intensive discussions among international organizations and national governments since its emergence.

2.5. The impact of green finance on environmental protection

One of the best-known green finance is green bonds, instruments capable of financing the investment required to bring about a low-carbon economy. Thus, among the most common ones are green bonds that are allocated (earmarked) to environmental projects. Green bonds have been issued in 2007 by the European Investment Bank (EIB) and by the World Bank (WB) in 2008. Almost ten years later, figures show that their popularity around the world has increased, their issuance registering USD182bn in 2018, up from USD173bn in 2017 and growing (Rust, 2019).

In 2018, sustainable bonds issued by WB and EIB have appeared alongside with social bonds. The first were considered a type of green bonds, from which the proceeds will be exclusively applied to finance or re-finance both environmental and social projects.

Specialists are concerned about the utility function of green bonds. They also tend to think that green bonds’ market is not going to expand and catch much because a green bond is just a regular one pushed on the market by an environmental marketing strategy based on climate change concerns. The financial risk stays the same and the bonds are less attractive since they are issued by large companies, corporations and development banks. Thus, according to Timothée Jaulin and Amundi cited by Rust (2019), investors are not very impressed and they are still expecting that small, emerging or down-market issuers in the development market to take the green bond initiative.

According to 2° Investing Initiative founder and CEO, Stan Dupré, issuing green bonds does not mean that there will be an automatic impact on the environment unless the green projects are finalized (Rust, 2019). In other words, they do not increase the capacity in investing into more green projects in comparison with conventional bonds.

In 2019, under the new presidency, the ambition of the European Commission is to lead the sustainability finance action in order to make Europe the first climate-neutral continent (Dixon-Declève and Jess, 2019).

The new EU commissioner for financial services in the EU, Valdis Dombrovskis has confirmed that a new green finance strategy exists and the EU Sustainable Europe Investment Plan worth EUR 1 trillion of climate-related investment will support green economic transformations without leaving out social fairness. In order to enhance sustainability, also, a few other reforms will target corporate disclosure rules and the European Investment Bank is going to become a climate bank when half of its total financing are going to be allocated to climate investments, that is by 2025.

However, the situation was tense between EU member states and their dithering resulted in postponing the new sustainable investment taxonomy regulations until 2023. Also, the transformation of the European Investment Bank in a “climate bank” was proven to be difficult since some EU member states, such as Germany, refused to end investments in fossil fuels by 2020.

By December 2019, EU member states had agreed on the final text of the taxonomy regulation (TR). EU taxonomy is destined to help investors, companies, issuers and other entrepreneurs to shift towards low-carbon, resilient and resource-efficient economy (European Commission, 2020b). The regulation imposes performance thresholds to investors, companies and issuers, that will allow them to access green finances in order to improve their environmental performances and identify the activities that are already no-harmful or less-harmful to the environment.

3. INSTITUTIONAL INITIATIVES AT EU LEVEL REGARDING GREEN FINANCE AND THEIR IMPLICATIONS ON ENVIRONMENTAL PROTECTION

The character and the scale of the sustainable action has to change if Europe wants to become the first climate-neutral continent. Governments need to invest public money in research and development, new technologies, nature-based solutions, support sectors and regions to achieve the goal in the long run. Also, European public authorities should encourage and facilitate private environmental-friendly investments and consumption behaviour in order to enforce EU Sustainability Finance Action Plan. In short, sustainable finance should become a major policy for all EU member states’ governments (EEA, 2020, p. 18).

Since 1970's, the EU has diversified its environmental policies and instruments. Thus, institutional arrangements, such as the climate-related expenditure accounting for at least 20 % of the EU's budget for 2014-2020 and the sustainable finance initiative were established (EEA, 2020, p. 57).

Alongside with the EU sustainable finance action plan, authorities had established the European semester, which is a mechanism design to improve member states' economic and budgetary policies. In spite of being dedicated to monitor the implementation of EU 2020 strategy and target economic, social and environmental goals, the semester ended-up focusing on GDP indicator and macro-economic aspects, in general (EEA, pp. 66-67). EU decision makers are trying to refocus it on the environmental indicators that will assess the sustainability progress (EEA, p. 67).

The revised EU Emission Trading System (ETS) Directive established new low-carbon funding mechanisms, namely the Innovation Fund and the Modernisation Fund. The Commission action plan on The EU sustainable finance action plan aims "to reorient capital flows towards sustainable investment in order to achieve sustainable and inclusive growth, manage financial risks stemming from climate change, environmental degradation and social issues, and foster transparency and long-termism in financial and economic activity" (EEA, p. 187).

EU Commission relies on banks, insurance companies and pension funds to support financial investments and thus, to close the financial gap needed for the transition to a sustainable economy, since for many years, such investments supported less innovation and more already established modes of production and consumption (EEA, p. 399). Thus, according to Rademaekers *et al.* (2017), investments in "green sectors" receive between 1-2%, while oil, gas exploitation sectors receive between 5-10% and metallurgy, chemical and the automobile industry receive even more investments, up to 20-25%. It is believed that transition to green investments that support innovation is in the hands of various public and private actors that could shape the future of a climate-friendly economy.

Although there have been several attempts to measure the impact of legislative initiatives on environmental protection, Brunel and Levinson (2013), have identified four obstacles: multidimensionality, simultaneity, industrial composition, and capital vintage. In this context and after analyzing several papers, they proposed two possible sources for emissions data in Europe. The first alternative is the European Pollution Emissions Register (EPER) for 2001 and 2004. The second alternative for measuring annual EU emissions data, starting in 2007, is the European Pollution Release and Transfer Registry (E-PRTR). This covers 91 pollutants, including water, air, and soil pollutants, for the 27 EU member states as well as Iceland, Liechtenstein, Norway, Serbia and Switzerland.

Also, the report on green finance of G20 Green Finance Study Group (2016) identified five general challenges to green finance: externalities, maturity

mismatch, lack of clarity about green finance, information asymmetry, and lack of analytical capacities. In the context in which these challenges exist, it is difficult to find or to measure the impact of green finance on the environment.

Since the 2017 G20 Green Finance Progress Report, Henderson and Mancini (2019) highlighted in their report the progress made regarding the improvement of the measurement of green/sustainable finance activities and their impact. Thus, they underline that in the EU, the European Commission delivered the first concrete legislative proposals linked to the Commission Action Plan on Sustainable Finance (European Commission, 2018), which includes several features to assist in the measurement of sustainable finance activities, including a EU classification system (“taxonomy”) and low carbon benchmarks. Also, the mentioned report (UN Environment Inquiry, 2017) highlights that “greater clarity on green definitions, as well as the measurement of green finance flows and associated impacts is important to guide market decisions and enable policymakers and regulators to achieve their goals”. Also, we noticed that currently, there is no systematic methodology for assessing progress on the greening of the financial system and the number of initiatives in this space has been relatively small. Progress has been mostly made in reporting done by financial institutions particularly on climate change and within the banking sector. Thus, at EU level, member states are transposing into national legislation the EU Directive on non-financial reporting. This requires large companies listed on EU markets, or operating in the banking and insurance sectors, to disclose relevant environmental and social information in their management reports.

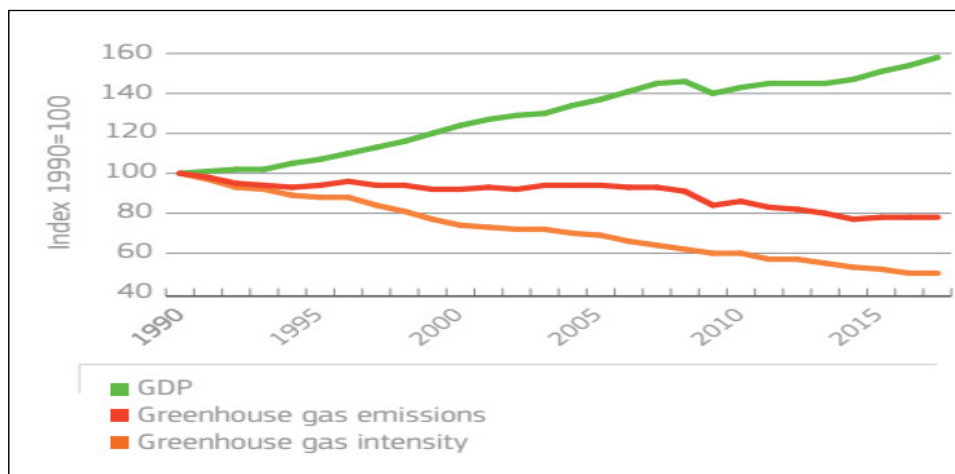
According to Europe 2020 Strategy (European Commission, 2010) the Commission proposed three priorities until 2020, one of which interests us for our research: the sustainable growth – promoting a more resource efficient, greener and more competitive economy. Related to this priority, the Commission established as headline target the “20/20/20” climate/energy, which suppose to reduce greenhouse gas emissions by at least 20% compared to 1990 levels or by 30%, if the conditions are right; to increase the share of renewable energy sources in our final energy consumption to 20%; and a 20% increase in energy efficiency. In order to accomplish this goal, the Commission put forward a Flagship Initiative called “Resource Efficient Europe” to catalyse progress regarding sustainable growth, which meant to help decouple economic growth from the use of resources, support the shift towards a low carbon economy, increase the use of renewable energy sources, modernise the transport sector and promote energy efficiency. In this context, Moreno and García-Alvarez (2018) suggest that indicators and composite indexes could be useful in order to evaluate the progress of the European Union towards the objectives of the Roadmap to a Resource Efficient Europe. After discussions and agreeing on indicators, the European Commission presented the Resource Efficiency Scoreboard (European Commission, 2016), which includes 32 indicators for assessing the use of natural resources in the EU

and for monitoring the progress towards the objectives and targets of a resource efficient Europe.

Europe 2030 Strategy (European Commission, 2019b) is the EU's sustainable development vision and focuses on sectorial policies after 2020, preparing the long-term implementation of the Sustainable Development Goals (SDGs). The EU officials admitted that there is a great ecological debt on our hands because of the excessive use of natural resources, which makes it difficult to maintain future sustainability. Greenhouse gas (GHG) emissions are rising on the continent accelerating the destruction of ecosystems. Urban pollution due to transportation is responsible for 27% of the EU's GHG emissions and food production for approximately 11.3%. Also, EU subsidises fossil fuels imports and production industry, around EUR 55 billion per year.

However, during recent years, the EU has succeeded in reducing GHG emissions, advocating the importance of reducing pollution globally, while encouraging sustainable economic growth.

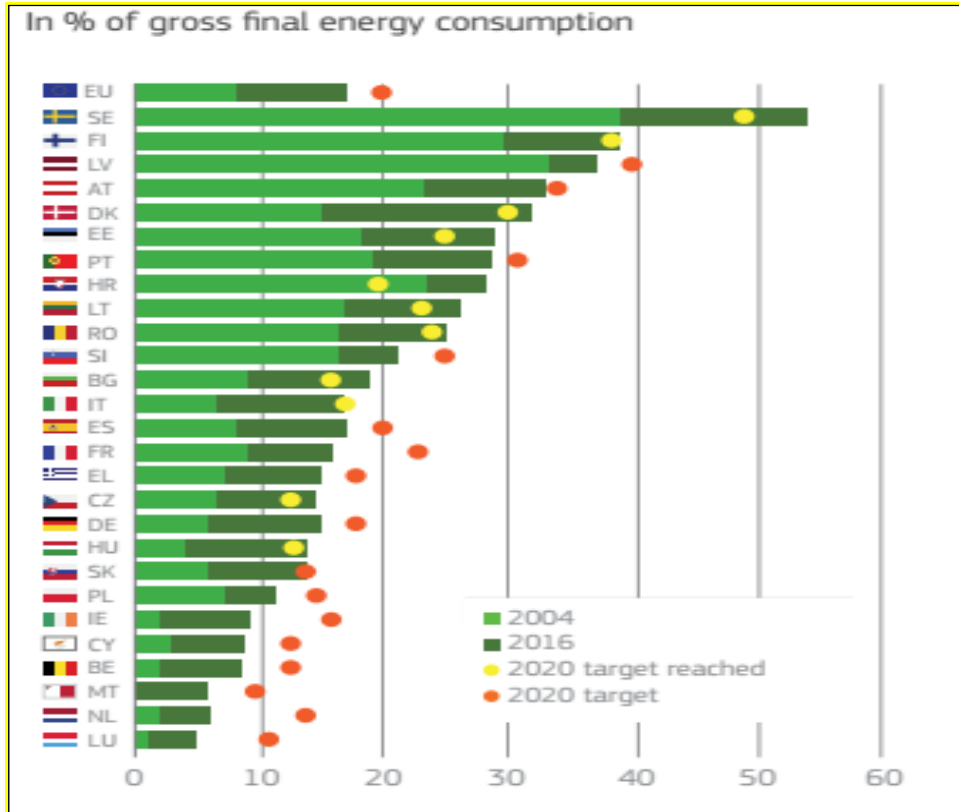
As Figure 1 shows, the EU is already proving that it is possible to have economic growth and also to reduce carbon emissions at the same time (European Commission, 2019b, p. 14).



Source: (European Commission, 2019b, p.14)

Figure 1. The evolution of GDP and carbon emissions during the period 1990-2015

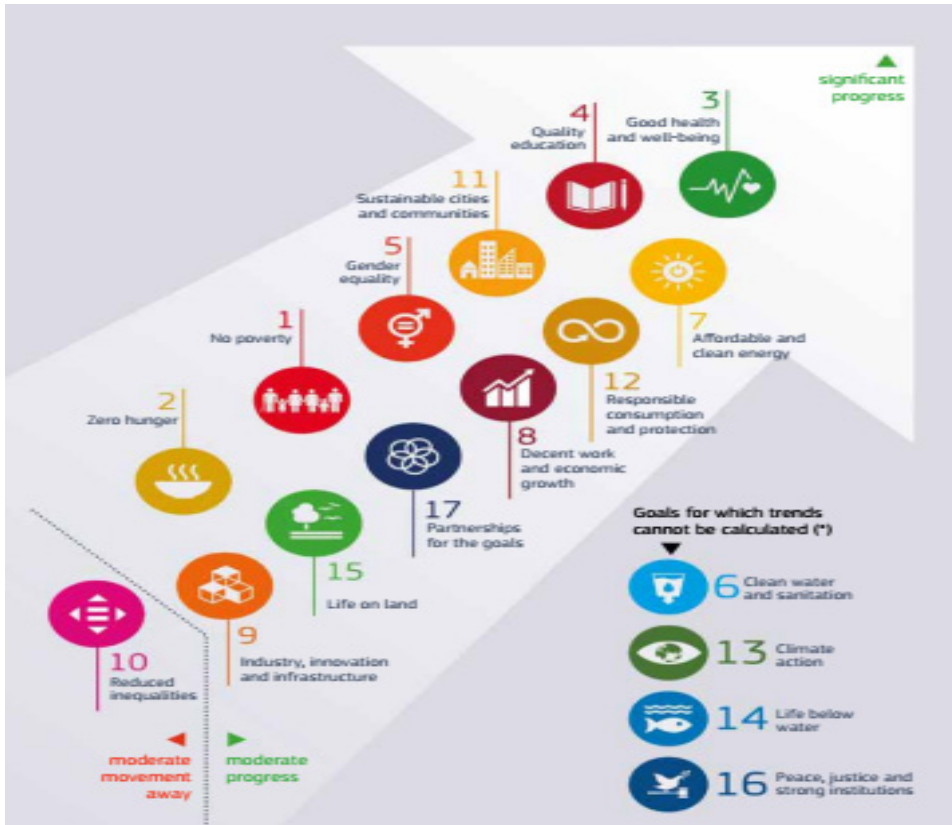
The EU is already one of the most carbon efficient economies in the world. Renewable energy is an integral part of Europe's energy mix and more than half of the EU's electricity supply is climate-neutral. In 2016, renewable energy represented 17% of energy consumed in the EU, on a path to the 2020 target of 20% (Figure 2).



Source: (European Commission, 2019b, p.18)

Figure 2. Share of renewable energy in gross final energy consumption

The EU member states are already leading the implementation of the Sustainable Development Goals (SDGs). Yet, no single country in the world has reached all agreed objectives (European Commission, 2019b, p. 66). At the same time, the EU's performance results on the SDGs show that the EU needs to continue its efforts in this direction (Figure 3).



Source: (Eurostat, 2019)

Figure 3. The EU’s performance on the Sustainable Development Goals

The 17 SDGs of the United Nations 2030 Agenda for Sustainable Development are strongly interlinked. In order to show the impact on environmental goals, we took into account the EU policy targets considered for assessing indicator trends (Eurostat, 2019, p. 262) and we have chosen to analyze the following relevant indicators for our study:

- SDG7 “Affordable and clean energy” – the situation has deteriorated compared with last year’s assessment. This is mainly due to the steady increases in the consumption of primary and final energy since 2014, which have put the EU off track towards meeting its respective energy efficiency targets for 2020.
- SDG9 – CO2 emissions from new passenger cars are still decreasing, however, this positive trend has recently slowed down.
- SDG12 “Responsible consumption and production” – The unfavourable developments in energy consumption reported for SDG 7 above have also

resulted in a deterioration of the overall assessment of SDG12 compared with last year.

- SDG13 “Greenhouse gas emissions” – the overall assessment, however, is neutral, meaning that over the past few years, progress has been made in some areas, while negative developments occurred in others. While the EU’s greenhouse gas emissions are still within the threshold to reach the 2020 target, the EU is no longer on-track to meet its 2020 energy efficiency target, and the increase in the share of renewable energies has slowed down.
- SDG14 “Life below water” – available data still have a somewhat limited scope, which makes it impossible to calculate an average score at the goal level.
- SDG15 “Life on land” – the indicators selected for SDG 15 show a mixed picture.

The EU registered some success in meeting the above mentioned UN indicators, most frequently 10 EU member states being in the worldwide top 20 countries to take climate-related action for securing clean energy, decreasing CO2 emissions in the industry sector, promoting a more responsible consumption and production, decreasing GHG emissions by rethinking transportation and energy efficiency, and protecting water and land ecosystems.

However, in spite of being a world leader in environmental protection, EU still faces some long-term challenges. One of them is related to SDG7 since, by 2030, the EU should reduce at least 40% in GHG emissions, obtain at least 32% energy from renewable resources, and increase energy efficiency by at least 32.5%. This means that one in four Euros needs to be spent on climate and energy related issues.

An even more bigger challenge that EU has to face is reshaping production and consumption for achieving sustainability with its own domestic material resources that are rather limited. In this respect, SDG12 shows on average the second lowest ranking for the EU member states. The new and improved EU legislation on food waste is meant to optimise the use of material resources by recycling up to 60% and halving food waste by 2030.

At the same time, EU anti-climate change actions (SDG13) need to continue so that at least 40% of EU’s GHG emissions to be cut by 2030 compared to 1990 levels, and thus, proving to the international world that stopping climate change can be done successfully worldwide.

Also, for SDG14, “Life below water”, EU scores the lowest SDG ranking, with big differences between its member states. EU maritime and coastal ecosystems are under great pressure since it is estimated that, by 2030, the global blue economy could double in size, bringing 10.8 million jobs for the Europeans and a turnover of more than EUR 1 trillion. Thus, it is vital for EU waters to be covered by ecosystem-based maritime spatial plans by 2021.

Biodiversity loss and land degradation (SDG15) still continue in Europe, with negative consequences on ecosystem services such as food, water, materials and energy.

In brief, EU still needs to address these issues by taking immediate action in order to achieve economic sustainability.

4. CONCLUSIONS

The purpose of our study was to show how “green finance” can help to improve environmental protection.

As the literature review showed, there is a lack of consensus over what should be considered a green economic activity or a green product, creating confusion and ultimately, discouraging investors, companies, banks to seek the opportunities for green investments. Thus, we believe that it is imperative to settle for a standardized definition of green finance, meant to facilitate internal budgeting, accounting and performance measurement for financial institutions, and giving them the possibility to decide on allocating financial resources for green projects and assets.

In the context of EU imprecise terminology regarding green finance and sustainable finance, our contribution consists in filling the gap in “green finance” research by enhancing and improving the literature on the subject of green finance. The added value of our research consists in clarifying the concept of green finance, and more importantly, in identifying development trends and emphasizing the role of green finance in environmental protection, from a legal and sustainable financial perspective.

In conclusion, we can state that green finance encompasses innovative financial instruments aimed at the environmental protection and the accomplishment of sustainable use of natural resources. In the future, we believe that environmental protection must be based on an efficient green finance system that will encourage investments, especially in the renewable energy sector.

We intend to extend our analysis in order to deepen the empirical investigation regarding the relationship between the green finance legislation and environmental protection, but from a financial perspective. Also, it would be interesting to analyse how the present health crisis will affect the financial world and green/sustainable investments on a long-term.

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THE IMPACT OF THE CATALAN POLITICAL CRISIS AND TERRORISM ON THE TOURISM INDUSTRY

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Abstract

In recent years, all regions around the world have faced many unexpected phenomena such as terrorist attacks, climate change, political crises, economic crises, and these undermine their function and structures. It is remarkable that each region responds differently to these changes: some regions can successfully overcome these shocks, while others cannot, some regions can react directly and quickly and others slower. The paper aims to investigate the impact of the Catalan political crisis and terrorism on the tourism industry at regional levels and its reactions from shocks and to measure the regional employment resilience of the tourism industry.

Keywords: *tourism; regional resilience; employment; tourism resilience; crisis.*

JEL Classification: J21, P48, Z32

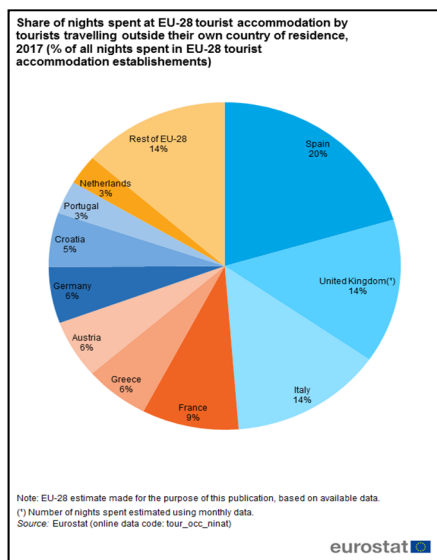
1. INTRODUCTION

Economic, political, social, and terrorist crises have affected the tourism industry in different countries across the EU and globally in recent years.

Terrorist attacks can be tracked through various economic indicators. For example, between 2008 and 2014, the average contribution of tourism and travel to GDP growth in countries that did not have terrorist attacks on tourists was 3.6%, whereas in Countries where the attacks intentionally targeted tourists rose to 1.9 percent (IEP, 2015). The threat of danger accompanied by these evils tends to affect the demand of potential tourists and significantly influence the flow of tourism (Sönmez, 1998). While the effect of incidents as well as terrorist attacks may disappear at one point, the appearance of ongoing conflicts in the region leads to permanent deterioration of the image of the destination (Sönmez, Apostolopoulos and Tarlow, 1999). Recent studies have mainly focused on determining the effect of different specific events on the target image. Ritchie (2004) notes that studying crisis and disaster management for the tourism industry is difficult, as chaotic situations are usually unpredictable and difficult to control.

In 2017, the first four most popular destinations in the European Union for non-residents were Spain, the United Kingdom (213 million nights, based on monthly data from 2017), Italy (211 million nights) and France (133 million

nights), who represented together (Figure 1) more than half (57.6%) of the total nights spent by non-residents in the EU-28 (European Commission, 2020).



Source: Eurostat (European Commission, 2020)

Figure 1. Share of nights spent at EU-28 – 2017

According to the report prepared by the WTTC (2019), the tourism sector in Spain has an important role in the Spanish economy with a contribution of 14.6% to GDP (\$ 211bn) being ranked 9th out of a total of 185 analyzed countries. Employment in the tourism sector in Spain also has a high share of total employment at national level (14.7%), and this is the main reason for the analysis in this article proposing a resilience analysis employment in the tourism industry at regional level.

The year 2017 was for Spain a year with many social and political events, as well as terrorism, and here we can remember the terrorist attacks in Barcelona and the Spanish constitutional crisis known as the Catalan crisis.

The Spanish constitutional crisis of 2017-18, also known as the Catalan crisis, is a continuing political conflict between the Spanish Government and the Generalitat of Catalunya, under former President Carles Puigdemont – Governor of the Autonomous Community of Catalonia until October 28, 2017 – on the issue of Catalan independence. It began after the law that intended to allow the referendum on Catalan independence in 2017 was denounced by the Spanish government under Prime Minister Mariano Rajoy and subsequently suspended by the Constitutional Court until it decided on the matter. Some international media institutions described the events as one of the most serious political crisis in modern Spanish history.

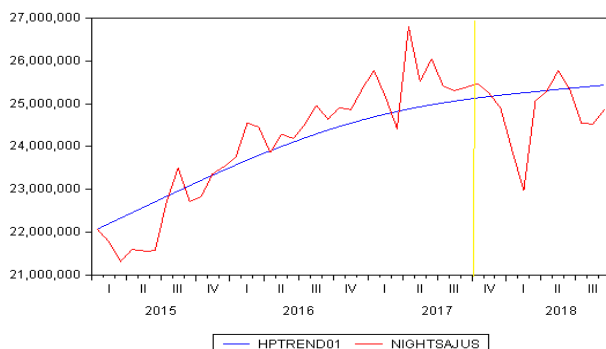
According to the Global Terrorism Index, Spain is one of the countries with a fairly high level of terrorism, ranking 7th in Europe and 50th in the world. On August 16, 2017, an explosion destroyed a house in Alcanar. Abdelbaki Es Satty and another man died in the explosion at Alcanar. At 17:55 CEST (UTC + 2) on August 17, Younes Abouyaaqoub headed a white truck on Barcelona's La Rambla's sidewalk, about 550 meters between Plaça de Catalunya and Liceu before, pausing on the mosaic of Joan Miró. Witnesses said the vehicle 2018 was driving fast on the street with pedestrians and cyclists. About two hours after the attack "La Rambla", a white Ford Focus entered a police barricade in Avinguda Diagonal, leaving a wounded officer. Cambrils Attack – Around 01:00, at Cambrils on August 18, five men wore false suicide bangs and attacked the passers-by with knives. The attacks resulted in 16 deaths and 155 injured by 34 different nationalities, and we can argue that terrorist attacks were mainly targeted at the tourism industry and not the inhabitants of Spain.

The purpose of this preliminary analysis is to observe how political instability and terrorism are interrelated with tourist arrivals and to identify their impact on the tourism industry. To identify the impact of shocks in the tourism industry, I did a statistical analysis of the monthly time series from 2015-2018 (number of nights, number of visits by nationality, number of visits by destination). In this analysis I applied Eviews CensusX-13 (Log) – (seasonality adjustment X-13 combines standard square regression, ARIMA and regARIMA estimation with seasonal adjustment X-11) and Hodrick-Prescott Filter.

Seasonal Adjustment X-13 (SA) adjusts seasonal time series, such as weather fluctuations, and we consider it useful to use when we want to analyze seasonally affected data such as tourism indicators. This software was developed after the original X-11 software that was developed by the US Census Bureau in the 1960s, and subsequently improved by Statistics Canada. Meanwhile, TRAMO-SEATS, developed by the Bank of Spain (Caporello, Maravall and Sánchez, 2001), offers an alternative approach based on this model for seasonal adjustment. The following software from the US Census Bureau was named X-12-ARIMA and X-13ARIMA-SEATS. Recent release, X-13 offers these two seasonal adjustment methods in a single command line tool, written in Fortran. The National Bank of Belgium has created an alternative Java-based implementation, called JDemetra + (National Bank of Belgium, Deutsche Bundesbank, Eurostat 2017), which is also widely used by statistical agencies. One of the TRAMO-SEATS or X-11 seasonal adjustment methods is used by almost all (government) statistical offices around the world.

The Hodrick-Prescott Filter is a standardization method that is widely used by macroeconomists to get a smooth estimate of the long-term trend component of a series. Data were obtained with the assistance of EUROSTAT, TURESPANNA.

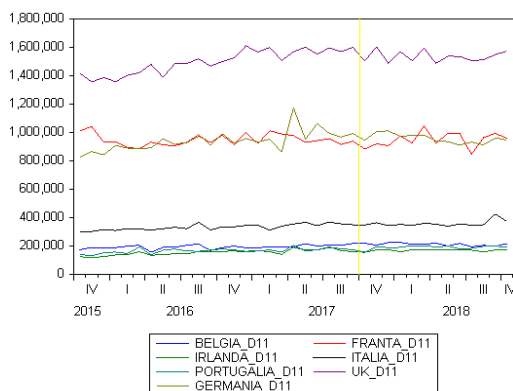
The first graph (Figure 2) analyzes the total number of nights in the tourism sector from 2015 to 2018 and includes hotels; holiday and other short-stay accommodation; camping grounds, recreational vehicle parks and trailer parks. From the analysis we can see a sharp decrease in the total number of nights at the end of 2017 and this may be due to terrorist attacks, but also to other factors that can influence the tourist flow.



Source: author’s elaboration

Figure 2. Total number of nights in Spain

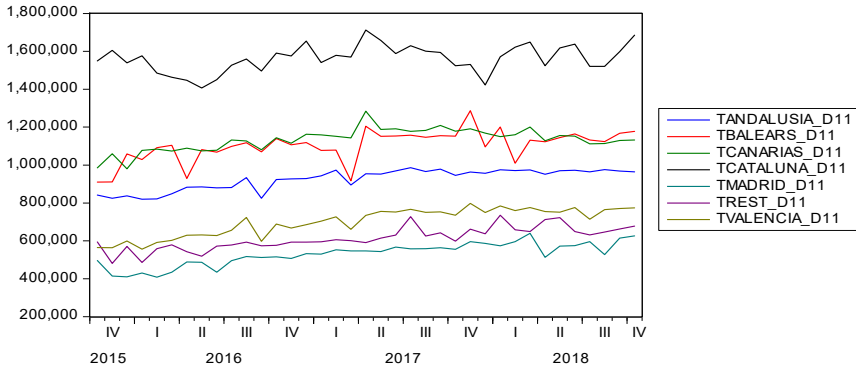
In the next chart (Figure 3) we analyze the number of visitors by place of residence and we can also notice a decrease in the end of 2017 of the visitors from France, Germany and the UK, the most important countries of origin of tourists in Spain.



Source: author’s elaboration

Figure 3. Numbers of tourists by residence

In analyzing the number of visits per region (Figure 4), there is a decrease in tourist preferences in regions such as Catalunya and a change in the trend between the Balearic Islands and the Canary Islands in the end of 2017.



Source: author's elaboration

Figure 4. Number of visits per region

From the analysis of the number of nights and visits of tourists, we can see that the effects of the attacks and the constitutional crisis in Spain were felt in the tourism sector by the end of 2017. Statistical analysis of the number of tourist arrivals shows that the tourism industry in Spain was affected by political instability and subsequent terrorist attacks. The impact of terrorism on tourism can be both direct and indirect. The direct costs of the shocks for the tourism sector include the decrease of the number of tourists, which leads to the decrease of the incomes and the decrease of the GDP, while the indirect costs include the reduction of the employment in the tourism sector. As a result, political conflict and terrorism can undoubtedly be said to have a negative effect on the development of tourism in Spain. The ever-growing tourism and one of the world's leading industries is disrupted by political instability and terrorism.

2. LITERATURE REVIEW

The main objective of the long-term economy is to promote employment and growth within the established social and economic objectives and to maintain economic stability. Economic crises affecting today must include resilience as an important factor in a destination/ country. In this sense, resilience is defined as the ability of an economy to reduce the likelihood of new crises or at least mitigate their effects (Aiginger, 2009).

Since the 1970s, several ecological studies (Holling, 1973) have been interested in understanding the resilience. The purpose of these studies was to try to explain why some regions can respond better than others to shocks. Martin (2012) addressed the issue of measuring recovery and resistance indices in order to assess the regions' sensitivity to shocks and their ability to react and restore an acceptable level of growth. Briguglio *et al.* (2009) indicate that the term resilience has been used in at least three senses in relation to the ability to: to adversity, to withstand the effect of adversity and to avoid complete adversity.

In a broader European context, Sensier, Bristow and Healy (2016) provide an analysis of the results at the level of Europe focused on identifying the duration of the shock and its impact. The focus is on the regional economies of Europe for the moment they suffered a shock and for how long this shock lasted. They focused on identifying the resilience of the regions, noting that the determinants of resilience represent a path for future research.

Courvisanos, Jain and Mardaneh (2016) provide an analysis of resilience on the Australian economy. They focus on identifying resilience by industry categories and regions using a conceptual resilience framework. They identify two major shocks in their data, drought and the global financial crisis and identify certain industries as being more resilient than others (noting that these are the mining and services sectors in general).

An example of the application of econometric techniques of time series in the study of resilience can be found in Fingleton, Garretsen and Martin (2012). They provide an empirical analysis of 12 NUTS1 UK regions for the period 1971-2010, using a seemingly independent regression analysis and a vector error correction model. The analysis indicates that the regions of the United Kingdom respond differently to economic shocks and that the differences are mainly the result of differences in their initial ability to withstand the onset of a shock. They find that employment shocks usually have a permanent effect and that there are inter-regional dispersions, but these are usually confined to nearby regions.

Cellini and Torrisi (2014) provide an empirical analysis of Italian regions using a series of time spans between 1890 and 2009. The analysis used by the authors is essentially the same with that of Fingleton, Garretsen and Martin (2012), except that it focuses on annual GDP per capita to analyze resilience. The authors note that shocks in the Italian regions have permanent effects on the growth trajectories of the regions. However, they note that shock recovery is about the same in regions, with no region showing signs of recovery above average.

Di Caro (2017) proposes a methodology to test engineering resilience and ecological resilience using VAR models. He notes that from the 1970s to 2007, the main priority of the economy was that the shocks of employment are temporary. However, after 2007, there was an increase in the opinion that these shocks could be permanent. The authors note that there are a number of determining factors in regional economic elasticity.

There are a significant number of works that correlate the structure of the industry with the economic performance at the regional level, much of it following the basic activity of Glaeser *et al.* (1992). In the work of Glaeser *et al.* (1992) provide a comprehensive analysis of the role of local competition, urban variety and regional specialization on economic growth, using data for 170 US cities in a variety of industries from 1956 to 1987. Their findings provided an important point of view of the importance of diversity for regional growth.

Davies (2011) offers an analysis of resilience in the European regions for the period 2008-2010. He notes that there is evidence of a link between resilience and industry structure. He also notes that the resilience in the construction sector was low in countries that experienced bubbles in construction before the crisis started. Continuing the discussion on the industry structure, Brakman, Garretsen and Van Marrewijk (2015) use regional data from 22 different countries to analyze the impact of urbanization on regional economic resilience. They focus on the economic crisis of 2007-2008 and the NUTS2 regions as a unit of their analysis. The main indicators of resilience used are unemployment and GDP. Their analysis shows that more urbanized regions, with a high share of commuters, are more resistant to the 2007-2008 crisis than less urbanized regions. They also find that the structure of the industry plays an important role in explaining resilience. Their analysis suggests that regions with a higher share of production in technology industries are more resilient.

Diodato and Weterings (2015) provide an empirical analysis of supply factors, inter-regional mobility, labor and inter-sector labor mobility. Their analysis focuses on the regions' initial resistance to shocks and their subsequent recovery. Their findings suggest that regions where there is a strong concentration of supply factors are more exposed to regional shocks, but less exposed to external shocks, with the opposite effect on export-oriented regions. Regions with a higher concentration of jobs or a movement of jobs in the service sectors were also found to be more resilient.

Lagravinese (2015) provides an empirical analysis of the recessions in the Italian regions from 1970 to 2011. It focused on employment, and the empirical analysis suggests that regions specialized in production or with a high degree of seasonal workers are less resilient to economic crises. However, regions with a higher degree of specialization in the public sector or in the service sector were more resilient. Their analysis of the 2007-2008 crisis suggests that this has led to a widening gap between northern and southern Italy.

Fingleton, Garretsen and Martin (2015) analyze the impact of economic crises on EU regions. They emphasize the role of the monetary union in explaining the propagation of shocks in regions. They find that more geographically isolated regions are more severely affected by the crisis. These regions also happen to be the regions most affected by the debt crisis.

Psycharis, Kallioras and Pantazis (2014) design a composite indicator of regional resilience for Greek regions to identify the capacity of these regions to withstand the economic crisis of 2007-2008. They consider that metropolitan regions with a high level of employment in industry are the most exposed to the crisis, while the specialty in tourism is proving to be a resilient factor. In another analysis of the Greek economy, Giannakis and Bruggeman (2017) use the exchange rate and input-output models to analyze the impact of the economic crisis on the Greek regions. The results are similar to those of Psycharis, Kallioras

and Pantazis (2014) and indicate that rural regions are more resilient to recessionary shocks than urban regions. They also find again that the tourism sector in the island regions has shown an increased level of resilience. The studies also focus on specific sectors, as opposed to studying the general structure of the industry.

Bellini *et al.* (2017) analyze the contribution of tourism to regional economic resilience and focuses on the concept of smart specialization. Emphasis is placed on how decision-makers recognize the importance of tourism and integrate it in regional development strategies to increase the resilience potential of the regions. They identify the fact that the role of tourism in determining resilience consists in its own growth dynamics, its own resistance and also its links with other sectors of the economy. Tourism is regarded as having the ability to support economies in a stable and reliable way and may be able to offset the declines in other sectors of the economy. In addition to other studies of the structure of the industry, other authors have also focused on factors such as innovation and entrepreneurship. In terms of innovation, Bristow and Healy (2018) link the concept of regional innovation capacity with that of regional economic resilience. It proposes more innovative regions that can be more resilient and analyzes data for EU regions for 28 countries. Their findings indicate that innovation is closely linked to resilience. Regions that are more innovative are more capable of recovering from an economic shock. Williams and Vorley (2014) analyze the link between economic resilience and entrepreneurship in urban regions, especially the Sheffield region. They use a case study approach focusing on decision-maker interviews to draw conclusions on the importance of entrepreneurship for developing a resilient urban region. They suggest from their analysis that the entrepreneurial spirit is integrated in promoting the diversification and consolidation of regional economies, the characteristic feature of resilient economies. Eraydin (2016) presents an empirical analysis of the impact of recessions on the NUTS2 regions of Turkey. They use data from the 1970s to 2011 to analyze the impact of a series of recessionary shocks on the GVA of the regions. They note that shocks have a different impact on regions over time. They attempt to explain the resilience of shocks by using a number of control variables, such as diversity, specialization and innovation of regions, and underline the importance of human capital for resilience, while at the same time indicating the importance of high-tech sectors and the development of research and technology. This is an argument similar to that of Bristow and Healy (2018) discussed earlier. Another example of a case study approach is Cowell, (2013), which focuses on the importance of resilience in economic development, research and planning. Their analysis includes case studies in two regions: Buffalo-New York and Cleveland-Ohio using interviews for leaders in economic planning and development. It underlines how economic development planning can lead to the development of adaptive resilience in regions in difficulty. Wrigley and Dolega (2011) provide a descriptive analysis of 250 urban centers in four

regions of the United Kingdom to provide a perspective on how these centers have adapted worldwide after the economic crisis. Their analysis finds that the diversity of the retail centers analyzed significantly contributed to shock resilience. Another alternative methodology is used in Capello, Caragliuy and Fratesi (2014), analyzing the role of cities as vectors of regional economic resilience in Europe. The focus is on the years 2007/08 – economic crisis. Their analysis is based on scenario analysis, accompanied by the use of a macroeconomic model for forecasting regional growth. Their findings suggest that there is a need for political intervention in the post-crisis recovery phase, without which the regional impact is likely to be differentiated, some regions returning much faster than others.

Rose and Liao (2005) take a different approach to shocks and focus on natural disasters and their impact on regional economies. They use the CGE model that allows them to analyze the impact. Their analysis focuses on the sectoral and regional economic impact of a disruption of the Portland Metropolitan Water System following a major earthquake, highlighting the negative economic impact of this natural disaster.

Eriksson and Hane-Weijman (2017) analyzed the Swedish regions regarding workflows. They are focusing on the recession that occurred in Sweden in 1990. The authors note that, although Sweden has experienced a strong national labor force growth since the economic crisis, the recovery has been limited mainly to a small number of urban regions. The authors consider that regions with a more diverse industry or a concentrated structure are more resilient to the economic crisis. They also find that resilience to future shocks may be linked to regions' resilience to previous shocks. Nyström (2015) analysis focuses on data from Sweden and focuses on the period 2001-2009. It discusses the extent to which a number of factors influence the ability of individuals to be re-employed in the same region in which they lost their jobs. The overall results suggest that the industrial structure is an important indicator of re-employment capacity, increasing the resilience of regions with low re-employment capacity. Kakderi and Tasopoulou (2017) noted that there is an increased awareness of resilience both in theory and in practice, and this interest was triggered by the fact that regional economies responded differently to the 2007 economic crisis. Some regional economies were vulnerable to shock, while others managed to resist and recover quickly. They suggest that shocks and disturbances are rarely spatially equitable. Starting with the conceptualization and analysis of resilience, Martin (2012) offers what he describes as a “preliminary” empirical analysis of the economic resilience of UK regions. Martin (2012) first argues that four dimensions are needed to measure regional economic resilience in relation to recession shocks, namely: resilience, recovery, renewal and reorientation. The presented results indicate that regional resilience varies in time from year to year. Martin (2012) notes that the impact of the 2008 economic crisis was less differentiated between the northern and southern regions compared to the previous

two recessions. In the following paper used statistical data for 40 years to analyze how regions in the United Kingdom have responded to the four major recessions. They focus their analysis on the role of industry structure as a possible cause and consequence of resilience. The analysis focuses on the use of resistance and recovery indices. They also note the importance of a region's competitiveness in determining its resilience. It is suggested that shocks influence different regions in different ways over time, and that regions do not respond in the same way to each shock. He notes that some regions of the UK have recovered better from shocks and that these are usually the regions in the South East.

3. METHODOLOGY

According to Martin, economic resilience is a multidimensional property that involves four interdependent dimensions that fully and precisely describe economic resilience to shock: resistance, recovery, reorientation and renewal. The author proposes two simple indicators in order to assess the ability of regions to resist shocks and recovery in a post-recession scenario. The resistance index was calculated as a variation in employment in the region, as compared to the national variation in the shock period. This helps to understand a region's ability to cope with a shock.

$\beta_{res} = (\Delta E_r / E_r) / (\Delta E_n / E_n)$, E is the total occupation and the $\Delta E / E$ represents the percentage change in employment. If the β_{res} is greater than 1, the region has a resistance to shock, and if β_{res} is less than 1, the region has a relatively high resistance to shock. The recovery index is measured as a change in employment in the region in the post-crisis period and shows the region's ability to grow. – or decline – after a shock.

Other authors have proposed other versions of the resistance index trying to improve the clues developed by Martin.

Di Caro (2015) assessed regional economic resilience using Martin's sensitivity and recovery indices, applying them to the Italian regions in three main periods. The first period (1993-1995) coincides with the devaluation of the Italian Lira; the second period (2008-2010) overlaps the global financial crisis of 2008 and, finally, the third period (2012-2013). Lagravinese (2015) has developed another version of the resistance index to measure the effects of the economic crisis that occurred in Italy between 1970 and 2011. According to the author, the resistance index is: $\beta_{res} = [(\Delta E_r / E_r) - (\Delta E_n / E_n)] / |\Delta E_n / E_n|$. If the β_{res} shows a positive value means that the region resists shock. A negative value of β_{res} indicates a weaker resistance in the region. Faggian *et al.* (2018) applied resistance and recovery indices to the local Italian labor system (LLS) to measure the regional economy resilience to the recession shock, calculated as: $SI = (E_r, t / E_r, t-1) / (E_n, t / E_n, t-1)$, E_r – total employment of the region, E_n = the total employment of the nation, t = time shock, $t-1$ = time before shock.

This index is similar to a "localization coefficient" for total employment and therefore is centered around 1. A value above 1 means that the region was more resilient than national and a value below 1 indicated that the region was not enough resistance. The recovery index taken into account was the change in the percentage of employment at regional level.

These revised versions of the sensitivity index are to overcome the possibility of analytical problems presented by Martin. Starting from this problem of measuring regional resilience, the paper proposes an extension of the concept in the tourism sector by building resistance and recovery measures. To analyze regional resilience we borrowed from the method of measuring resistance and recovery in response to the economic crisis proposed by Faggian *et al.* (2018).

Analyzing recovery and resilience aims to identify changes in employment both at regional and tourism levels as a consequence of the events in 2017 in Spain.

The new indices for resistance and recovery measurement will be:

Index regional resistance

$$\frac{\frac{R_{tm1}}{N_{tm1-1}} + \frac{R_{tm2}}{N_{tm2-1}} + \dots (R_{tmk}/N_{tmk-1})}{k} \quad (1)$$

Index regional recovery

$$\frac{\left(\frac{R_{tm1+1}}{N_{tm1+1}}\right) - \left(\frac{R_{tm1-1}}{N_{tm1-1}}\right) + \left(\frac{R_{tm2+1}}{N_{tm2+1}}\right) - \left(\frac{R_{tm2-1}}{N_{tm1-1}}\right) + \dots (R_{tmk+1}/N_{tmk+1}) - (R_{tmk-1}/N_{tmk-1})}{k} \quad (2)$$

Index regional tourism resistance

$$\frac{\frac{RT_{tm1}}{R_{tm1-1}} + \frac{RT_{tm2}}{R_{tm2-1}} + \dots (RT_{tmk}/R_{tmk-1})}{k} \quad (3)$$

Index regional tourism recovery

$$\frac{\left(\frac{RT_{tm1+1}}{R_{tm1+1}}\right) - \left(\frac{RT_{tm1-1}}{R_{tm1-1}}\right) + \left(\frac{RT_{tm2+1}}{R_{tm2+1}}\right) - \left(\frac{RT_{tm2-1}}{R_{tm1-1}}\right) + \dots + (RT_{tmk+1}/R_{tmk+1}) - (RT_{tmk-1}/R_{tmk-1})}{k} \quad (4)$$

Where:

- R – regional employment,
- N – national employment,
- RT – tourism regional employment,
- Tm-1 = time monthly before shock,

T_m = time monthly of sock,
 T_{m+1} = time monthly after sock,
 k = number of months.

A positive value of the resistance index above value 1 indicates a high resistance of the region to shock. A negative value of the index below 1 indicates a weaker performance of the region reported at national level.

A positive value of the recovery index indicates that the region is recovering from the initial pre-shock value. A negative value of the index indicates a weaker recovery of the region relative to the initial pre-shock value.

I considered it more appropriate to calculate a year-to-year change in employment compared to the same months than to calculate the current month's variation with last month, as we have seasonality in the tourism sector, and at the regional level we certainly have other sectors with a high seasonality such as agriculture and construction.

4. RESULTS

Using the model explained in the previous section, we calculated resistance and recovery indices with monthly employment data from the regional and tourism industry from 2016-2018 for 18 regions in Spain. Resistance and recovery values are shown in Table 1.

Table 1. Resistance and recovery values

Region	Employment – tourism		Employment – regional	
	Resistance	Recovery	Resistance	Recovery
Andalucía	1.016914571	0.003309782	1.002926842	0.000497141
Aragón	0.994647724	-0.000383089	1.000365549	-0.000101884
Asturias	1.013327575	0.002091126	0.984432681	-0.000681987
Balears (Illes)	1.014034423	0.002921154	1.019614775	0.000572221
Canarias	1.01154985	-0.000284748	1.013823207	0.000943199
Cantabria	1.011899662	0.001970836	0.989069958	-0.000206694
Castilla-La Mancha	1.006531372	0.00098401	0.921107343	-9.75926E-05
Castilla y León	1.006531372	0.000517233	0.984680765	-0.00139279
Cataluña	0.934782405	0.000239147	1.002712274	0.00020617
Valenciana	1.011105999	0.001312325	1.00657091	0.001389578
Extremadura	1.019699367	0.002343914	0.986909068	-0.000557319
Galicia	1.010720959	0.000731905	0.986743763	-0.001089741
Madrid	1.011648036	0.000936092	1.002501366	0.001761811
Murcia	1.006018727	0.001466276	1.007822046	0.000222466
Navarra	0.987300081	-0.000265209	0.993710457	-6.20646E-05
País Vasco	1.012218063	0.000709112	0.985062414	-0.001286025
Rioja	0.922893569	-2.66708E-05	0.990732277	-0.000111693
Ceuta y Melilla	1.006844833	-0.001792197	0.975162378	-4.79573E-06

Source: author's elaboration

From the analysis we can see a value of the resistance index for the tourism industry below the value 1 and this shows that in Aragon, Cataluna, Navarra, Rioja the impact of the shocks was felt and showed a lower resistance than the other regions.

In order to have a better view of the situation of resilience (see Figure 5 and Figure 6) we divided the regions into 4 groups:

1. Most resilient – positive values of resistance and recovery indices;
2. Strong resistance weak recovery – the resistance index has a positive value and the recovery index has a negative value;
3. Strong recovery weak resistance – the resistance index has a negative value and the recovery index has a positive value;
4. Resilient – negative values of resistance and recovery indices.

In Figure 5 Catalunya's tourism industry has a value below 1, and we can see that this is due to shocks that have led to a change in tourists' preferences in choosing it as the holiday destination. In 2018, things have changed with a recovery in employment.

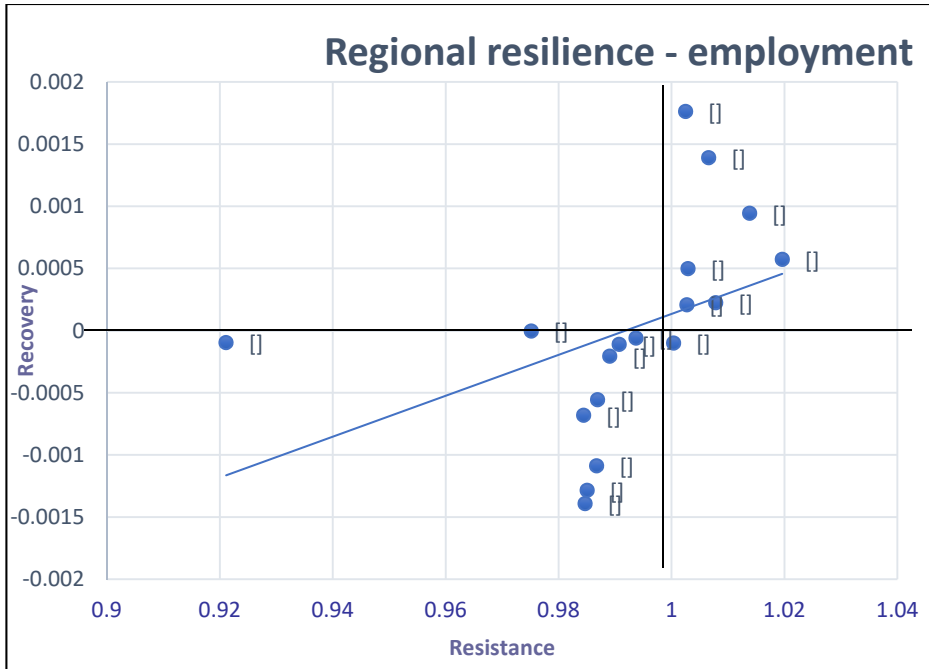
We can see that the trend change between Balears and Canarias has had an effect on employment, and Canarias shows a negative recovery value even though in 2017 the effects of shocks were not felt.



Source: author's elaboration

Figure 5. Resistance and recovery in tourism

In the regions of Rioja, Navara, Aragon and Ceuta e Melilla, the negative values of the resistance and recovery indices are due to a higher regional employment growth than the growth in the tourism sector.

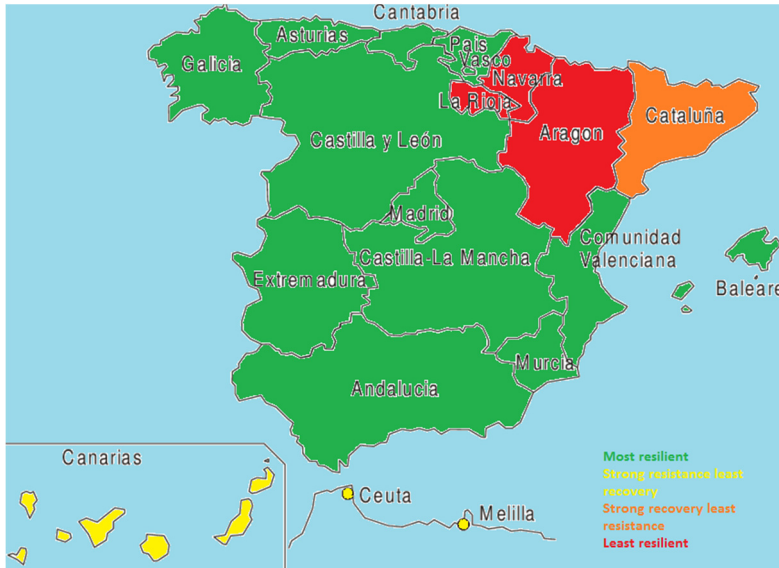


Source: author's elaboration

Figure 6. Resistance and recovery of employment at regional level

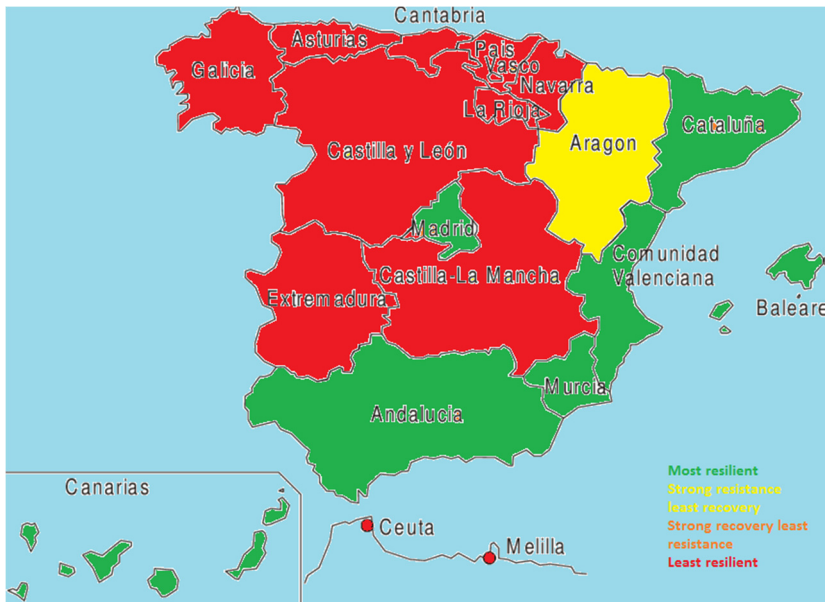
Regional employment provides an insight into the contribution of the tourism industry to regional resilience. Regions such as Asturias, Cantabria, Castilla-La Mancha, Castilla y Leon, Ceuta y Melilla, Extremadura, Galicia, Navarra, Pais Vasco, Rioja are less resilient, but employment in the tourism industry in these regions has not been affected here we can see that while these regions face some employment problems in other sectors, employment in the tourism industry is growing.

The Andalucia, Catalunya, Madrid, Balears, Canarias, Valencia and Murcia regions have not encountered problems and are the most resilient in terms of employment.



Source: author's elaboration

Figure 7. Tourism resilience map



Source: author's elaboration

Figure 8. Regional resilience map

Through a comparative analysis of Figure 7 and Figure 8 we can consider that the employment in the tourism sector is a key factor in the regional economic

resilience with a considerable contribution, almost the map being green. In Figure 8 we have represented the regional employment map and we can see as an explanation for the less resilient regions a variation in regional employment distribution and a 6.7% increase in employment at national level.

5. CONCLUSIONS

From the analysis of the number of nights and visits of tourists, we can see that the effects of the attacks and the constitutional crisis in Spain were felt in the tourism sector by the end of 2017. Statistical analysis of the number of tourist arrivals shows that the tourism industry in Spain was affected by political instability and subsequent terrorist attacks. The impact of terrorism on tourism can be both direct and indirect. The direct costs of the shocks for the tourism sector include the decrease of the number of tourists, which leads to the decrease of the incomes and the decrease of the GDP, while the indirect costs include the reduction of the employment in the tourism sector. As a result, political conflict and terrorism can undoubtedly be said to have a negative effect on the development of tourism in Spain. The ever-growing tourism and one of the world's leading industries is disrupted by political instability and terrorism.

Regional employment provides an insight into the contribution of the tourism industry to regional resilience. Regions such as Asturias, Cantabria, Castilla-La Mancha, Castilla y Leon, Ceuta y Melilla, Extremadura, Galicia, Navarra, Pais Vasco, Rioja are less resilient, but employment in the tourism industry in these regions has not been affected here we can see that while these regions face some employment problems in other sectors, employment in the tourism industry is growing. The Andalucia, Catalunya, Madrid, Balears, Canarias, Valencia and Murcia regions have not encountered problems and are the most resilient in terms of employment.

Catalunya's tourism industry has a value below 1, and we can see that this is due to shocks that have led to a change in tourists' preferences in choosing it as the holiday destination. In 2018, things have changed with a recovery in employment. We can see that the trend change between Balears and Canarias has had an effect on employment, and Canarias shows a negative recovery value even though in 2017 the effects of shocks were not felt. In the regions of Rioja, Navara, Aragon and Ceuta e Melila, the negative values of the resistance and recovery indices are due to a higher regional employment growth than the growth in the tourism sector.

Considering this first contribution of analyzing tourism's contribution to regional resilience, there are a number of possible researches for the future. The analysis could be extended over a longer period of time to observe and compare if the tourism industry's response is similar in the face of various shocks, although it is very difficult to create long time series due to the lack of statistical data at the level regional. Secondly, we could expand the analysis by including reorientation

and renewal indices for a better vision of the resilience defined by Martin (2012). The analysis of the reorientation and renewal, according Duschl (2014), would be possible at microeconomic level using data from individual firms. I think that an analysis of all sectors of activity will give us a vision of reorientation and renewal and we can explore and determine the role of other industries that could contribute to regional resilience.

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ECONOMIC TRENDS AND ENTREPRENEURIAL ACTIVITY

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Abstract

Entrepreneurship is about discovering, evaluating and exploiting opportunities to create future goods and services, so special attention has to be paid to researching the concept of perception of opportunities. As a social force the entrepreneurial activity generates economic effects, but the real challenge is to find which factors are influencing the entrepreneurship, and what drives the involvement of individuals in entrepreneurial activities. The data of 50 states, related to the entrepreneurial activity, were collected for the year 2019. The dependence between GDP and entrepreneurial activity was analyzed from a two-way perspective and Total early-stage Entrepreneurial Activity (TEA) was the dependent variable. Other two independent variables were established: Perceived opportunities (PO) and Perceived capabilities (PC), as percentage of the population aged 18 – 64, persons involved in any stage of the entrepreneurial activity or who consider that they have the skills and knowledge necessary to start a business.

We identified that there is a statistically significant direct relationship between TEA and PC, also a weak direct relationship between PO and PC. The estimated correlation ratio shows that the link between the dependent variable -TEA and the independent variables: PO, PC, GDP is strong. The values obtained from the econometric modeling, respectively from the multiple regression equation, validate the research hypothesis.

Keywords: *entrepreneurial activity; perceived opportunities; perceived capabilities; total early-stage entrepreneurial activity (TEA).*

JEL Classification: O12, O47, P17, P42

1. INTRODUCTION

From the very beginning, the existence of the human being was confronted with the need to satisfy his personal and family needs, for which he had to look for new resources. Initially these needs could be provided by the individual, but later the work specialized, and thus the division of labor appeared. Individuals sought to obtain the necessary earnings to purchase goods and services that would ensure their existence. However, the progress of society and the economy as a whole has been characterized by change and competitiveness. The continuous development of the society has determined the revolution of the means of work, with the help of which it carries out existential activities. Basically, economies are characterized by large primary sectors, and as they develop, by secondary and, ultimately, tertiary sectors. The progress of economies and their transition to other

stages of development determine the need for the formation of new industries and businesses. Thus, entrepreneurial initiative becomes almost imperative (Wennekers and Thurik, 1999).

Scientific research on entrepreneurship, from recent years, has brought new approaches. The large numbers of studies investigating the entrepreneurial phenomenon and the implications to related activities have brought new elements that prove the complexity of this field. Research has shown that entrepreneurial activities not only generate jobs and career opportunities, but also represent a means of economic growth through innovation (Drucker, 2014).

So, we can say that entrepreneurial activity is a social force that produces economic effects, that requires to be supported in the current context. The real challenge is to find answers to questions such as: 1) Which factors are influencing the entrepreneurship? or 2) What drives the involvement of individuals in entrepreneurial activities?

According to Arenius and Minniti (2005), entrepreneurship is based on discovering, evaluating and exploiting opportunities to create future goods and services. Special attention was paid to researching the concept of perception of opportunities. Self-confidence, risk-taking and skills in discovering opportunities have been significantly correlated, in many researches, with the creation of new businesses. Thus, when entrepreneurs made decisions, they relied significantly on subjective, even biased, perceptions rather than objective expectations (Shane and Venkataraman, 2000).

The perception of opportunities can be considered a determining factor in the development of entrepreneurship, and an inadequate level of entrepreneurial activity may reflect a lack of vision of community members, called “poor entrepreneurial thinking.” Also, in addition to the perception of opportunities, many previous researches have taken as a key predictor the intention of a person to start a business, personal skills (Ebrahim and Schott, 2011; Noguera, Alvarez, and Urbano, 2013; Walker, Jeger and Kopecki, 2013). Thus, self-confident people may have a low perception of threats and therefore may approach entrepreneurship with a reduced fear of failure which often increases business success (Krueger, 2007; Tsai, Chang and Peng, 2016).

We can consider that entrepreneurial activity or the processes of creation and development of a business result from the interaction between the individual's perception of an opportunity and the perception of the ability to act on that opportunity (Bosma *et al.*, 2020). Certainly, perceptual variables are not the only determinants of entrepreneurial activity, so we seek to find out if the evolution of this field depends on the level of economic development, measured as GDP per capita. The dependence between GDP and entrepreneurial activity will be analyzed from a two-way perspective, the author aiming at the mutual influence between the two variables. Entrepreneurial activity uses the opportunity to create profit for the entrepreneur, at the same time it creates goods and services in the

economy that generate direct income, and through employment it generates indirect income for the economy. Therefore, we can consider that the impact of entrepreneurship is spread on the whole economy.

Bjørnskov and Foss (2008) conducted a study on economic freedom and entrepreneurship in which they measured the influence of global economic development on the emergence of new firms in the economy. The results reached by the two researchers showed that economic development (GDP per capita) is inversely associated with entrepreneurship. In other words, when the economy develops, there is a polarization of entrepreneurial activity towards the *satus quo*.

The present paper aims to analyze the influence of the value of gross domestic product (per capita on purchasing power parity), the ability to perceive and exploit the entrepreneurial opportunities exercised on entrepreneurial activity. Regarding the “measurement of the degree of entrepreneurial activity” we will use the indicator Total early-stage Entrepreneurial Activity (TEA). Influencing factors can be grouped into perceptual variables (perception of opportunities and perception of capabilities) and factors aimed at economic development, in this case GDP per capita.

2. METHODOLOGY

From a methodological perspective, the research uses both qualitative and quantitative analysis. In order to identify the determinants of entrepreneurial activity, a review of the literature was conducted and, subsequently, data were collected in order to validate or refute the information found in the literature. In order to establish a link between the dependent variable and the three independent variables, multiple linear regressions were used. In the context of the evolution of society, we aim to identify the factors that influence the development of entrepreneurial activity. Starting from this premise, the data related to the entrepreneurial activity registered at the level of a sample of 50 states were collected. The data collected are related to 2019.

The research hypothesis can be formulated as follows: entrepreneurial activity is influenced by the value of gross domestic product per capita at purchasing power parity, as well as by the ability to perceive and exploit entrepreneurial opportunities.

The dependent variable is Total early-stage Entrepreneurial Activity (TEA). This represents % of the total population aged between 18 and 64 who are either new entrepreneurs or managers and business owners.

The independent variables were established based on the literature. In such conditions, the following three were chosen: (1) Perceived opportunities: percentage of the population aged between 18 and 64 who report opportunities to open a business in the area where they live. (2) Perceived capabilities: percentage of the population aged between 18 and 64 persons, involved in any stage of the entrepreneurial activity, who consider that they have the skills and knowledge

necessary to start a business. (3) GDP/ capita PPP (USD): is the gross domestic product converted into international dollars, using purchasing power parity rates and divided by the total population.

The data collected is provided by the Global Entrepreneurship Monitor and the World Bank.

The purpose of the article is to identify elements that justify entrepreneurial activity, starting from the influence of GDP and the existence of companies. In this regard, the following variables were used: Total early-stage Entrepreneurial Activity (TEA), Perceived opportunities, Nascent entrepreneurship rate, New business ownership rate and GDP/ capita PPP (USD).

3. STATISTICS

Following the analysis of the data related to 2019, we can summarize the following:

- 12.82% of the population aged 18-64 are either new entrepreneurs or managers;
- 53.65% of the population aged 18-64 notice opportunities to open a business;
- 58.27% of the population aged 18-64, involved in any stage of entrepreneurial activity; consider that they have the skills and knowledge needed to start a business;
- the average value of GDP per capita at purchasing power parity is USD 37,928.76.

Table 1. Correlations between variables

		Tea	Po	pc	Gdp
Pearson Correlation	Tea	1.000	.053	.561	-.190
	Po	.053	1.000	.472	.128
	Pc	.561	.472	1.000	-.351
	Gdp	-.190	.128	-.351	1.000
Sig. (1-tailed)	Tea	.	.358	.000	.093
	Po	.358	.	.000	.189
	Pc	.000	.000	.	.006
	Gdp	.093	.189	.006	.
N	Tea	50	50	50	50
	Po	50	50	50	50
	Pc	50	50	50	50
	Gdp	50	50	50	50

Source: author's own calculation

We identified that there is a statistically significant direct relationship between Total early-stage Entrepreneurial Activity (TEA) and Perceived

Capabilities (PC) (Table 1). There is also a weak direct relationship between Perceived Opportunities (PO) and Perceived Capabilities (PC). And, between Perceived Capabilities (PC) and Gross Domestic Product per capita (GDP per capita) there is an inverse and weak relationship between Perceived Capabilities (PC) and Gross Domestic Product per capita (GDP per capita). All correlations are statistically significant, with a probability of 95%.

It is necessary to specify the fact that, following the data processing, Sig values higher than 0.05 were also returned, which underlines that they are statistically insignificant. Among them, we find: (1) The relationship between Total early-stage Entrepreneurial Activity (TEA) and Gross Domestic Product per capita (GDP per capita); (2) The relationship between Total early-stage Entrepreneurial Activity (TEA) and Perceived Opportunities; (3) The relationship between Perceived Opportunities and Gross Domestic Product per capita (GDP per capita).

Summarizing the above, with a probability of 95%, we admit that there is a statistically significant correlation between: Total early-stage Entrepreneurial Activity (TEA) and Perceived Capabilities (PC), Perceived Opportunities (PO) and Perceived Capabilities (PC), as well as between Perceived Capabilities (PC), and Gross Domestic Product per capita (GDP per capita). Thus, the results obtained are in accordance with those in the literature.

Table 2. Correlation ratio

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Chang	df1	df2	Sig. F Change
1	.618 ^a	.382	.342	5.79096	.382	9.480	3	46	.000

a. Predictors: (Constant), gdp, po, pc

Source: author's own calculation

The estimated correlation ratio is 0.618 which shows that the link between the dependent variable (TEA) and the independent variables (perceived opportunities, perceived capabilities and GDP per capita) is strong (Table 2). The estimated value of the determination ratio is $R^2 = 0.382$, which means that the variation of the dependent variable (TEA) is explained in proportion of 38.2% by the variation of the independent variables.

Table 3. ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	953.693	3	317.898	9.480	.000 ^b
Residual	1542.619	46	33.535		
Total	2496.311	49			

a. Dependent Variable: TEA

b. Predictors: (Constant), pc, gdp_capita, po

Source: author's own calculation

Regression equation:

$$Y_x = -2.945 - 0.146PO + 0.385PC + 3.03GDP \quad (1)$$

The value $b_0 = -2,945$ represents the level of Total early-stage Entrepreneurial Activity (TEA), given that Perceived Opportunities, Perceived Capabilities and GDP per capita are constant.

The value $b_1 = -0.146$ shows how much, on average, the total early-stage Entrepreneurial Activity (TEA) decreases, to a 1% increase of Perceived Opportunities, if the rest of the independent variables remain constant.

The value $b_2 = 0.385$ shows how much, on average, the total early-stage Entrepreneurial Activity (TEA) increases, to a 1% increase of Perceived Capabilities, if the rest of the independent variables remain constant.

The value $b_3 = 0.385$ shows how much, on average, the total early-stage Entrepreneurial Activity (TEA) increases, at an increase of GDP/capita by one unit, if the other independent variables remain constant.

4. CONCLUSIONS

The scientific research of the last two decades approaches the entrepreneurial phenomenon starting from previously analyzed premises that included it in the sphere of the determinants of development. Distinctive valences have been discovered for the latter, involving, among others, the innovative process or the labor market. Therefore, the complexity of entrepreneurial activity is described by the vitalizing force placed on the process of human development, respectively on its determinants of economic or social origin. From such a perspective, our approach started from trying to identify possible answers to dilemmas that revolve around the factors influencing entrepreneurial activities and those that determine the decision to start such enterprises.

The specialized literature provided us with certain analytical milestones located in close correlation with the processuality of the activities of discovery, evaluation and exploitation of the entrepreneurial opportunities, respectively of the way of their individual perception. A complementary aspect of the perceptual

variable on market opportunities (considered in previous research) refers to the subjective side involved in decisions to start a business, an element that emphasizes the individual perception of the existence of entrepreneurial capabilities. Regarding the measurement of the results of entrepreneurial activity, studies suggest the existence of interdependence between the macroeconomic indicator – GDP per capita, and the entrepreneurial phenomenon, as evidenced by the direct impact of the latter on income generation, production of goods and services, the degree of employment, etc.

Therefore, our study focused on identifying the influence of the group of perceptual factors (opportunities and capabilities) as well as the one that describes, to a certain extent, the level of economic development (GDP per capita). The two dimensions were juxtaposed with the G.E.M. (Global Entrepreneurship Monitor) Total early-stage Entrepreneurial Activity (TEA), as a dependent factor. The research hypothesis – entrepreneurial activity is influenced by the value of gross domestic product per capita at purchasing power parity, as well as the ability to perceive and exploit entrepreneurial opportunities, was statistically tested on a sample of 50 states whose data were collected in 2019 from the GEM database and that of the World Bank.

The descriptive synthesis of the analyzed indicators included information on the average percentage compared to the population aged 18 to 64, respectively: approximately 13% are engaged in entrepreneurial activities, 54% notice the existence of business opportunities, and 58% consider that have entrepreneurial skills and knowledge. It should also be noted that the average value of gross domestic product per capita at purchasing power parity was USD 37,928.76, which proves a relatively high level of economic development in the sample states.

Strong ($R = 0.618$) and statistically significant correlation ($\text{Sig} < 0.05$) between incipient entrepreneurial activity and the perception of business opportunities, together with the existence of entrepreneurial skills, as well as between the latter and the level of development expressed by the Gross Domestic Product per capita, it shows that subjective assessments of economic realities are what determine individual decisions regarding the start of entrepreneurial activities. In addition, only the perception of the existence of entrepreneurial skills and abilities will determine the final decision towards entrepreneurship, even if the opportunities are perceived on their positive side.

The values obtained from the econometric modeling, respectively from the multiple regression equation, validate the research hypothesis and may outline certain conclusions.

First, this model suggests that entrepreneurial activity is diminishing, *ceteris paribus*, to an increase in the perception of the existence of opportunities. This result is contrary to previous theoretical conclusions, according to which the existence of opportunities positively influences entrepreneurial activity (Kirzner,

1973). However, we consider the *ceteris paribus* clause to be the cause of this confusion. In reality, the way individuals perceive entrepreneurial opportunities can be severely dissociated from what they perceive to be their personal skills or abilities.

Second, the decision of the entrepreneurial debut can be taken starting not from the existence of the opportunity, but from the awareness of the existence of specific skills. Business opportunities can be identified later. This conclusion is validated in our model by the value of the coefficient b_2 . Entrepreneurial activity is positively influenced by the perception of individual skills. And this, we believe, is due to the fact that the process of self-knowledge is, in essence, of a psychological nature. The limitations of this approach do not allow a detailed analysis of the individual perceptual values of the selected sample.

Finally, the model proves, once again, that the dimensions of entrepreneurial activity contribute to understanding the process of economic development. It must be based on the recognition of the entrepreneurial phenomenon as one of the determinants of prosperity. Economic development is due to entrepreneurs, their attitude and talent.

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ASSUMPTIONS REGARDING THE FINANCING OF EDUCATION

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Abstract

The year 2020 is a year of change, a year of challenges and self reinvention for us as human beings. The pandemic crisis will bring major transformations on all levels, both social and economic. Education is a determining factor in evolution, a business card of a nation. That is why the educational system is the basis for the development of society, a society that currently needs visionary specialists more than ever.

The issue we want to address in this article refers to how the level of funding influences the performance level in education. In a time where we have seen, more than ever, how important research and investment in education are, the question we want to answer is: to what extent will this pandemic crisis bring changes to the funding structure of tertiary education, in relation with performance in the field. Are the states of the European Union ready to reinvent education in the current context? What transformations can expect in the near future, so that higher education can remain competitive under the given conditions? The COVID-19 crisis has shown us that online education can no longer be a neglected component of teaching structures in the education system, but governments' attention must be constantly focused on performance. Online education could lead to the redirection of funds for student mobility or relocation to investments in licensed educational platforms. All these changes that could take place in the future must take into account the quality of the education act.

In the present analysis we will apply an econometric method to see if there is a correlation between the level of government funding for higher education and the variables we choose, namely performance indicators in higher education. In order to establish a link between the chosen variables, we will analyze the behavior of governments at the level of the most important states in the European Community and also what might be the changes in the structure of performance indicators in the future in the context of the current pandemic crisis.

Keywords: *higher education funding; performance indicators; online education.*

JEL Classification: I21, I22, I28

1. PERFORMANCE, A NECESSARY CONDITION FOR THE DEVELOPMENT OF HIGHER EDUCATION

As international competition in undergraduate education becomes fiercer, many countries have been willing to invest in higher education in order to live up to the new challenges and improve their competitiveness. Against the background of the current pandemic crisis caused by the SARS-Cov-2 virus, investments in higher education and especially in research have proved to be more than necessary.

1.1. Performance indicators in higher education

The concern for performance standardization in higher education institutions has become a hotly debated research topic. The need to identify a set of universally accepted performance indicators has preoccupied researchers since the early 1980s, when higher education expanded considerably. Since 1985, the British government has emphasized the importance of setting goals in university education and monitoring their achievement. The basis for establishing the performance indicators are the assumed objectives and the declared mission of the universities. The objectives are those that show the institutional direction, and the declared mission is given by the educational philosophy of the respective institution (Ball and Halwachi, 1987). According to the same authors, the objectives of higher education institutions are characterized by two attributes: effectiveness and efficiency. The first shows us the degree to which a university achieves its objectives, and the latter is measured by the amount of resources used to produce a unit of production, in our case the unit of production being considered to be a graduate. Over time, the objectives of higher education institutions have been formulated in philosophical terms, which has led to the impossibility of separating the objectives from the assumed mission. In *Performance indicators in higher education*, Ball and Halwachi cite Sizer, who in 1979 set out the main characteristics that performance indicators must meet: relevance, variability, lack of prejudice, measurability, economic feasibility and acceptability from an institutional perspective.

Thirty years later, the characteristics of performance indicators in the vision of researchers have not changed much. Instead, the functions they should perform have become more complex. Thus, the main functions of a performance indicator should be: to ensure and measure the quality of education; to supply information for educational policy makers; to provide references for the management and allocation of educational resources; to give each department performance management indicators (Chen, Wang and Yang, 2009). In the absence of price competition or cost-effectiveness measures, performance indicators provide relevant information for prospective students and also help increase accountability (Bratti *et al.*, 2004). On the other hand, performance indicators should underpin the decision to allocate resources within universities (Geraint, 1992), even if

anomalies can sometimes occur, in the sense that additional funding can be allocated to stimulate certain key departments even if they do not yet bring visible benefits. Geraint believes that in order to stimulate performance at the university level, performance indicators must be positively correlated with the level of funding. Starting from the idea, supported by the reviewed documents, that there is a causal link between performance indicators and the financing of the university system, we want to analyze, at the level of European Union countries, which states allocate the most resources for this field and how it influences performance in education. In order to establish this link between the level of funding and performance in higher education, we need to identify what are the measurable performance indicators that can answer this question.

2. METHODOLOGY AND DATA. THE PERFORMANCE INDICATORS – FINANCING RELATIONSHIP

Establishing and choosing performance indicators is not an easy task. Researchers in the field have developed, over time, sets of performance indicators classified by field. In our approach, in order to determine which performance indicators we should analyze, we additionally studied the Times Higher Education World University Rankings, published in 2020. This ranking is the only such ranking that has been audited by independent companies, making it the only global university ranking to be subject to complete and independent control of this nature. The performance indicators, according to which the ranking was established, were grouped into five areas as follows: teaching – learning environment; research – volume, income and reputation; references – the influence of citations; international perspectives – staff, students and research; industry income – knowledge transfer.

In order to establish the performance indicators in our analysis, we took into account the five areas found in the international ranking of universities, as well as the proposals of the National Council for Financing Higher Education (CNFIS) in Romania, on establishing the list of quality indicators and their weight in the year 2019. Another aspect that we considered when establishing the analyzed performance indicators was the measurable characteristic of these indicators, so that we can apply an econometric model at the level of identified statistical data. We would like to mention that the proposed analysis is not an exhaustive analysis, because in our analysis we only take into account five indicators, nevertheless it can be the basis of future research in the field.

Performance indicators on the chosen areas are the following:

Rendition:

- the number of students enrolled in the master;
- the ratio between the number of students and the number of teachers;
- government expenditure per student (this indicator is very important because it gives us additional information on the level of funding for

tertiary education, more precisely we can see if an increase in government expenditure corresponds to a real increase in expenditure/ student or is it only a related allocation of funds an increased number of students);

Research:

- the number of researchers in tertiary education;

International perspectives:

- the number of foreign students in tertiary education.

To determine whether there is a link between the selected performance indicators and the level of funding, in our case the level of government spending, we analyzed for the 28 Member States of the European Union (including the UK) what happens to the proposed indicators when government spending increases or decreases. In order to perform this analysis, we took into account the variations of government expenditures over four years between 2013 and 2016 respectively, we compared the level of government expenditures in 2014 compared to 2013, 2015 compared to 2014 and 2016 compared to 2015. For the three-time intervals, for the 28 selected states we followed the variation of the other indicators considered presented in Table 1.

Table 1. Ascending (+), descending (-) or no data (0) variation of the performance indicators for the EU member states for the three-time frames selected

	STATE	TIME INTERVAL	Gov. Exp.	Exp./ Students	Students/ Teachers ratio	Number of foreign students	Number of master students	Number of researchers
1	Austria	2014-2013	+	+	-	-	-	0
		2015-2014	+	+	-	+	+	0
		2016-2015	+	+	+	+	-	0
2	Belgium	2014-2013	+	-	+	+	+	+
		2015-2014	-	-	-	+	+	-
		2016-2015	+	+	-	+	+	+
3	Bulgaria	2014-2013	+	+	+	-	+	+
		2015-2014	-	+	-	+	-	-
		2016-2015	-	+	-	+	-	+
4	Croatia	2014-2013	0	0	+	+	+	-
		2015-2014	0	0	+	+	-	+
		2016-2015	0	0	-	+	+	+
5	Cyprus	2014-2013	-	-	+	+	+	-
		2015-2014	+	-	-	+	+	-
		2016-2015	-	-	-	+	+	-
6	Czechia	2014-2013	-	-	+	+	+	+
		2015-2014	+	+	+	+	-	+
		2016-2015	-	+	-	+	-	-
7	Denmark	2014-2013	+	+	0	+	+	+

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	STATE	TIME INTERVAL	Gov. Exp.	Exp./ Students	Students/ Teachers ratio	Number of foreign students	Number of master students	Number of researchers
8	Estonia	2015-2014	0	0	-	+	+	+
		2016-2015	0	0	-	+	+	-
		2014-2013	+	+	0	+	-	+
		2015-2014	-	+	-	+	-	-
		2016-2015	+	+	-	+	-	-
9	Finland	2014-2013	+	+	+	+	+	-
		2015-2014	-	-	+	+	+	-
		2016-2015	-	-	+	+	-	-
10	France	2014-2013	+	+	0	+	+	+
		2015-2014	+	+	0	+	+	0
		2016-2015	-	-	0	+	+	0
11	Germany	2014-2013	+	+	+	+	+	+
		2015-2014	+	-	+	+	+	+
		2016-2015	+	+	+	+	+	+
12	Greece	2014-2013	-	-	0	0	+	0
		2015-2014	+	+	-	0	-	0
		2016-2015	0	0	-	+	+	0
13	Hungary	2014-2013	-	-	+	+	-	-
		2015-2014	-	-	-	-	+	-
		2016-2015	+	+	-	+	+	+
14	Ireland	2014-2013	-	-	0	0	-	+
		2015-2014	+	+	0	+	+	-
		2016-2015	-	-	0	+	+	-
15	Italy	2014-2013	-	+	-	+	-	+
		2015-2014	-	-	+	0	-	-
		2016-2015	-	-	+	0	-	+
16	Latvia	2014-2013	+	+	-	+	+	+
		2015-2014	-	+	-	+	+	+
		2016-2015	-	-	-	+	+	-
17	Lithuania	2014-2013	+	+	-	+	-	-
		2015-2014	-	-	+	+	-	-
		2016-2015	-	-	-	+	-	-
18	Luxembourg	2014-2013	0	0	0	-	0	-
		2015-2014	0	0	0	+	0	+
		2016-2015	-	-	-	+	+	0
19	Malta	2014-2013	+	+	-	+	+	+
		2015-2014	+	+	-	+	+	+
		2016-2015	+	+	-	+	+	-
20	Netherlands	2014-2013	+	+	0	+	0	+
		2015-2014	-	-	0	+	0	+
		2016-2015	+	+	-	+	+	-

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	STATE	TIME INTERVAL	Gov. Exp.	Exp./ Students	Students/ Teachers ratio	Number of foreign students	Number of master students	Number of researchers
21	Poland	2014-2013	+	+	+	+	-	+
		2015-2014	+	+	-	+	-	-
		2016-2015	-	-	-	+	-	+
22	Portugal	2014-2013	+	+	+	+	+	-
		2015-2014	+	+	-	+	-	+
		2016-2015	-	-	+	+	+	+
23	Romania	2014-2013	-	+	0	+	-	-
		2015-2014	+	+	-	-	-	+
		2016-2015	+	+	-	+	-	+
24	Slovakia	2014-2013	+	+	-	+	-	-
		2015-2014	+	+	-	-	-	-
		2016-2015	-	-	+	-	-	+
25	Slovenia	2014-2013	-	-	-	+	-	+
		2015-2014	-	+	-	-	-	-
		2016-2015	+	+	-	+	-	-
26	Spain	2014-2013	+	-	+	0	-	+
		2015-2014	+	-	-	0	-	+
		2016-2015	-	-	-	0	-	+
27	Sweden	2014-2013	-	-	-	-	-	0
		2015-2014	+	+	-	+	+	0
		2016-2015	+	-	+	+	+	0
28	United Kingdom	2014-2013	+	-	-	+	-	+
		2015-2014	+	+	-	+	-	+
		2016-2015	-	-	-	+	-	+

Source: personal interpretation of data gathered from Eurostat
(European Commission, 2020)

The results obtained from the analysis performed above are presented in the Table 2.

From the total time intervals studied in the periods of increase in government expenditures for the performance indicators belonging to the teaching field, the following can be observed:

- for 52.38% of the intervals taken into account, the number of students enrolled in the master's degree also increases;
- for 57.14% of the intervals taken into account, the ratio between the number of students and the number of teachers decreases;
- for 83.33% of the intervals taken into account increase government spending per student.

Table 2. Variation of performance indicators for the *teaching* field

Government expenditure	Number of students enrolled for masters %			Students/ teachers ratio %			Expenditure/ student %		
	Increase	Decrease	No data	Increase	Decrease	No data	Increase	Decrease	No data
Increase	52.38	45.24	2.38	28.57	57.14	14.29	83.33	16.67	0.00
Decrease	38.24	58.82	2.94	29.41	52.94	17.65	23.53	76.47	0.00

Source: personal interpretation of data gathered from Eurostat (European Commission, 2020)

Also, for the time intervals studied in the periods of decrease in government expenditures for performance indicators corresponding to the field of teaching it is observed:

- for 58.82% of the intervals taken into account, the number of students enrolled in the master's degree decreases;
- for 29.41% of the intervals taken into account, the ratio between the number of students and teachers increases;
- for 76.47% of the intervals taken into account, government expenditures per student decrease.

Table 3. Variation of performance indicators for the *research* field

Government expenditure	Number of researchers%		
	Increase	Decrease	No data
Increase	54.76	28.57	16.67
Decrease	38.24	50.00	11.76

Source: personal interpretation of data gathered from Eurostat (European Commission, 2020)

From the total time intervals studied in the periods of increase in government expenditures for performance indicators belonging to the research field, the following can be observed (Table 3):

- for 54.76% of the intervals taken into account, the number of researchers increases;

Also, for the time intervals studied in the periods of decrease in government expenditures for performance indicators corresponding to the field of research it is observed:

- for 50% of the intervals taken into account the number of researchers decreases;

Table 4. Variation of performance indicators for the field of international perspectives

Government expenditure	Number of foreign students %		
	Increase	Decrease	No data
Increase	83.33	9.52	7.14
Decrease	73.53	11.76	14.71

Source: personal interpretation of data gathered from Eurostat (European Commission, 2020)

From the total time intervals studied in the periods of increase in government expenditures for performance indicators belonging to the field of international perspectives, the following can be observed:

- for 83.33% of the intervals taken into account the number of foreign students increases;

Also, for the time intervals studied in the periods of decrease in the governmental expenditures for the performance indicators that correspond to the field of international perspectives it is observed:

- for 11.76 of the intervals taken into account, the number of foreign students decreases.

2.1. Discussions and future research directions

As a result of the analysis, we can say that there is a fairly close link between the level of government spending and the proposed indicators. We can observe that for 83.33% of the studied periods, an increase of government expenditures meant an increase of expenditures per student, which shows us that this is a real increase of expenditures allocated to the higher education system. At the same time, the increase in government spending entails an increase in the ratio between students and teachers. From our analysis we can see that the student/teacher ratio is more sensitive to increases in government spending than to declining spending. If in the periods of increase in 57.14% of cases the ratio between students and teachers improved (decreased – a teacher had a smaller number of students), in periods of decrease in government spending only for 29.41% from intervals the ratio of student teachers increased (a teacher had a higher number of students). Regarding the increase in the number of students enrolled in the master, we can see that for the time intervals where we found increases in government spending in 52.38% of cases were followed by increases in the number of students, which

can lead us to the idea of investing in the most specialized education possible to provide a highly qualified workforce.

In the case of the number of researchers, we also noticed a relatively strong correlation with the level of government spending in the sense that in over 50% of the subject intervals we observed a movement in the same direction.

The trend of globalization in recent years, as well as the standardization of the university education system, by the signing by the member states of the European Union of the Bologna Declaration, has led to an increase in the number of foreign students. In our analysis we observed that both in the periods of increase and in periods of decrease in government spending, the number of foreign students increased. However, this does not exclude the link between the level of government spending and the number of foreign students.

Therefore, the periods of increase in government spending were matched by an increase on the selected indicators, averaging 66.18%, showing a strong link.

3. CONCLUSIONS

This research aims to bring to the fore the need for investment in the education system in the European Union and beyond. Now that we are facing a period of change, the education system needs to be better prepared than ever. In the next period we will certainly know changes in the way of evaluating educational institutions, the performance indicators analyzed in 2020 will no longer be relevant for 2030.

Online education, which has grown in size due to the current situation, will weigh heavily in the decision to fund universities in the future. The states of the world will certainly rethink their position on online education, and this could mean a relocation of funds from traditional education to online education, even after overcoming the pandemic crisis. As we have seen in our analysis, the number of foreign students has increased in recent years. If in the future we move to online education, there will be no need for funds for such mobility, internal or external, each student admitted to a university in the country or abroad will be able to be a student in their own home, the funds thus saved could be redirected to improve performance in education. The process of transforming education from a traditional to an online education will not be a simple one and will require the allocation of huge funds during the transition period for the acquisition of platforms, licenses or the creation of virtual libraries. All these changes must take into account the increase of performance in the field, so that the quality of the educational act is the engine of the new university order.

We want this material to be the starting point for future research on university funding and the effects of the COVID-19 crisis. As most experts say, the pandemic crisis will trigger irreversible changes in all areas, changes that, properly managed, could bring major benefits in the future.

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