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THE FORECAST OF THE NUMBER OF TEACHERS IN PRE-UNIVERSITY EDUCATION IN ROMANIA

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Abstract: *In the era of the knowledge society, in the context of the challenges produced by globalizing tendencies and the need of keeping national identity, the countries of the world must set on the first positions of national priorities the educational system with all its components, including its subsystem, pre-university education. In post December Romania we have acknowledged the consistency of all governments, at a declamatory level the political actors setting education as a national priority. Unfortunately, this consistency wasn't continued in the operational plan. The budget allocations for education were approximately equal in relative figures, while we recorded a massive decrease of school population, followed, obviously by a decrease in the number of teachers in pre-university education as well as a drop of the attractiveness of a teaching career. To ensure the continuity of the Romanian people on the current territory and to keep cultural identity, we must apply a series of measures at a macro level concerning stopping the demographical drop and reducing emigration of families or work force. Successfully implementing such policies will implicitly lead to mending the problem of the number of students and teachers from pre-university educational level, the effects being seen some immediately, some on a medium term and, most importantly, on the long term.*

Key words: *education, pre-university education, education levels, teachers, educational policies.*
JEL Classification: *I21, I28.*

1. Introduction. Actuality and importance of the tackeled problem

In the context of complex problems generated by maintaining an equilibrium between globalizing – mainly in economy, on the one side and the necessity of keeping cultural identity, preserving peoples' traditions and customs, the objectives of educational systems must also cover the efforts towards balancing these issues.

The exponential development of the information and communication technologies, the growth of family and work force migration represent a small part in the multitude of restrictions which contemporary people are dealing with. Even though human beings tend to adapt to their environment, educational systems must ensure the increase in the degree of adaptability so that the graduates get clear reference points in their socio-professional orientation, when setting personal objectives, but also the competences necessary to follow and accomplish them.

The political deciding parties from most countries are aware of the importance of educational systems in the current context and set them as top priorities in the area of concerns. But this intention isn't always and everywhere followed by actual efforts, mainly when it comes to budget allocations. In Romania in the past three decades, education and health have been the Cinderellas of the budget, even though in political discourses they were powerful weapons and were always considered as national priorities. Certainly during crisis periods, not particularly global ones like the one we are experiencing right now (generated by COVID 19), the lack of reform in the aforementioned fields is more noticeable and it is more accessible to observers. We don't have to reinvent the wheel to set these two major systems on the top two places, each having arguments to be placed on the first place.

The highest scientific forum of the country, The Romanian Academia, carried out a study with a wide area of coverage published in 2015 called *Romania's development strategy over the next 20 years,* in which they approach problems from important fields for the period between 2016-2035. Special attention is given to education, one of the presented projects being called "School and education as seen by the Romanian Academia". The authors start from a free analysis of the current educational system, they set the group of values on which education should rely, they elaborate "Educated Romania – 2035 vision", they set the strategic targets for education and they suggest seven programs for accomplishing them: 1. Start in education; 2. Autonomy and responsibility; 3. Authentic learning for all; 4. Well-being and self-esteem; 5. Excellency in teaching; 6. School and university, open; 7. Curious minds, creative minds.

Concerned about the estate and the direction of the Romanian university educational system, after analyzing the budgetary allocations and the discouraging evolution of the number of students, we continue the series of studies, having as purpose, this time, analyzing the evolution of the number of teachers from pre-university education, identifying the trends and forwarding a 2050 prognosis.

2.1. Number of teachers vs number of students

We set the purpose of observing the way in which the number of teachers evolved parallel to the number of students, a relevant indicator in the field of education being the number of students allotted to a teacher. The values of the increase rhythm for students and teachers and those of the aforementioned ratio are determined in the following table (Table no. 1).

Table no. 1. Number of students vs number of teachers in Romanian pre-university education between 1995-2018

Year	Number of students enrolled in pre-university education			Number of teachers in pre-university education			Number of students/ teacher
	Total	*Rhythm of growth with the fixed 1995 base*	*Rhythm of growth with chain base*	*Total*	*Rhythm of growth with the fixed 1995 base*	*Rhythm of growth with chain base*	
1995	3669248			244640			15,00
1996	3674597	0,15%	0,15%	250612	2,44%	2,44%	14,66
1997	3659208	-0,27%	-0,42%	248231	1,47%	-0,95%	14,74
1998	3598666	-1,92%	-1,65%	249002	1,78%	0,31%	14,45
1999	3509449	-4,36%	-2,48%	238820	-2,38%	-4,09%	14,69
2000	3421091	-6,76%	-2,52%	232956	-4,78%	-2,46%	14,69
2001	3356231	-8,53%	-1,90%	236803	-3,20%	1,65%	14,17
2002	3270786	-10,86%	-2,55%	222744	-8,95%	-5,94%	14,68
2003	3214999	-12,38%	-1,71%	216550	-11,48%	-2,78%	14,85
2004	3108634	-15,28%	-3,31%	219716	-10,19%	1,46%	14,15
2005	2996029	-18,35%	-3,62%	213736	-12,63%	-2,72%	14,02
2006	2911213	-20,66%	-2,83%	210180	-14,09%	-1,66%	13,85
2007	2846904	-22,41%	-2,21%	207537	-15,17%	-1,26%	13,72
2008	2781039	-24,21%	-2,31%	205200	-16,12%	-1,13%	13,55
2009	2735424	-25,45%	-1,64%	199254	-18,55%	-2,90%	13,73
2010	2682489	-26,89%	-1,94%	185854	-24,03%	-6,73%	14,43
2011	2610022	-28,87%	-2,70%	181731	-25,71%	-2,22%	14,36
2012	2688590	-26,73%	3,01%	182548	-25,38%	0,45%	14,73
2013	2649040	-27,80%	-1,47%	184372	-24,64%	1,00%	14,37
2014	2615722	-28,71%	-1,26%	181174	-25,94%	-1,73%	14,44
2015	2553861	-30,40%	-2,36%	175410	-28,30%	-3,18%	14,56
2016	2524399	-31,20%	-1,15%	174244	-28,78%	-0,66%	14,49
2017	2497768	-31,93%	-1,05%	174474	-28,68%	0,13%	14,32

2018	2466269	-32,79%	-1,26%	172803	-29,36%	-0,96%	14,27
Average	**3001737**	**-18,98%**	**-1,70%**	**208691**	**-15,33%**	**-1,47%**	**14,37**

Source: own processing based on the number of students and teachers taken from the INS-tempo-online platform.

While the number of students dropped with 32.79% in 2018 compared with 1995, the decrease of the number of teachers is somewhat smaller, being of -29.36%. This fact, enforced by the average values of the annual decrease rhythms with chain base, that is – 1.7% compared to - 1.47%, allow us to assert that the decrease of the number of students was more accelerated than the decrease of the number of teachers from pre-university education.

A smaller value of the number of students allotted to a teacher should naturally make for a much more qualitative teaching act. The average annual value of this indicator during the analyzed period is of 14.47 students/ teacher. The evolution of this indicator doesn't show major changes, the minimum of 13.55 students/teacher being registered in 2008. In the opposite corner, the value of 15 students/ teacher registered in 1995, represents the maximum value of the indicator.

We notice that the trend is a slowly decreasing one, a more accentuated decrease being registered between 2003-2008, when, as we remember, mostly because of consumption, Romania's economy '*was on fire*'. Starting with 2019, clearly because of the crisis started by the austerity measures, the indicator starts to rise, practically having, during 2010-2018, values close to the average of the entire analyzed period.

While the indicator hasn't registered significant changes for the entire pre-university education, we should analyze the facts on educational levels. This approach will lead us to the average values presented in Table no. 2.

Table no. 2. Averages of the ratio no of students per teacher, on levels, in Romanian pre-university education during 1995-2018

The average of the ratio no of students/ teacher					
Pre-university educatiom	***Primary school (including special education)***	***Secondary school (including special education)***	***High school***	***Vocational education***	***Post-high school and craftsman education***
14,37	**18,05**	**11,31**	**12,51**	**93,78**	**47,84**

Source: own processing based on the number of students and teachers taken from the INS-temp-online platform.

We got an average value of 18.05 students/ teacher in the case of primary school. Compared to the average of 14.37, in our opinion, this is a high value knowing that primary school years are fundamental to students accumulating values – knowledge, abilities, behavior, attitudes etc -, forming and developing cognitive, affective and psychomotor structures. From a wider perspective, these years model their personality. The quality of acquisition at this level influences the quality of the students entire educational development in a decisive way. More over, simultaneous learning is an indicator which both reflects a big effort of the teachers and stands as an important factor of school failure.

Values below the average of the entire pre-university educational system are registered in the case of secondary and high school level, whereas in the case of vocational and post-high school levels calculating such an indicator is irrelevant because practically it is an abnormal situation. In 2011, vocational education was practically annulled and the share of teachers who were working mainly in these two areas was irrelevant, but precisely these teachers were included in the reports. After 2012, once vocational education was re-established, a lot of teachers, although they were hired at high-school or even secondary school level, took classes in vocational schools as well, the system lacking teaching personnel for vocational education. This was due to its disappearance few years earlier.

2.2. Multi-decade prognosis of the number of teachers in pre-university education

Taking into account some data and affirmations from the previous paragraphs, as well as being led by the logics of economy, we can assume that the number of teachers depends significantly on the number of students from pre-university educational system.

To determine the linear regression which varies the number of teachers with the help of Eviews, we will use the series (Table no. 3):

Table no. 3. Number of students enrolled and of teachers from pre-university education in Romania between 1995-2018

Year	Number of students (x_i)	Number of teachers (y_i)
1995	3.669.248	244.640
1996	3.674.597	250.612
1997	3.659.208	248.231
1998	3.598.666	249.002
1999	3.509.449	238.820
2000	3.421.091	232.956
2001	3.356.231	236.803
2002	3.270.786	222.744
2003	3.214.999	216.550
2004	3.108.634	219.716
2005	2.996.029	213.736
2006	2.911.213	210.180
2007	2.846.904	207.537
2008	2.781.039	205.200
2009	2.735.424	199.254
2010	2.682.489	185.854
2011	2.610.022	181.731
2012	2.688.590	182.548
2013	2.649.040	184.372
2014	2.615.722	181.174
2015	2.553.861	175.410
2016	2.524.399	174.244
2017	2.497.768	174.474
2018	2.466.269	172.803

Source: INS – tempo-online platform.

The upload of the two series into Eviews leads us to the following scatter diagram (Figure no. 1):

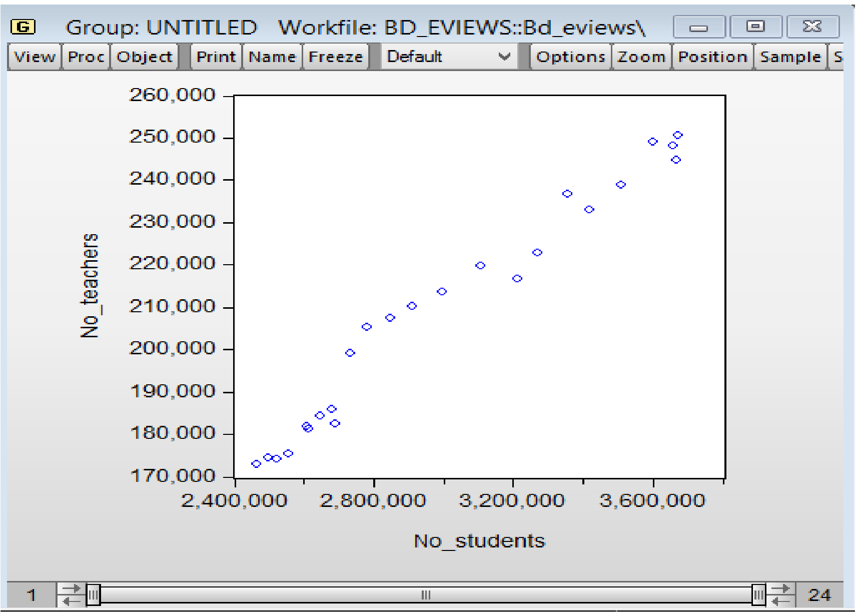


Figure no. 1. Scatter diagram in Eviews for the evolution of the number of teachers based on the number of students enrolled in the pre-university educational system

According to the diagram, we assume that we have a linear dependency of the number of teachers based on the number of students, that is after the model:

$$\boldsymbol{Y = \beta_1 + \beta_2 X + u} \qquad \textbf{(1)}$$

We are calculating the parameters of this regression, meaning we determine $\mathbf{b_1}$ estimations for $\boldsymbol{\beta_1}$ and $\mathbf{b_2}$ for $\boldsymbol{\beta_2}$ (Figure no. 2).

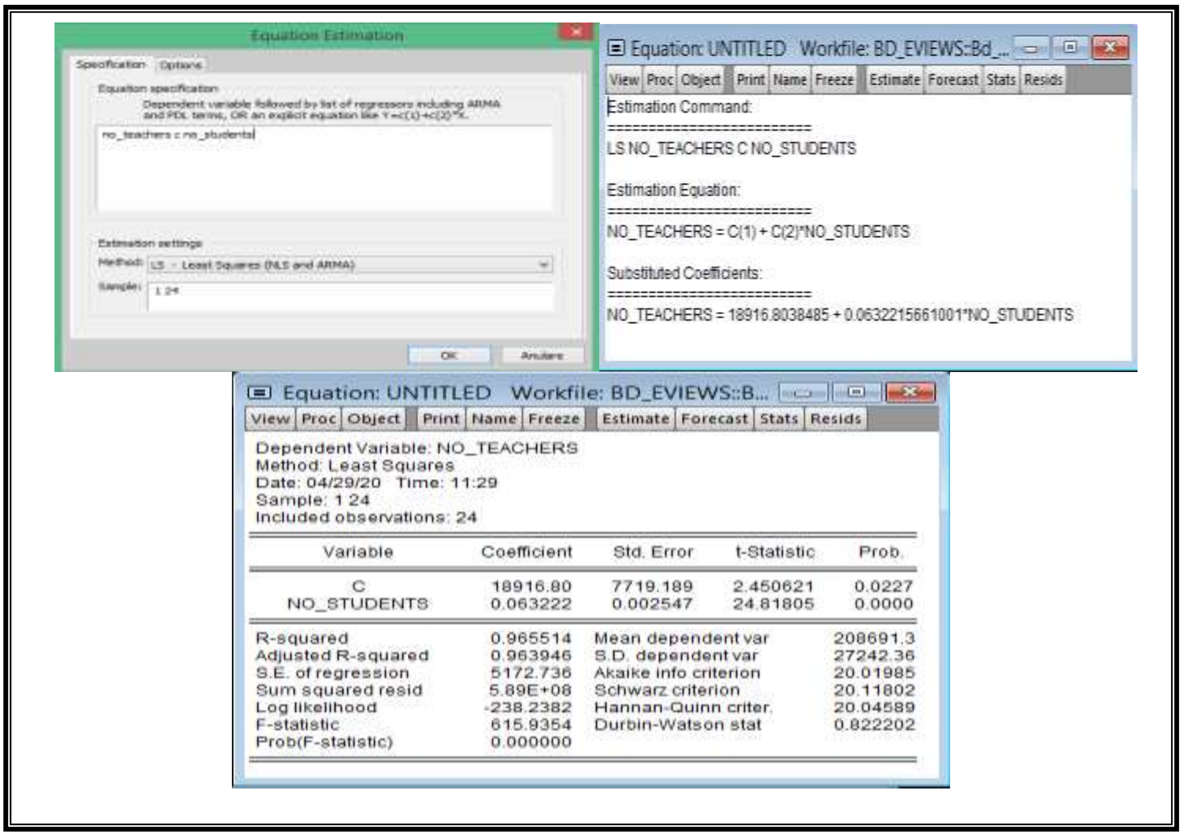


Figure no. 2. Eview model of the linear regression for the evolution of the number of teachers based on the number of students enrolled in pre-university education in Romania between 1995-2018

Thus, the calculated values for the number of teachers are obtained as follows:

$$\hat{y}_i = 18916{,}80 + 0{,}06322 \times x_i \qquad (2)$$

In the case of the Student test for this model, the hypotheses are:

H_0: "$\beta_2 = 0$" – the no of students **is not** a significant factor for the number of teachers;

H_1: "$\beta_2 \neq 0$" - the no of students **is** a significant factor for the number of teachers.

From Eviews $t_{calculated} = 24{,}818$

On the other side, inserting the corresponding function into Excel, for a level of 5% of significance, we get, $t_{critical} = 2{,}073873068$.

Obviously $|t_{calculated}| > t_{critical}$, which means that hypothesis H_0 is rejected.

In conclusion, the number of students **is a significant factor** for the number of teachers.

In case of the Fisher test, the hypotheses are:

H_0: "$\beta_2 = 0$" – the model **is not** significant;

H_1: "$\beta_2 \neq 0$" – the model **is** significant.

Because the probability (statistical - F) in this case is 0 (less than 0.05), we reject hypothesis H_0 and accept hypothesis H_1, thus, the model **is entirely significant.**

To get a good prognosis, the residues must be homoscedastic, they shouldn't show autocorrelation and they should have normal distribution.

Homoscedasticity is checked with the help of the White test, the associated hypotheses being:

H_0**: the accidental errors **are homoscedastic;

H_1**: the accidental errors **are heteroscedastic.

If the associated probabilities of the calculated statistics are smaller than the chosen signification level, we reject ***H_0*** and accept ***H_1*.** In our case, we get (Figure no. 3):

Equation: UNTITLED Workfile: BD_EVIEWS::Bd_e...

View | Proc | Object | Print | Name | Freeze | Estimate | Forecast | Stats | Resids

Heteroskedasticity Test: White

F-statistic	3.006017	Prob. F(2,21)	0.0711
Obs*R-squared	5.341650	Prob. Chi-Square(2)	0.0692
Scaled explained SS	2.571099	Prob. Chi-Square(2)	0.2765

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 04/29/20 Time: 11:33
Sample: 1 24
Included observations: 24

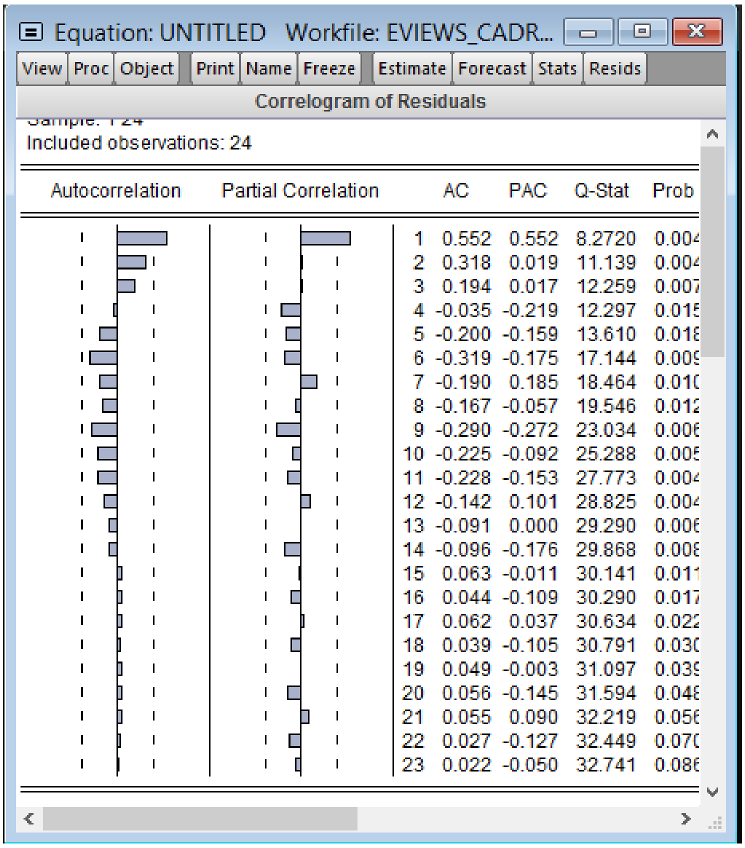
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.31E+08	3.86E+08	-2.150170	0.0433
NO_STUDENTS^2	-9.52E-05	4.13E-05	-2.303712	0.0316
NO_STUDENTS	576.1540	254.8312	2.260924	0.0345

R-squared	0.222569	Mean dependent var	24527433
Adjusted R-squared	0.148528	S.D. dependent var	26817546
S.E. of regression	24745960	Akaike info criterion	37.00269
Sum squared resid	1.29E+16	Schwarz criterion	37.14995
Log likelihood	-441.0323	Hannan-Quinn criter.	37.04176
F-statistic	3.006017	Durbin-Watson stat	1.054389
Prob(F-statistic)	0.071113		

Figure no. 3. White test for checking the model's homoscedasticity

We notice that the probabilities associated to the test are bigger than the chosen significance threshold, that is, 5%, so we can't reject ***H_0*** meaning that the accidental errors are homoscedastic.

The error autocorrelation is tested with the help of the Durbin Watson test. Thus, in Eviews, with the option *View/Residual test/Correlogram – Q-statistics* we get (Figure no. 4):



	AC	PAC	Q-Stat	Prob
1	0.552	0.552	8.2720	0.004
2	0.318	0.019	11.139	0.004
3	0.194	0.017	12.259	0.007
4	-0.035	-0.219	12.297	0.015
5	-0.200	-0.159	13.610	0.018
6	-0.319	-0.175	17.144	0.009
7	-0.190	0.185	18.464	0.010
8	-0.167	-0.057	19.546	0.012
9	-0.290	-0.272	23.034	0.006
10	-0.225	-0.092	25.288	0.005
11	-0.228	-0.153	27.773	0.004
12	-0.142	0.101	28.825	0.004
13	-0.091	0.000	29.290	0.006
14	-0.096	-0.176	29.868	0.008
15	0.063	-0.011	30.141	0.011
16	0.044	-0.109	30.290	0.017
17	0.062	0.037	30.634	0.022
18	0.039	-0.105	30.791	0.030
19	0.049	-0.003	31.097	0.039
20	0.056	-0.145	31.594	0.048
21	0.055	0.090	32.219	0.056
22	0.027	-0.127	32.449	0.070
23	0.022	-0.050	32.741	0.086

Figure no. 4. Residual correlogram

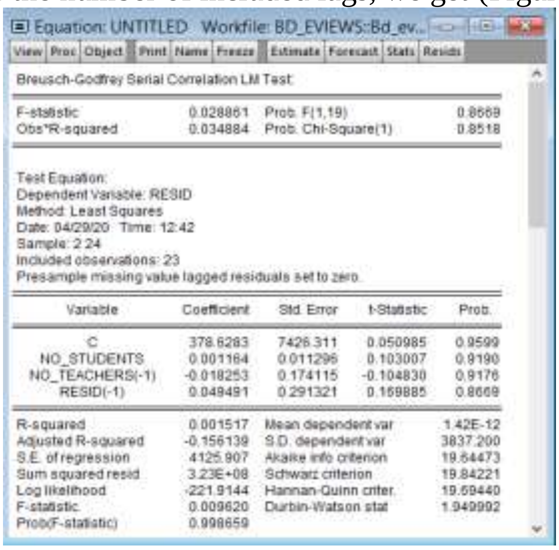
According to the results of this test, for the first lag there is a series error correlation (the value of the autocorrelation coefficient is over the interval indicated in the chart). It is a well-known fact that this test often renders weak results.

Next we will carry on the Breusch-Godfrey test to check error autocorrelation. The hypotheses associated to this test are:

***H_0*: there is no** *serial error correlation of the regression equation;*

***H_1*: there is** *serial error correlation of the regression equation.*

For the value of 1 for the number of included lags, we get (Figure no. 5):


Equation: UNTITLED Workfile: BD_EVIEWS::Bd_ev...
View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.028861	Prob. F(1,19)	0.8669
Obs*R-squared	0.034884	Prob. Chi-Square(1)	0.8518

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 04/29/20 Time: 12:42
Sample: 2 24
Included observations: 23
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	378.6283	7426.311	0.050985	0.9599
NO_STUDENTS	0.001164	0.011296	0.103007	0.9190
NO_TEACHERS(-1)	-0.018253	0.174115	-0.104830	0.9176
RESID(-1)	0.049491	0.291321	0.169885	0.8669

R-squared	0.001517	Mean dependent var	1.42E-12
Adjusted R-squared	-0.156139	S.D. dependent var	3837.200
S.E. of regression	4125.907	Akaike info criterion	19.64473
Sum squared resid	3.23E+08	Schwarz criterion	19.84221
Log likelihood	-221.9144	Hannan-Quinn criter.	19.69440
F-statistic	0.009620	Durbin-Watson stat	1.949992
Prob(F-statistic)	0.998659		

Figure no. 5. The Breusch-Godfrey test

The most important part of the test output is the first part which presents the two statistical tests *F-statistics* and *R-squared* and the probabilities associated to these tests. If the probabilities obtained are inferior to the level of relevance involved then the null hypothesis is rejected. In our case, the probabilities are bigger than 5% so we can't reject ***H_0*;** in conclusion there is no serial correlation of errors.

We will check the normal distribution of residues with the help of the Jarque-Bera test, the hypotheses being:

H_0*:** *the residues (errors)* ***have *a normal distribution;*

H_1*:** *the residues (errors) don't* ***have *a normal distribution.*

The ***H_0*** hypothesis is rejected if there is a probability of <0.05 (Figure no. 6).

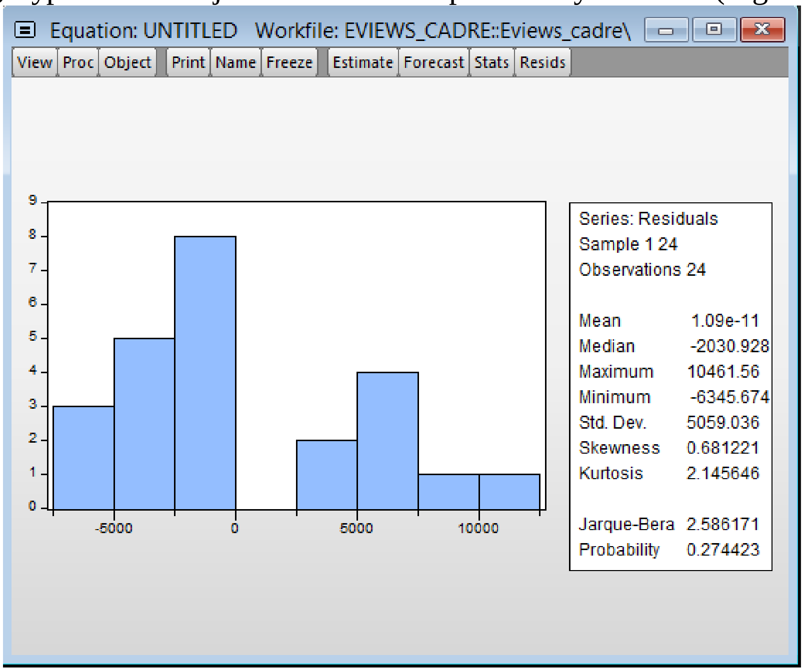


Figure no. 6. The Jarque-Bera test

Because the probability of Jarque-Bera statistics is 0.274 and it is bigger than the threshold of 0.05, we can't reject hypothesis ***H_0***; so the residues have normal distribution.

Taking into account the results of the aforementioned tests, we can obtain relevant prognosis on medium and long term for the number of teachers from Romanian pre-university education based on the number of students.

Next, we estimate the reliability intervals for the regression coefficients and we analyze the best and worst case scenario.

The reliability interval for an estimator is determined with the formula:

$$\boldsymbol{\beta} \in \left[b_{calculated} - t_{(\propto;n-k)} \, \mathrm{x} \, err_{standard} \, , b_{calculated} + t_{(\propto;n-k)} \times err_{standard} \right]$$

(3)

which means that $\boldsymbol{\beta}$ belongs to the interval with a probability of 1-∝.

Taking the standard errors from **fig. 2,** knowing the value of $t_{critical}$**=2.073873068,** given by the EXCEL function at the relevance level of 0.05% and replacing in **(3)** we get (Table no. 4):

Tabel no. 4. Reliability intervals for the estimators of the regression model

Calculated value for b1	Standard error for b1	Calculated value for b2	Standard error for b2	Low limit of reliability	High limit of reliability
18916,80	7719,189	0,063222	0,002547		
			Estimation β1	2908,18	34925,42
			Estimation β2	0,05794	0,06850

We can assert with a probability of 95%, that $\boldsymbol{\beta_1} \in [2908{,}18; 34925{,}42]$ and $\boldsymbol{\beta_2} \in [0{,}05794; 0{,}06850]$.

Thus, for the most favourable case of the prognosis, we can take this estimation into account:

$$\hat{y}_i = 34925{,}42 + 0{,}06850 \times x_i \qquad (4)$$

For the most unfavorable case of the prognosis, the regression has the following form:

$$\hat{y}_i = 2908{,}18 + 0{,}05794 \times x_i \qquad (5)$$

If we take the number of students from the prognosis carried out in '*The study of the number of students from Romanian pre-university educational level*' in the three cases (moderate, pessimistic, optimistic) and taking into account the 3 models of the regression equation, that is **(2), (4)** and (**5**)**,** the systematization of calculations leads us to Table no. 5.

Table no. 5. Multi-decade prognosis of the number of teachers from Romanian pre-university education

	Number of students (x_i)			**Number of teachers (y_i)**								
				Moderate case Model (2)			***Optimistic case Model (4)***			***Pessimistic case Model (5)***		
Year	***2030***	***2040***	***2050***	***2030***	***2040***	***2050***	***2030***	***2040***	***2050***	***2030***	***2040***	***2050***
Moderate case	1625031	1039199	453367	121651	84615	47579	146240	106111	65981	97062	63119	29176
Optimistic case	1890283	1359229	828176	138420	104847	71274	164410	128033	91655	112431	81662	50893
Pessimistic case	1359779	719169	78558	104882	64383	23883	128070	84188	40307	81694	44577	7460

In the optimistic case of the number of students prognosis, using optimistic case (model 4), the most favorable of the teachers estimation, so in the most favorable cases, according to our study, the number of teachers would drop by 2030 to around 165.000, in 2040 to about 128.000 and in 2050 below the threshold of 100000, meaning around 92000.

If we take the moderate case (model 2) and the same optimistic attitude towards the evolution of the number of students, then the number of teachers will be of about 138000 by 2030, it will drop to 100000 by 2040 and it will get to 70000 by 2050. Also in the optimistic case for the number of students, the pessimistic case or the number of teachers prognosis offers us as results about 112000 by 2030, about 82000 by 2040 and 51000 of teachers by 2050.

3. Conclusions. Recommendations

We have demonstrated a clear dependency between the number of teachers and the number of students, which was naturally expected. After the cases from the current study, we asserted that the number of teachers from pre-university education dropped with 1.47$ every year, in absolute figures being in 2018 at the level of 172803 compared to 244640 teachers in 1995. In the moderate case of prognosis (model 2) and by taking the optimistic scenario for the evolution of students – association which we find relevant, the future estimations indicate, for 2030, 2040 and 2050 approximate levels of 138000, 100000, and 70000 of teachers. We keep in mind that the number of teachers decreases with about 30000 every decade.

A broader approach would be the one in which we would introduce in the model other relevant factors, like the birth rate, family emigration rate, early school abandonment rate. Of course, changes in the demographic trends would lead to an adjustment of the slope of the tendencies in the evolution of the number of students and teachers. Thus, obviously the solution would be one of policies, demographical ones at first, but also economic and social assistance ones. The people responsible must first of all acknowledge the tendencies, ascertain the catastrophical levels which could be reached in a couple of decades and generate policies that, once implemented, would stop the decrease, and would begin an ascending curve for the population number so, implicitly, for the number of students and teachers.

The number of teachers could be increased by introducing, taking the example of other countries, the teaching assistant who stands beside the tenured teacher during classes or reducing the ratio '*number of students per teacher*'. These measures could be adopted to increase the quality of education and they should be validated/ invalidated afterwards through the promotion rates of the national exams and through the results students gets to international tests, at which, unfortunately, we occupy very low positions.

If the policies meant to radically change the descendent demographical tendencies will not appear as soon as possible, the situation of teachers could be even worse than the moderate and optimistic cases presented in table no 5. Any delay of development in the case of such policies would just maintain the discouragement in the case of pre-university education graduates regarding a teaching career. In other words, we would witness an even bigger decrease of attractiveness for this profession. Obviously this would also mean a low level of absorption of the valuable graduates as teachers.

The vastest of the educational system, the complexity of the phenomena and of the relations between its entities, make us state that our study only takes a small part into account, having as objective that of identifying some current tendencies and to send an alarm signal. Obviously, the cases should take several other aspects into account, but disregarding the complexity of the studies, they have to be based on a country project and on a clear strategy for education. Out leading elite should just accept that such a basis was established in 2015 by the Romanian Academia in "*Romania's development strategy over the next 20 years*".

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THE BANKING AGENCY OF THE FUTURE

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Abstract: *For many banks, the closure of agencies has been, in recent years, a coordinated development strategy, because their objectives are to reduce costs and the number of clients visiting their branch. The increase in alternative payment methods and decline in cash use means that there is little need to visit the bank for transactions. But people still like to visit a banking agency, though less frequently than usual and for other purposes. In today's digital age, in addition to virtual experiences, people also want physical experiences, and visiting a branch may be more appropriate for some clients and for certain services. Clients tend to visit an agency to learn more about banking products and services, such as mortgage loans or more complex investment products, such as pension plans, because they want to receive financial advice. Although most clients start the journey online to find the financial products they need, many of these trips are concluded and completed at the traditional banking agency. Thus, for many banks, the traditional branch remains a crucial point in the relationship with clients, the place of manifestation of its brand/image and all that it represents. Although branch closures have been a major issue in recent years, many banks - including new ones - are opening branches, while others are turning branches into counselling agencies. If the bank branch has outlived its usefulness, why do some banks open new ones while others retain theirs, even transformed. Banks that dispense with their branch networks could be endangering their future.*

Keywords: *bank, banking agency, branch closures, digital economy.*
JEL Classification: *G21.*

1. Introduction

Traditionally, banks were accessed by clients directly, they had direct contact with the bank employee, face to face, through the territorial, physical network, formed by branches and, in particular, the numerous agencies, purely operational, of larger or smaller size which had widespread branches, up to neighbourhood or even neighbourhood street level.

But in recent years, banking systems are downsizing almost everywhere in the world, thousands of agencies are disappearing, especially small neighbourhood agencies.

From here, a legitimate first question. Why do banks resort to downsizing their network, why do they close branches that were once places where banks sold their products and made a profit? There are several causes to explore:

- are banking operations in regress, that is to say does the public no longer need banking products;

- maybe new companies have entered the market selling products similar to banks', but cheaper and more adapted to clients' needs of financial products;

- maybe a significant part of their clientele no longer feels it necessary to come to banking agencies, they are too busy, they have found alternatives to the traditional, physical bank counter, which are much more convenient for them;

- maybe banks want fewer customers in physical agencies, want to get rid of the expensive and rigid territorial network, when banking crises appear, and banking operations drop. So they created alternatives to the traditional counter, moved it to clients' living rooms or pockets.

A second legitimate question is regarding the future of the banking agency. Will the traditional banking agency disappear, in the sense that the on-going downsizing will continue, until the last physical banking agency in the near or distant future will close its doors? Or will the process stop somewhere at 50%, 33% of the banking network?

But if we look a little at the physiognomy, the architecture, the environment of the banking agency we will observe a terrible dynamism. Thirty years ago there were still high walls in the physical banking agency; the client had to stand on tiptoes to speak with the bank employee. But with the fall of the Berlin Wall, banks came to understand that they must demolish the walls between them and clients, invite them into comfortable armchairs, treat them to coffee, bring their TV program to the branch, so that clients no longer leave the agency and make use of so many banking products that they expend their entire salary there. Returning to the present let us remember that a short time ago I entered a bank that, although operational, had no bank employees, but a robot, sister of Alexia and Siri, following me since entering, answering any questions with competence, kindness, and helping solve any difficulties accessing banking services through the many devices in the bank. Thus another question, if the bank will remain and not be shut down, what will the new banking agency of the future look like? Will it be informational, a gadget or, somehow, SOMETHING ELSE.

2. Downsizing of the banking network and staff

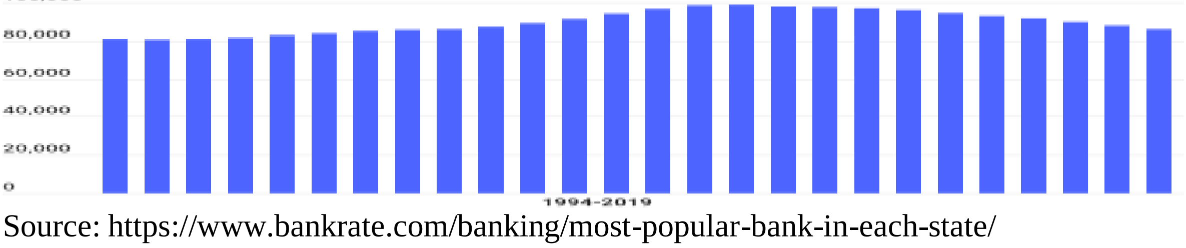
Traditionally, the distribution of banking products to clients was carried out through a network of physical offices (branches and agencies) and their staff, who were increasingly transforming from bank employees, initially, with precise tasks, into financial consultants and, later, sales agents. Interestingly, although ATMs appeared on the market, presented in the literature, but also by the practitioners in the field, as truly automatic bank employees, the network of agencies continued to grow until the financial crisis of 2007-2008.

Starting in 2007 (Garcia, 2019), the beginning year of the last financial crisis, we witness a strong downsizing of the banking network, a process observed both in the US, where the downsizing amounts to about 15% (figure no. 1), but even more prominently in Europe, exceeding 25% at European Union level (figure no. 3). Naturally, the process is accompanied by a reduction in banking staff. Thus, if in the US the reduction process after the crisis, seems to have stabilized in recent years, at pre-crisis values, at somewhere around 1.93 million employees (figure no. 2), in the European Union the reduction in banking staff continues, from about 3.1 million, to less than 2.7 million employees (figure no. 4).

In addition, the process appears to be global or at least supranational, the best example being in European countries (EBF, 2020), where all states are downsizing the banking network and 20 out of 28 countries are registering reductions in banking staff (ERCB), 2019), and the remaining 8, either stability or growth, but starting from a low staff base (Table no. 1). The same process, of equal magnitude, is registered in Romania (Table no. 2), where the banking network downsized by a third in 10 years, and the staff, by a quarter.

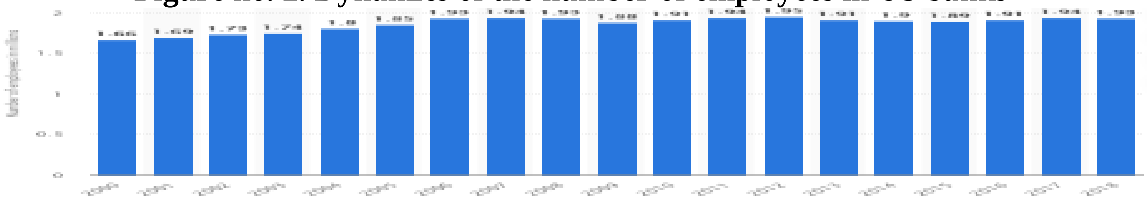
Therefore, why is the banking network downsizing and banks' sales force dropping and why is the triggering factor the financial crisis.

Figure no. 1. Dynamics of the number of branches and agencies in the USA



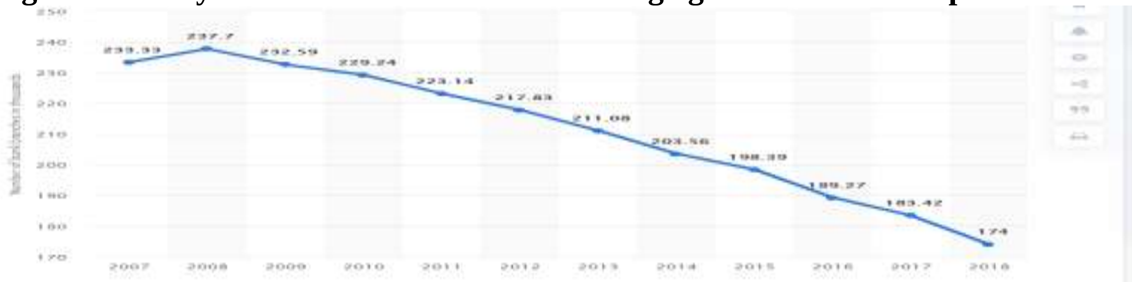
Source: https://www.bankrate.com/banking/most-popular-bank-in-each-state/

Figure no. 2. Dynamics of the number of employees in US banks



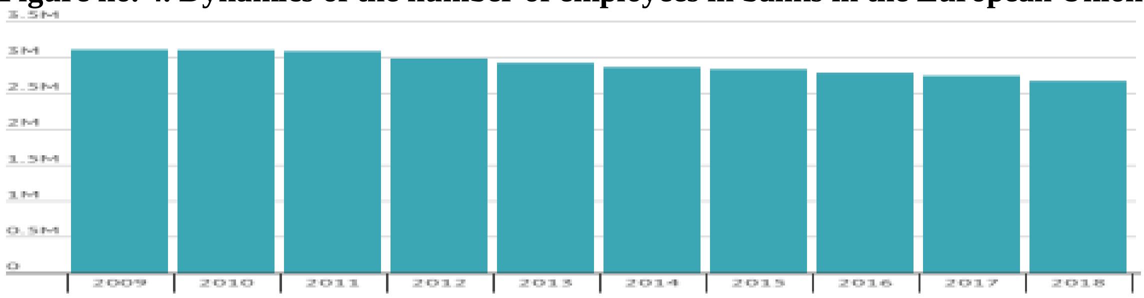
Source: https://www.statista.com/

Figure no. 3. Dynamics of the number of banking agencies in the European Union



Source: https://www.statista.com/

Figure no. 4. Dynamics of the number of employees in banks in the European Union



Source: https://www.ebf.eu/

I consider that the restructuring of the banking network can be explained through, in 2007, banks' need for profit against a backdrop of fewer operations caused by the crisis. Faced with serious management problems, with significant losses generated by investments in securities and loans, which turned into nonperforming assets, but also with a reduced demand for banking products, banks began to downsize the network and, consequently, the personnel, particularly among those with negative or low returns. The problem is that after the crisis, bank management noticed that this reduction had no major consequences on the bank's operations and profits, returning to acceptable levels, quite quickly. And, in my opinion, they realized something else. That they could shut down many critical profit agencies and branches, because clients were no longer the same. Many accessed banks from their computers or phones.

Table no. 1. Dynamics and number of employees in EU banks

	Number of local units (branches)					Number of employees of domestic credit institutions				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Belgium	3,607	3,508	3,347	3,195	2,983	56,666	55,774	54,657	53,059	51,740
Bulgaria	3,720	3,684	2,936	3,060	3,142	31,715	30,657	30,352	30,070	29,991
Czech Republic	2,144	2,095	1,977	1,868	1,868	38,791	38,835	39,654	39,990	40,244
Denmark	1,186	1,113	995	1,007	958	37,201	40,748	41,123	42,240	41,737
Germany	35,284	34,001	31,974	30,072	27,887	649,900	637,338	619,621	597,319	564,935
Estonia	122	107	99	95	91	4,860	4,979	4,924	4,920	5,317
Ireland	994	1,029	1,048	916	891	28,871	27,091	26,811	26,891	27,940
Greece	2,688	2,547	2,331	2,168	1,978	45,654	46,095	42,647	41,707	39,382
Croatia	1,194	1,175	1,142	1,112	1,035	21,190	20,914	20,607	20,434	20,028
Spain	31,999	31,087	28,807	27,480	26,166	201,656	196,556	186,982	183,053	179,055
France	37,623	37,567	37,261	37,209	36,519	408,726	406,701	410,925	409,925	408,941
Italy	30,723	30,258	29,039	27,374	25,454	299,684	298,473	295,305	281,928	274,056
Cyprus	615	563	544	460	386	10,956	10,983	10,663	10,632	8,946
Latvia	319	276	261	249	218	9,374	9,401	8,803	8,492	7,345
Lithuania	610	558	506	480	406	8,952	8,434	8,643	8,922	9,165
Luxembourg	221	213	230	217	210	25,972	25,945	26,062	26,149	26,317
Hungary	3,112	2,812	2,691	2,418	2,235	39,456	38,205	38,751	38,885	39,434
Malta	110	109	105	102	97	4,426	4,584	4,747	4,924	5,044
Netherlands	1,854	1,764	1,674	1,619	1,489	94,000	90,137	82,836	75,215	72,199
Austria	4,247	4,094	3,934	3,765	3,631	74,110	73,315	72,957	71,927	71,798
Poland	14,117	14,307	13,647	13,855	12,645	175,972	175,151	173,043	168,800	166,011
Portugal	5,938	5,453	5,323	5,001	4,169	53,888	50,687	51,062	50,358	50,819
Romania	5,304	4,947	4,798	4,596	4,382	57,732	55,928	55,396	55,044	53,737
Slovenia	592	589	583	560	532	10,682	10,444	10,055	9,844	9,683
Slovakia	1,277	1,291	1,293	1,233	1,174	18,656	18,900	19,788	18,879	19,539
Finland	1,188	1,051	1,039	970	858	22,019	21,806	21,965	20,999	20,796
Sweden	2,027	1,718	1,734	1,978	1,453	54,644	54,319	55,260	70,877	52,255
United Kingdom	10,760	-	-	-	-	401,256	398,606	387,571	367,044	370,083
Euro area	159,401	156,065	149,398	143,165	135,139	2,020,100	1,997,643	1,959,453	1,905,143	1,853,017
EU	203,575	-	-	-	-	2,887,009	2,851,006	2,801,210	2,738,527	2,666,537

Source: https://www.ecb.europa.eu/pub/pdf/annex/ecb~10913d25c1.pr190604_ssi_table.pdf

Table no. 2. Dynamics and number of employees in banks in Romania

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Banks	3.387	3.031	3.533	4.470	6.340	7.375	6.425	6.170	6.046	5.723	5.492	5.304	4.947	4.798	4.596	4.382
Employees – thousand people	466	497	525	585	660	716	679	668	658	618	586	577	559	554	550	537

Source: https://www.bnr.ro

A report entitled *The future of the bank branch is in trouble - here's why* (Heggestuen, 2015), which analyzes trends in the banking industry, believes that the traditional, banks' physical branch/agency seems to be outdated. It has not died yet, but the end seems to be approaching, because the improvement of online channels, in parallel with the decrease of visits to the branch and the increase in the cost of transactions carried out in branches lead to frequent branch closures (Cazan, 2016).

The factors that determine the downsizing of the banking network are the reduction in operating costs, mergers that take place within the banking industry, the competition between banks and the increase in alternative means of accessing banking services. It is also noticeable that the closure of traditional branches is more widespread in poorer areas, especially rural, where the economic value of transactions is low, but where the impact on non-mobile customers is much higher.

However, the closure of branches also leads to a decrease in the number of ATMs, as many are located in the perimeter around the closed banking agencies, although in some cases the decrease in the number of ATMs is justified by the reduction in cash withdrawals.

3. The importance of the traditional banking agency

Although closing branches is a business decision that can make sense for several reasons, banks should not give up on branches altogether.

Srinivas, Wadhwani, 2019, consider that the traditional counter remains important because it generates greater satisfaction for clients compared to services through digital channels. They consider that due to the typical complexity and/or urgency of these operations, account opening and problem solving are two critical operations that customers are likely to perform through channels that involve human contact - usually branches and call agencies. Also, the banking clientele considers the physical branch and call agencies indispensable for complaints.

At the same time, clients can experience high satisfaction if a question at the agency has been dealt with effectively or if they have had a successful meeting with the branch manager, which exceeds any satisfaction paying bills online or through a mobile application.

Another impact of the traditional branch is that they are a symbol of trust. And, given that the issue of money is complex and personal, trust is important when it comes to deposit operations and attracting public savings, the traditional branch is still considered the typical location for opening bank deposits.

It must not be omitted that a physical agency is synonymous with brand image and helps maintain customer relationships.

Finally, another advantage for the physical network of bank counters is that they also offer easy and universal access to all banking services and products. Therefore, there are still bank clients who appreciate the proximity of branches and ATMs and consider it a determinant in choosing their bank. Moreover, over 4 out of 10 respondents visit a branch at least once a month.

Digital banking simplifies the banking experience in branches, so many customers may not understand much of the banking activity performed in a traditional branch, may consider it too complex, too bureaucratic, which is why banks should continue to focus on training workforce from banking agencies, to ensure high quality interactions with clients and to create positive interactions that remain in clients' minds. A 2017 study on account opening highlighted the need for "attentive and empathetic human interaction by senior staff during the account opening process."

One third of bank clients seem to appreciate the mix of human intervention and technology and would be open to using branches more if banks offered some digital services in agencies to provide them with greater comfort. The same study mentioned among the digital services that would appreciate, were they to be found in branches: extending service hours through virtual remote services with a representative, offering digital self-service screens with the help of a representative, and the possibility to program a virtual video meeting with a bank employee. Interestingly, all of these options focus on how the digital can lead to strong remote interactions with a bank representative. Note that although these approaches are not new, they are not yet widespread, although more banks are beginning to experiment in this area.

HSBC, for example, has introduced a robot - Pepper - to its Fifth Avenue subsidiary in Manhattan, which is scheduled to answer basic customer questions and direct them to the appropriate advisor/staff in the branch, just as Romanian banks have begun to include robots with exotic names in their call agency services: Ana, Sofia, etc. The idea is that these robots do not replace human labour, but have been designed to make the banking experience more attractive and for an optimal rational allocation of services.

In many cases the banking agency is and will be the final destination for a client's journey that began online or on the mobile phone (Proctor, 2019). Thus, the banking agency ensures the connection between the physical client and the client's physical and digital financing and the digital financial world, as it is those banks that offer an integrated, personalized experience that are considered successful.

The banking agency has special relevance for elderly population, who are less technologically sophisticated. This has been one of the factors keeping traditional branches and their sales potential alive, albeit at lower levels, because the financial needs of this demographic are declining, while the new generations, familiar with new technologies, by relying on digital banking services reduce the sales volume of branches.

Banking agencies are still important because they allow for the testing of new ideas for banking products and services, new devices. The traditional bank branch was almost invariably identical, counters for cash transactions (national currency or otherwise), counters for advising individuals and counters for companies, colour and furniture made the difference. Today the counters for cash operations are gone, they have been replaced by more or less separate areas where ATMs are installed, automatic counters, computers, telephones with direct connection to the bank's call agency, from where payments, cash deposits, cash-outs, etc. are performed, and the area of the traditional branch has shrunk, being populated with customer advisory offices, more or less depending on the size of the agency. Thus, the new branch tests the functionality of new devices, but also the optimal combination of devices and banking staff. It can be said that the new bank branch has the role of testing the withdrawal of staffed bank branches, while others are locations with staff that test the attractiveness of certain segments of customers or banking products.

A quarter of banks have plans to expand their physical branches, and the most ambitious seem to be medium-sized and small banks, while large banks are considering reducing their territorial branch network (Stephans, 2018). Thus, many banks still believe that branches are the best way to attract and retain customers. Small and medium banks realize that before you can digitize your clientele, you must first have it, and its training is also done through the traditional banking agency with walls and mortar. The fact that large banks are not only planning to close branches, but also to set up new ones is a strong signal that today's customer is still attracted to digital banking alternatives, but many still want to be advised by banking staff and even take into account their advice. More specifically, in order to remain relevant, banks should not only open branches, but should reinvent their traditional branch, invest in new strategies and adopt innovative technologies to make conversation a top priority.

4. Design of new banking agencies

The current model of a traditional agency, in existence for about 15-30 years, had efficiency as its objective, the emphasis being placed on transactions. In the last 2-3 decades the working area a traditional banking agency had allocated for transactions was about 70% of its surface, where there were cashiers or bank officials with computers and whose mission was to carry out transactions at the request of clients, and the remaining 30% of the working surface was reserved for self-service, with devices through which the client could also perform the desired operations.

The banking agency of the future redesigns this space and, in some cases, decreases and simplifies it significantly. From the entrance, the bank client is greeted by equipment and devices serving the role of universal bank employee, through which they can access the services that meet their financial needs. This space is open to customers permanently, 24 hours a day, 7 days a week. The bank staff in new branches is reduced to a minimum and in some of them is non-existent, and the role is to advise and help them access the services they need.

To compete with non-traditional banking service providers, branches need to become smaller, more automated and offer a variety of technologies. Banks must harness the power of digital technologies to provide new branch services, reduce branch management costs, branch integration, remote assistance, while ensuring that the branch retains the brand's image.

The typology of the new branch is different, being defined by its clientele. Thus, a bank could opt for a smaller city, without employers, for a agency equipped exclusively with equipment, but with telephone communication channels with advisors located in other locations or in the case of senior retirement communities, the new branch should be positioned in a mall and should definitely have one or two employees for customer advice or, in the case of a heavily populated suburb, the bank branch should be closer to the banking agency, but with new equipment, where those in a hurry can access the banking services they need, but also staff to advise in choosing the right product. In the latter case, the banking staff will have at their disposal for consulting private meeting rooms and waiting areas customized based on the brand of the bank and means of information on banking products.

In branches with large transaction volumes, it is necessary to use multifunctional banking machines, where bank clients can self-serve, which can improve customer experience and reduce transaction costs, especially since they are already accustomed to self-service experiences through retailers, airlines, etc. The use of these self-service multifunctional banking machines allows bank employees to be more proactive towards their clients, and their arrangement in separate rooms, separated from each other, allows for remote assistance but also confidentiality of conversations.

It should also be noted that multifunctional ATMs, which also allow cash deposits, make it easier to manage cash, and cash recycling at device level is also a measure to reduce operational costs of the new branch.

As the equipment in a new branch becomes more sophisticated, it becomes the best place to use or test these new technologies.

Additionally, the use of multifunctional bank machines with self-service in the branch frees up time for bank employees to advise clients and focus on activities that generate higher incomes.

But the restructuring of traditional branches' activity is driven by mobile devices (smartphone, tablets, etc.) that have an impact on the so-called "open space" in new branches through their transformation into "universal bank employees".

Unlike traditional counters, with cashiers and account advisers dedicated to different operations, mobile devices turn into "super" bankers, entrusted to handle a multitude of banking activities, all through one device. Mobile devices can be used inside and outside the new branch. Outside of the bank, mobile devices allow a client to directly access the bank, their accounts, connecting directly and at the same time to the bank and the trader or service provider's server, facilitates bank-client-merchant collaboration and customer involvement. Inside, mobile devices can be used to greet the customer, to direct traffic, as well as to assist in carrying out transactions and replacing multifunctional banking machines.

The Internet of Things (IoT) can also be brought up here, it offers a multitude of options and benefits when integrated into the bank branch of the future. IoT can recognize a customer's smartphone and track its movement within the branch to provide key information about customer behaviour and patterns.

Additionally, IoT offers the possibility to deliver personalized messages and experiences through smartphones, multifunctional banking machines and digital signature.

Biometric elements visualized via IoT can be used through tablets or multifunctional banking machines to authenticate customers.

5. Conclusions

Almost everywhere in the world, banking systems are shrinking, with thousands of agencies disappearing, especially in small neighbourhoods. Thus, a legitimate first question, will the banking agency disappear or, if it remains, what will it look like.

The restructuring of the banking network was caused, in 2007, by banks' need for profit against a backdrop of fewer operations caused by the crisis. After the crisis, bank management noted that the aforementioned reduction had no major impact on bank operations and profits, these returned to acceptable levels, quite quickly. Finally, the process continued and bank executives realized that they could dispense with a lot of critical profit agencies and branches, because clients were no longer the same, many accessing banks from their computer or phone.

But the traditional bank counter will remain because it is important, as generates greater overall satisfaction than digital channels, clients experience higher satisfaction in the physical environment, when they have someone next to them, who gives them advice, gives them more information or attention, compared to the virtual environment, silent, unclear whether a choice was correct or not. Additionally, the traditional counter will also remain because it is a symbol of trust (worth remembering savings, where trust is key), because it helps maintain customer relations and, last but not least, because the physical network of bank branches offers easy and universal access to all banking services and products.

The banking agency of the future is rebuilding the physical space it occupies. It significantly reduces and simplifies the environment. On entering, the bank client is greeted by equipment and devices serving as universal bank employees, through which they can access the services that meet their financial needs. Banking staff in new branches is reduced to a minimum, and in some is non-existent, and their role is to advise and help in providing the services they need. The typology of the new branch is different, being defined by its clientele, traditional for baby boomers, technologically advanced for generations Y and Z. In agencies with large transaction volumes, it becomes necessary to use multifunctional banking machines, where clients can self-serve, which can improve customer experience and reduce transaction costs. The Internet of Things (IoT) also offers a multitude of options and benefits when integrated into the banking agency of the future. IoT can recognize a customer's smartphone and track their movement within to provide key information about their behaviour and patterns.

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TURKEY'S PERSPECTIVE ON THE FLOW OF MEDITERRANEAN GAS

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Abstract: *Regardless of whether it is possible to implement the EastMed project eventually under current conditions, in the foreseeable future a new outstanding actor is expected to appear either way in the international gas arena. Accordingly it's hard to imagine that this technologically advanced country would miss the opportunity of becoming an exporter. Moreover this situation promises the country not only financial benefits but also geopolitical advantages in a pretty disturbed region. "Bets" were placed on "traditional" pipeline gas but not on LNG. Consequently the EU market is the most obvious option for precise orientation. Moreover this option is supported politically and financially by the Union itself which is also encouraged by the US known as the most important ally of Israel. On the other hand Greece playing an important role currently in the EastMed project highly needs foreign investments and new workplaces particularly in industrial sectors for European loans to the country. Several developed countries including the founding members of the EU were interested in economic prosperity of this member of Eurozone. In this sense they have been saving Greece from bankruptcy for a long time and the country has been overcoming the decade-long economic crisis with great difficulty.*

Keywords: *natural gas, pipeline, supplies, economic development.*
JEL Classification*: L13, L95, Q42, Q48.*

1. Introduction

The East Mediterranean region has attracted the world's interest due to hydrocarbon reserves especially discovered by the end of the 2000s. Within this framework as a result of exploration works of the giant international energy companies, several natural gas fields with different sizes were found in the Mediterranean Sea around Israel, the Greek Cypriot Administration, Egypt, Lebanon and Palestine. Tamar, Leviathan, Aphrodite and Zohr fields were among the most outstanding and contentious reserves. While these reserves enhance current energy potential of the region, they also give the surrounding countries having high energy demand new opportunities in terms of supply. Accordingly countries, particularly the EU members, which have high energy demand and insufficient sources began to put these reserves on the agenda to diversify supply routes and to strengthen energy security. In this sense different projects were in question for exportation of the region's gas sources. The EastMed project and Turkish route are prominent options among them. The EastMed project is supported by the EU however Turkey is excluded at the moment. While Israel is one of the key countries of the EastMed, it considers Turkey as strategic partner and possible transit country for delivery of the Leviathan gas to the EU if realization of the EastMed becomes difficult. That's why Israel approaches more carefully and cautiously to Turkey's Libya move by which Turkey disrupted the project. On the other hand Turkey is considered as the optimum option by many decision makers by dint of its major completed projects including TANAP, existing infrastructure, and obviously geographic location. A project in the region where Turkey is included has potential to create a "win-win" situation for both suppliers and consumers. Turkey plans to be one step closer to the objective of being a regional hub by playing an active role in transportation of the East Mediterranean gas to the West.

2. Development degree

Several studies of experts and scientists from Turkey and other countries were used widely during preparation of the article. In this sense works of G.K. Shrikov about globalization of the world economy, V.A. Melyantsev about the world economy, V.A. Yashkin on economic mechanisms, V.A. Isaev about problems in energy markets, A.I. Dinkevich and L.A. Friedman on economic development of the CIS countries, A.V. Akimov about problems in oil and gas economy of the Caspian states, N.G. Kireev, L.H. Matyunina, G.I. Starchenkov, N.Y. Ulchenko and E.I. Urazova on Turkish economy and its economic relations with the Caspian states were utilized. In addition studies of Turkish experts and scientists including the works of Cenk Pala, Alaeddin Alcinkaya, Aydin Aydin and A. Necdet Pamir were also used.

3. Aim of research

The aim of this article is analysing the logic and arguments of decision making in complicated geopolitical and geoeconomic conditions on major international natural gas pipeline projects in the region.

Research methods

Historical and comparison methods, diagnostic tools, forecasting, calculations, inductions and deductions were used within the scope of research methods.

4. Results and analysis

Iran has the second largest proven gas sources of the world. In this context while the country's reserves were 31,9 tcm in 2018 (BP, 2019), 17% of global sources were located within the boundaries of Iran. However delivery of Iranian gas to the EU through Turkey or any other route seems difficult due to current political conditions including ongoing sanctions and poor infrastructure.

Iraq is another country attracting attention of the EU in terms of natural gas supply. In this sense proven gas sources of overall Iraq was 3.6 tcm in 2018 (BP, 2019), while between 3-6 tcm of gas were estimated to be on intersection point of borders of Iran, Turkey and the Kurdistan Regional Government on Northern Iraq (KRG).

But due to current political conditions, security concerns, unsufficient technology and infrastructure and absence of a "concrete" gas pipeline, transportation of Iraqi gas to the EU through Turkey or other routes seems impossible in the short term.

Apart from Iran and Iraq, which are geographically close to Turkey and the EU, Qatar, UAE and Saudi Arabia come into prominence in terms of rich gas sources comparing to the other states in the Middle East. Within this framework Qatar had 24.7 trillion m3 of natural gas in 2018 ranking 3rd in the world, while both UAE and Saudi Arabia held 5.9 tcm (Can, 2019). In addition to this, Qatar was the only country exporting gas to Europe among these countries. In this sense Qatar exported 19.5 bcm to the EU in 2018 as LNG while Turkey imported 3.1 bcm from Qatar (BP, 2019). Accordingly Qatar's inclusion to the SGC through Turkey by a pipeline considering its existing strong LNG infrastructure is unlikely to happen. On the other hand both UAE and Saudi Arabia are neighbouring states, however they don't have gas exportations to the Union. Their reserves are also smaller to a certain extent comparing with current suppliers of the EU and Turkey which pretty dominate in the region at the moment. From this point of view UAE and Saudi Arabia may not be included to the SGC at this point. However within the frame of the SGC there may be several routes to include these states in the SGC. Within the frame of the SGC there are two possible options for delivering gas. One of them is already running TANAP and other is the planned EastMed Project. Accordingly if both Saudi Arabia and UAE desire to be included in the SGC through TANAP, the proper route may be the connection of these countries at initial stage and linking them to Turkey via Iraq or Iran. However this option can be costly and troubled at the moment due to poor infrastructure and ongoing sanctions in Iran and political problems in Iraq.

Other option would be connection of these countries through the Arab Gas Pipeline (AGP) to Turkey. The AGP was planned to reach Syria and Turkey, however construction activities in both countries were suspended due to political issues. Accordingly Turkey was excluded in this sense. Since the AGP runs without Turkey and Syria, UAE and Saudi Arabia may be linked with Jordan and Israel then with the planned EastMed Pipeline that can be another option. Although construction agreement of the EastMed project has been signed recently and target date has been set as 2025, concrete steps in this direction haven't been taken yet. That's why realization of this route seems difficult in a close future. Moreover it's necessary to remind that the EU welcomes additional suppliers within the frame of the SGC including the countries of Middle East. That's why it's possible to say that much more countries would be evaluated in future.

The East Mediterranean Region. With the emergence of scientific predictions about existence of rich gas sources in the east of the Mediterranean Sea particularly in the early 2000s, the region has attracted interests of not only littoral states but also international companies and global powers. In this sense, the year of 2009 can be considered as a milestone, when the first large reserve in the region was discovered in the Taman field located in Israel's Exclusive Economic Zone (EEZ). Approximate gas source was predicted to be 280 bcm in the field (Figure 1).

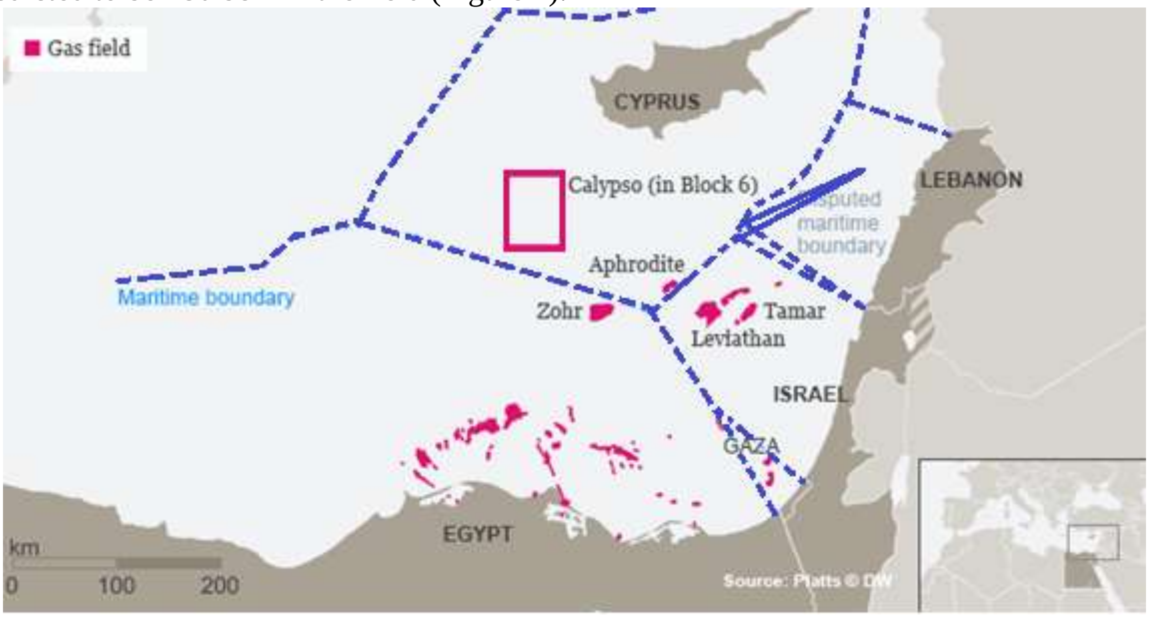

Figure 1. Overview of gas assests in the East Mediterranean Region

Sources: Schulte, S. and Weiser, F., 2017. Natural Gas Transits and Market Power-The Case of Turkey. *EWI Working Paper No 17/06*, Institute of Energy Economics at the University of Cologne (EWI), August 2017, p. 5. [pdf] Available at: <https ://www. ewi.uni-koeln .de/ cms/ wp-content/uploads /2017 /08/ EWI _WP_17-06 _ Natural _Gas _Transits_and_Market_Power.pdf> [Accessed 2 March 2020].

The following year Israel discovered a larger reserve in the Leviathan field. There was about 622 bcm of gas, of which extractable amount could meet Israel's domestic demand for 40 years alone. However Lebanon claimed that part of Taman and Leviathan fields were located in its maritime jurisdiction. An exploration work in the Aphrodite field of Cyprus in 2011 caused Turkey's objections. Turkey didn't recognize the agreement on the maritime border delimitation signed by the Greek Cypriot Administration with Israel, Egypt and Lebanon, claiming that the agreement ignored the area of juristiction of the Turkish Republic of Northern Cyprus (TRNC). The first reserve discovered in Aphrodite field was predicted to contain 129 bcm. The largest ever reserve of the East Meditarranean region was discovered in the Zhor field of Egypt in 2015 by ENI, an Italian energy company. Gas source was predicted to be 849 bcm. It was aimed to extract 30 bcm annually and ongoing production started firstly in August 2019. Apart from that another source was explored in the Nour field of Egypt by ENI in 2018 as well, of which estimations haven't been officially stated due to ongoing feasibilty studies. Then ENI stated about another gas source in 2018 in the Calypso field of Cyprus. Although feasibility studies continue, the field is estimated to hold gas from 169 bcm to 226 billion m^3. Finally the biggest reserve of Cyprus was discovered in the Glaucus-1 field in 2019. According to initial determinations the field was likely to hold gas between 142 bcm and 227 bcm (Can, 2019). In this sense Turkey owning the longest coastline of the Mediterranean Sea is expected to maintain exploration activities in 2020 in the region as well. It's worthy to note that especially after ENI's foundings, the region has attacted interest ıf the giant international energy companies. In this sense companies such as Total (France), ExxonMobil (the U.S.), Korean Gas Corporation (KoGas), BP (The U.K.), Qatar Petroleum (Qatar), Mubadala Petrolum (U.A.E.), Rosneft (Russia), Noble Energy and Derek Drilling (Israel) and Dolphin Energy (Egypt) have been actively operating in the fields since then. So far approximately 2.2 tcm of gas have been discovered. However according to estimations of the U.S. Geological Survey overall region contained approximately 9.9 tcm that was equal to 700 billion USD, of which 6.3 tcm were held by the Nile Delta Basin in Lower Egypt while 3.6 tcm were located in the Levantine Basin.

All these developments including ongoing activites have changed the region's security environment and geopolitics in terms of transportation of the gas to be extracted. As a result of this new actors and mechanisms have joined in the East Meditarranean's "energy game" and new "forced" cooperations have become obligatory.

In this context Cyprus, Egypt and Israel seem to become new natural gas exporters however Egypt and Israel can become a rival to Turkey in terms of being regional gas hub.

As is known to all Egypt with the second longest coastline after Turkey became one of key players in the region in 2003 when it signed an agreement on EEZ with the South Cyprus. Accordingly Turkey started to develop its relations with Egypt. In this context signing an agreement on EEZ was determined as a matter of priority in foreign policy of Turkey. However diplomatic and military relations have been suspended when Egypt's current president Sisi took over the management.

It's worthy to note here that Turkey is a transit country especially in terms of natural gas. When considered from this point of view market structure of the country can be identified through the Stylized Theoretical Model (Figure 2).

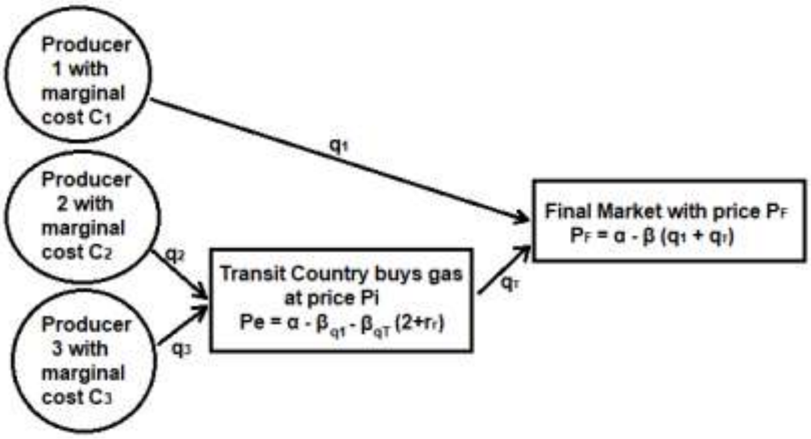

Figure 2. Stylized Theoretical Model

Source: Schulte, S. and Weiser, F., 2017. Natural Gas Transits and Market Power-The Case of Turkey. *EWI Working Paper No 17/06*, Institute of Energy Economics at the University of Cologne (EWI), August 2017. [pdf] Available at: <https://www.ewi.uni-koeln.de/cms/wp-content/uploads/2017/08/EWI_WP_17-06_Natural_Gas_Transits_and_Market_Power.pdf> [Accessed 2 March 2020].

The final market has a price $P_{F.}$

Producer 1 can sell volumes q_1, producer 2 can sell volumes q_2, producer 3 can sell volumes $q_{3,}$ to the transit country that then resells the volumes $q_T = q_2 + q_3$ to the final market.

Again, regarding to gas reforms in Egypt, a new Law on Regulation of Gas Markets entered into force in 2018. An important step to become a hub has been taken by authorizing direct gas importation to private sector by the mentioned Law. Then an agrement priced at 15 billion USD was made with Israel. Hereunder Israel annually will sell 7 bcm for 10 years. Part of gas to be supplied from Israel will be used in domestic market and rest of it will be re-exported as LNG.

It's necessary to remind here that Egypt has been importing gas since 2012. Recently-discovered sources in the Zohr field and an annual production capacity of 30 bcm gave chance to the country to be an international player. In addition two LNG terminals of the country with an annual capacity of 19 billion m^3 have been reactivated. Turkey had similar process with Israel. Close relations shaped by the Operation Reliant Mermaid had continued until the Gaza flotilla raid in 2010. Turkey was considered both as a market for gas to be extracted from Tamar and Leviathan fields and access point for the EU market. However suspension of both bilateral and political relations complicated this option. Although bilateral relations have normalized to a certain extent in 2016 when the parties signed a reconciliation agreement, Israel turned its face to Egypt. On the other hand Israel will have an annual capacity of 40 bcm when Tamar and Leviathan fields start production in full capacity (World Bank, 2019). By increasing domestic demand, bridge position between Asia and Africa, ready LNG infrastructure and export opportunity to other Arabian countries through the 1.200-km-long AGP (The Arab Gas Pipeline is a natural gas pipeline in the Middle East. It originates near Arish in the Sinai Peninsula and was built to export Egyptian natural gas to Jordan, Syria, and Lebanon, with branch underwater and overland pipelines to and from Israel) has turned Egypt a good partner for Israel. Contrary to Egypt and Israel, reserves discovered in the fields which were announced a tender by the South Cyprus fell short of the mark. At this point it seems impossible to build LNG terminals in Cyprus without discovering additional sources. If sufficient amount isn't discovered, the optimum route excluding Turkey can be transportation of current reserves to Egyptian LNG terminals in market conditions.

Factors such as problems between Turkey, Israel and Egypt, the Greek Cypriot State's unilateral declaration of 13 parcels in the region, the ongoing Cyprus dispute, extracting of discovered reserves and their marketing have forced countries for cooperation, which have opened a road for new coalitions and cooperation fields that Turkey has been excluded. Within this framework triple coalition period started between Greece, the Greek Cypriot State and Israel, supported diplomatically by the U.S. and the EU, which included subjects such as cooperation in the fields of military and energy security, construction of EastMed Natural Gas Pipeline and transportation of Israeli and Cypriot natural gas to the EU.

As a mechanism of regional cooperation the East Mediterranean Gas Forum was established on 14 January 2019 in Cairo with the participation of Israel, Italy, the Palestinian National Authority, the Greek Cypriot state, Jordan, Egypt and Greece which are also the founding members. In January 2020, the U.S. and France asked to join the Forum as a permanent member and observer respectively. Turkey, TRNC, Syria and Lebanon were left out. Founding purposes of the Forum are ensuring coordination between member countries in optimal use of East Mediterranean reserves as well as current sources and establishment of a regional gas market serving to purpose of member countries [4]. On the other hand energy giants Total, ENI, Novatek and Exxon signed exploration and production agreements with member governments in 2019.

Generally, it's possible to state that the region may be an alternative supply source for the EU in the future to lessen dependence on Russia given recently-discovered reserves and support of the Union for triple coalition of the countries in the region.

Within this framework the Eastern Mediterranean Pipeline (EastMed) Project was designated under the Regulation of the European Comission as a Project of Common Interest in 2015 during the 2015-2018 period and the Comission contributed more than 34 million to complete environmental, technical and economic studies for the project. In the same year it was granted an award of 2 million through the Connecting Europe Facility (CEF) Programme. The project was also included in the Union's Ten Years Development Plan in line with the objective of ENTSO-G. On the other hand Greek Cypriot state, Greece and Israel signed an international agreement for the EastMed pipeline on 20 March 2019. The agreement was also supported by the U.S. by virtue of the EU's ongoing diversification policies. And on 2 January 2020 the parties also signed another agreement on the EastMed's construction.

The EastMed is a designed pipeline connecting the East Mediterranean gas sources to Greece via Cyprus and Crete (Figure 3). Total lenght of the pipeline was planned to be 1.900 kilometres and its total capacity was thought annually as 10 billion m3 at the initial stage, which could be increased to 15 billion m3 and to 20 billion m3 at final stage. Total expenditures of the project were predicted to be minimum 10 billion EUR. The project was planned to be completed in 2025.

Figure 3. Route of the EastMed Project

Source: Schulte, S. and Weiser, F., 2017. Natural Gas Transits and Market Power-The Case of Turkey. *EWI Working Paper No 17/06*, Institute of Energy Economics at the University of Cologne (EWI), August 2017. [pdf] Available at: <https ://www. ewi.uni-koeln .de/ cms/ wp-content/uploads /2017 /08/ EWI _WP_17-06 _ Natural _Gas _Transits_and_Market_Power.pdf> [Accessed 2 March 2020].

However the project is controversial due to its high costs and geological issues along with geopolitical dimensions that are mostly related with Turkey owning the largest coastline of the Meditterranean Sea. First of all as already stated total lenght of the project was designed to be 1.900 kilometres of which 1.300 kilometres were planned to be off-shore and the basic starting point of the project was to transport Israeli natural gas to Europe without Turkey and using Turkish territorial waters (IGI Poseidon, 2020). To do so, submarine part of the pipeline should be constructed in high seas and deep water. On one hand this situation approximately triples cost of the project, on the other hand there are some serious geological challenges in the seabed between Crete and Greece. Accordingly the longest and deepest pipeline of the world has been facing with technical and economical difficulties and energy companies haven't been taken concrete steps for this project and the project hasn't been supported financially yet (Aksan, 2020). It's necessary to note that according to some experts financial support from the EU wasn't expected due to its investments in eco-friendly energy sources desisting from hydrocarbon use. That's why the project can be realized with the support of private capital which seems difficult under current circumstances. However as it is understood from figures and expert interpretations, even if the project was financed by some actors, expectations wouldn't be an economic profit. However due to Turkey's decisive and solid stance for protection of the foster-land Northern Cyprus's and its own rights, political benefits of actors are unclear at the moment. Accordingly all these factors seem to be serious obstacles for project's realization in a close future.

There is another issue effecting the project. Turkey signed an agreement with Libya's internationally recognized government on maritime boundaries in the Mediterranean Sea in November 2019 which is very critical in geopolitical and geostrategical terms (Figure 4). In this way Turkey disrupted the project by blocking it under favour of this agreement. Because the EastMed was planned to cross from the EEZ where was created with the agreement by Turkey and Libya.

Figure 4. Shared Maritime Zone of Turkey and Libya within the frame of the agreement

Source: Schulte, S. and Weiser, F., 2017. Natural Gas Transits and Market Power-The Case of Turkey. *EWI Working Paper No 17/06*, Institute of Energy Economics at the University of Cologne (EWI), August 2017. [pdf] Available at: <https ://www. ewi.uni-koeln .de/ cms/ wp-content/uploads /2017 /08/ EWI _WP_17-06 _ Natural _Gas _Transits_and_Market_Power.pdf> [Accessed 2 March 2020].

According to experts Turkey gave a message that it couldn't be ignored in the region and it wouldn't give access permission to the waters considered by the EU as its continental shelf by this agreement and Turkey which was a transit country and net energy importer didn't want hands of energy exporting countries such as Egypt and Israel to be strengthened against itself. And the agreement on Libya's side was mostly focused on security.

5. Conclusions

In general terms applicability of the projects related to region's gas has raised doubts. The main reasons of these doubts were difficulties of gas exportation and its pricing in an environment where the EU was able to import cheaper gas from Qatar and Russia. So a competition is in question. In this sense export is the key of gas potential's accurate evaluation in the region, of which realization isn't easy due to high cost of the EastMed. Moreover the agreement signed between Libya and Turkey has also further complicated this challenging picture.

The EU, the Greek Cypriot state and Greece object the agreement. Contrary to these parties Israel approaches more carefully and cautiously to Turkey's Libya move. According to analysts one of the main reasons of Israel's this behavior was possibility of gas exportation through Turkey if realization of the EastMed became difficult. Even if Turkey and Israel have an "on again off again relationship", bilateral foreign trade is still strong (bilateral trade volume of Turkey and Israel was 6 billion USD in 2019) and both countries consider each other as strategic partners. On the other hand as already stated Israel will gas to Egypt for conversion to LNG and re-exportarion. That's why it is less dependent on Greece and the Greek Cypriot state in this respect (Amerika' nın Sesi, 2019). Apart from that Turkey mostly was pointed out as the most economic and optimum option in terms of transportation of East Mediterranean gas to Europe, which already has a ready infrastructure including TANAP.

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INFLUENCE OF THE ECONOMIC CRISE PROVIDED BY COVID-19 ON THE LEVEL OF THE DEFENCE INDUSTRY

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Abstract: *Analysis of data on arms exports worldwide reveals relative stability in the international arms market that increased in 2019 compared to 2018, by about 4%, with growth in the United States of 6.6%, equal to that of China. This trend in the United States of America may diminish considerably in the coming period, given the limitation of the increase in the defence budget from fiscal year 2021, and in the case of China, the sars-CoV-2 coronavirus crisis will have effects including in the defence industry. Recent developments resulting from the economic crisis caused by the medical emergency caused by the COVID-19 pandemic, induced by the worldwide spread of the SARS-CoV-2 coronavirus, will also have effects in the defence industry, mainly on the the basis of the contracting of gross domestic product at state level. To overcome this crisis situation in the defence industry, innovative measures are needed to enable the development of state-of-the-art military products adapted to the market requirements and defence needs of resource-enabled States financial support, while accelerating the work of the applied Research and Development sector that will enable such products to be produced.*

Keywords: *crisis, coronavirus, military products, innovation, exports.*
JEL classification: *O2, O3.*

1. Introduction

The COVID-19 pandemic affects many industrial sectors, and companies will be affected, many of which will go bankrupt, and some large companies will significantly reduce their business or restructure their business- including their product range.

Of course, this global crisis also affects the field of defence industry that is connected to the world economy, in the sense that many of the companies producing military products depend, to, a large extent, on subassemblies that occur in the civil industry (e.g. high-performance machine tools, military industry-specific consumables).

Experts in the field consider that the COFID-19 pandemic is likely to cause a recession of defence proportions on three distinct levels, namely: budgetary, industrial and political-strategic.

In order to understand in detail the effects that COVID-19 will have on the defence industry, it is necessary to take into account three main variables, namely: the duration of the pandemic, its economic consequences and the responses that will come from both the states and the European Union and NATO.

Europe and North America are expected to face an unprecedented economic recession in 2020. In order to effectively combat the epidemiological crisis generated by COVID-19, national governments are now employing significant financial resources for the public health sector and providing livelihoods to the citizens of these states, which will inevitably lead to cuts in defence budgets. Even if the percentage will maintain the same budgetary allocation (e.g. 2% of GDP in the case of Romania), by nominally decreasing GDP, the defence industry will be affected, given the considerably smaller amounts that will be allocated to the defence industry. This is also favoured by wage expenditure, which remains constant, with reductions to be made from expenditure on investments in new military products.

The aerospace and defence industry in Europe and North America will not only suffer from these cuts in the global military sector, but will also be affected by the crisis of commercial airlines, which has reduced orders to large companies such as Airbus and Boeing, while share prices have fallen significantly in international financial markets. All of these elements can help create trade tensions between the EU and the US, as both blocs are likely to feel obliged to protect their defence industrial sectors from short-term losses.

The EU's next Multiannual Financial Framework (MFF) must be completed by the end of 2020. If the European Union transfers its available resources to deal with the public health crisis and the upcoming economic recession, both the European Defence Fund (EDF) and the EU military mobility project will risk a substantial reduction in the budget. These decreases in resources for the development of the European defence industry will have direct consequences in terms of the development of new products by the defence industries of the EU Member States. From this point of view, Romania will feel this shock strongly, given that European funds were a valuable source for the domestic defence industry that could be used, including in the Research and Development sector.

Another very important aspect that has been highlighted by experts is the lack of solidarity currently perceived by several EU Member States, which demonstrates how the pandemic also poses security challenges for the EU at strategic level. In this context, we mention the case of Italy, which activated the EU Civil Protection Mechanism at the end of February 2020; however, by 10 March 2020, no Member State had responded to its request for support. This, unfortunately, reveals the lack of solidarity at EU level, as well as the 'selfishness' manifested by certain important EU member states, which creates the favourable premises for the erosion of cohesion at European level, with effects including in security. This dangerous centrifugal trend is enhanced by the dissemination of fake news, in particular by Russian propaganda, which has become very active in the context of the COFID-19 pandemic, their aim being to denigrate the European institutions, European leaders, as well as government ones in the Member States (Bode, 2020).

In this context, if the extraordinary measures necessary to deal with the pandemic and its socio-economic consequences are not taken at EU level, the Union will be called into question by European citizens, more than with the migration crisis of 2015 and previous financial crises. The materialisation of this risk would obviously translate into stronger support for eurosceptic ideological formations, which will take advantage of citizens' uncertainty to gain political support and gain power in the EU Member States, with effects in terms of democracy and even the increasing possibility of the European Union's de-isolation.

At a time when pandemic anxieties at the population level are further fuelled by fake news and information warfare triggered by entities- in particular- in the coordination of the Russian Federation, such a political storm would be extremely difficult to manage at EU level. In this context, at the level of the government and the EU institutions it is necessary to have effective measures in place for the rapid recovery of the economy, including the defence industry sector which employs many people (Wolf, 2020).

At the same time, the defence industry also has a characteristic that does not allow employees of high-profile companies to retrain, in the sense that there is a high degree of specialisation of the workforce. Another very important aspect of the high specialisation of the labour force in the defence sector is the possibility of its dismissal during a crisis period, with negative effects after this period which will require the hiring of staff. In order to resolve this situation, it is necessary to have a coherent and effective strategy at the level of the Romanian Government, designed by the Ministry of Economy, in cooperation with the Ministry of National Defence, which provides concrete measures for the retention of personnel from companies active in the national defence industry, taking into account, first of all, the strategic character of this industrial sector.

2. Risk of reducing the defence budget

The COVID-19 pandemic is likely to have a negative impact on the world economy, to which national governments are likely to respond with considerable financial investments aimed at economic recovery. As a result, many military experts now question whether this will involve inevitable cuts to the defence budget.

At present, given that this health crisis is far from over, it is impossible to carry out a comprehensive assessment. However, it is now important to try and carry out a predictive analysis of future developments in the defence industry, as the development of the pandemic crisis can continue for a long time. In order to carry out this predictive analysis of the evolution of the defence industry, the analytical method of scenarios can be chosen, through which several scenarios can be imagined, starting from the most favourable to the most unfavourable, as well as at least three intermediate scenarios.

The application of the analytical method of the scenarios requires particular efforts and costs, in the realization of these scenarios will be involved military, experts in the field of defense industry, economists, medical professionals, as well as high-level managers from the ministries of profile (e.g. Ministry of Economy, Ministry of National Defence, Ministry of Public Finance, Ministry of Health).

Some experts in the field note that the CoVID-19 pandemic will indeed have negative consequences for defence budgets, but they will mostly not materialise until 2021-2022. According to them, despite the current medical crisis, governments are aware of the importance of supporting economic activities, including those of the aerospace, security and defence industries, and will therefore continue to make significant investments in the sector. Some experts believe that cuts to the military would cause more problems for industries already affected by the commercial aircraft order crisis, such as Airbus and Boeing.

Other experts argue that military spending will fall not only in Europe, but in every country affected by the virus worldwide, which will affect the way business is conducted worldwide. The experts who have joined this view believe that it is possible to make a forecast of future defence expenditure compared to the 2008-2009 financial crisis. In the following years, the regions most affected by the crisis (e.g. Western Europe) had a direct negative impact on their military spending. Differently, regions that have been less affected by the economic crisis (e.g. Asia and the Middle East) have not had any decreases in their defence budgets. Because the COVID-19 pandemic appears to be affecting the whole world, the cuts are likely to take place globally, affecting the entire industry.

There are major differences from the crisis of 2008-2009, in the sense that the crisis was of a financial nature and affected, in particular, small and medium-sized companies that were not able to resize and adapt their economic and investment policies, whereas this crisis of a medical nature affects almost all industrial sectors, except those in the food industry and courier companies which have seen increases.

The East Asian and Oceania states are hit hard by the economic recession, which is likely to have a negative impact on military spending. For example, in Japan, the government is trying to implement measures to save budget funds, with this state having a strong defense industry that invests heavily in the R&D sector.

In Europe, today, as in 2008, Western and Mediterranean countries seem to be facing the worst consequences of the crisis, with direct effects including in the defence industry. Military experts point out that the states most affected by the pandemic also happen to be those that are more militaryly active, such as Great Britain, France and Italy, because they are the ones that deploy more troops in North Africa, the Sahel and/or the Middle East. As regards foreign and defence policy, as military spending in several NATO countries will be constrained in the coming years, this will, by default, limit the possibility of using the armed forces for external purposes. This aspect also applies to political will, as it is not clear whether political leaders will be willing to push for foreign policy commitments in times of internal security crisis and/or economic recession.

Another expert noted that after the 2008 crisis, it took six years of low military budget before a reversal of this trend, which was mainly caused by the persistent threat of the Russian Federation that arose from the war in Ukraine and the annexation of the Crimean Peninsula. The question can be contextualised whether, this time, Europeans will again face an external security crisis that will require an increase in defence budgets, or whether Europe is heading for a prolonged fall in military spending.

Other experts point out that the 2008 financial crisis and subsequent recession were very different from the one the world is now entering. The first has been characterised by budget cuts, while today's one concerns the economic incentives needed to address both supply and demand shocks. The failure to perceive the defence sector as particularly important in industrial recovery will indicate a lack of understanding of its dual nature, and this will turn into a semnificative crisis for the aerospace and defence industries. An example in this context is the aviation industry that will be most affected, given the dramatic reduction in commercial flights. Thus, aircraft companies are heavily affected, given the sharp drop in demand from commercial airlines, which have dramatically reduced their activity. As mentioned above, this also has a negative effect on the aerospace and defence sectors, as several main contractors have both a civil and military aviation industry. During this period, many commercial aeronautical companies suspended contracts for the delivery of new aircraft or, at best, postponed these deliveries for indefinite periods.

Several experts appreciate that Europe will not suddenly become incapable in terms of military potential and investment in this area. However, an uneconomically and strategically unmotivated reduction in military spending, at the same time as the decline of the European Defence Technological Industrial Base (EDTIB), will lead to a political problem in defining the EU's ambitions in terms of strategic autonomy. This, in the long term, can lead to an increase in tensions between the EU and the US, with direct economic and political-military effects (Marrone and Credi, 2020).

In addition, some experts note that not every country will lose the same degree of GDP, influence and power worldwide. Thus, the balance between power and ambition will change, sometimes quite substantially, at both regional and global level. This will create windows of opportunities that can be strategically exploited by ambitious competitors who are likely to be less affected by the crisis, such as the Russian Federation and China. They could represent Europe in the face of new direct threats to its security interests, i.e. situations where the activation of Article 5 of the NATO Treaty. Indirect challenges, for example, in new tensions at NATO or EU level or in changing the security situation in the Middle East or the South China Sea, must also be taken into account.

The more Europe will focus on the internal problems caused by the crisis caused by COVID-19, the more room for manoeuvre will be given to the states concerned (e.g. the Russian Federation, China) in other regions, which will lead to the deterioration of its strategic interests.

3. Pandemic crisis and NATO

In the short term, NATO member states will focus most of their political and economic attention on relations with the pandemic and the management of the socio-economic impact afterwards. Governments must meet the expectations of society and their electorate, and the same is true for international organisations run by Member States, such as NATO. Not coincidentally, major Allied military exercises have already been reduced, postponed or cancelled, including Defender Europe 2020.

The political-strategic dimension of the pandemic crisis will therefore become inherent on NATO's agenda, with consequences that are hard to predict militarily. Military experts appreciate that NATO will have to prove its ability to contribute to the political and security challenges posed by the COFID-19 pandemic crisis. As a result, in this crisis situation, NATO is likely to place greater emphasis on civilian actions to support Member States at the expense of military missions.

Other experts express concern about the possibility of such a focus on NATO's non-military activities, especially given the context of the security challenges of the Russian Federation vis-à-vis the Central and Eastern European States. In this respect, a balance will have to be struck between civil and military operations, in full compliance with the mandate of the organisation which must ensure the security of its members. In other words, although Western countries are living a new reality under the pandemic, some of the activities that NATO is carrying out must remain in place in order to guarantee collective defence, political cohesion and solidarity. In this note, some experts warn that only a few European countries are able to operate militarily in a pandemic environment and even fewer are able to provide assistance abroad through the deployment of the armed forces.

Other experts point out how, in the wake of the COVID-19 crisis, the international system will neither become more efficient nor strengthen in the sense that no major geopolitical changes are expected. Geopolitical trends will continue in the same trend, although they could be accelerated by the effects of the virus, in the sense of increasing accusations regarding the outbreak of the COVID-19 pandemic (e.g. accusations between the US and China).

Broadly speaking, the pandemic's consequences for NATO could be decelerate in the short, medium and long term. In the short term, it will consist of the withdrawal of soldiers from current allied operations until the reduction of military exercises in 2020, affecting both the situation on the ground in operational theatres and the availability of forces (Rempfer, 2020). The medium- and long-term effects of covid-19 on NATO will mainly be to reduce the budget of the Allied States and unable to meet the capability objectives they have undertaken (Brzozowski, 2020).

One expert highlighted how the severe decline in GDP of some countries could, paradoxically, help them achieve the 2% defence spending target set by heads of state and government at the NATO Summit in 2014. This presents a critical perspective on the risk of exaggerating the importance of a single input parameter in the assessment of military capabilities. However, such a parameter is of significant political importance in the US. Another expert actually stressed that the defence cuts of European allies could be used by the current US administration to further criticize Europe and gain negotiating levers on important dossiers on the transatlantic agenda.

Some experts pointed out that both NATO's and the EU's contributions to the pandemic crisis are very limited and that this runs counter to the narrative that European defence is meant to protect its population. They called on NATO and the EU to engage in a process of developing the collective capabilities needed to contribute to the pandemic crisis. Failure to achieve this would seriously compromise their role and credibility in the eyes of European and global public opinion, with negative consequences for the commitments of political leaders to both organisations (Bunkall, 2020).

4. The role of change in the armed forces

In several Western countries, the armed forces are actively contributing to cope with the negative effects of the COVID-19 pandemic crisis. In some cases, like Italy, this is not the first time that the military has actively contributed to the management of national emergencies under the leadership of civil protection. However, the level and duration of such an engagement in the context of the current pandemic crisis is likely to result in more than in previous experiences.

At the same time, the line between security and defence is still blurred and diffuse. Police are increasingly using drones and other new technologies to observe people, to implement unprecedented blocking restrictions. Any military equipment that may be useful is currently used, from strategic and tactical lifts to military hospitals, as well as to patrol missions carried out by the military in certain areas (Sabbagh, 2020).

In this note, some experts raised the issue of privacy in relation to the extraordinary security measures and controls applied. As the EU is a community of values, not just interests, it is crucial that its members do not resort to new technologies in the same way that China does.

Another expert pointed out that, for example, in France, the armed forces played a greater role during the 2015 terrorist attacks, than in the current pandemic crisis. Consequently, it has been suggested that at the level of the expert community it focuses on finding new solutions for civil protection, probably using non-military instruments. For example, technologies used in the fight against climate change and natural disasters could be used in current circumstances in order to resolve COVID-19 pandemic crisis (Amaro, 2020).

With regard to security and stability in the vicinityof Europe, according to some experts, the spread of the virus in the Middle East and Africa is likely to be followed by a call for humanitarian response at international level and possibly crisis management and/or stability operations. Indeed, in such regions, the pandemic could also generate new conflicts or revive the old ones, causing new instability. This, in turn, would require the imposition of external peace in order not to escalate into a humanitarian disaster and/or regional destabilisation. In general, the answer will depend on the political readiness and military readiness in Europe and the US to engage in armed intervention while dealing with the pandemic or its economic consequences at home (Imbert, 2020).

5. EDF and Europe's economic recovery

The discussion also focused on European cooperation in the defence sector and, more specifically, how crucial such cooperation will be in terms of military spending during pandemic budget cuts.

The view that budget cuts necessarily, lead to increased international cooperation for the achievement of economies of scale was considered by several participants without reason, after being shown in the wake of the 2008 financial crisis. Indeed, it was recalled how, at that time, the European Defence Ministries did not invest in new international acquisitions, as they were barely carrying out the ongoing programmes through cuts imposed by the finance ministries. Thus, several governments have decided to maintain their small and inefficient national programmes, rather than using European cooperation, to ensure that they deal with their own procurement decisions and related industrial benefit.

Taking this as a lesson learned, some experts consider that the possible cuts in defence budgets that will be caused by the pandemic will not be a driving factor for closer cooperation between EU Member States. Rather, an incentive such as the co-financing of the EDF is needed. A possible reduction in the EDF budget, in the context of the new MFF, would thus lead to negative consequences for public procurement cooperation in the defence sector.

Some participants insisted on the urgency of directing most of the EU's efforts towards achieving European strategic autonomy, thus prioritising investments in joint projects rather than in national or non-EU programmes. At the same time, the pressure to ensure the share of industrial work "at home" could turn into a low use not only of American supply, but also of European, if domestic producers are able to offer decent solutions.

Finally, many agreed on the importance of including a defence angle in the economic debate that political leaders will have on the relaunch of industries and small and medium-sized enterprises in Europe. The aerospace and defence sectors should be considered a strategic economic sector, especially in view of its high-tech nature. Consequently, some have stressed that defence investment will have to support the economy, particularly in the period 2020-2021, as part of a global European economic recovery plan. For such a recovery to be successful, industrial cooperation in the field of defence within the EU is needed, and this can be done by ensuring that its members know that they can rely on the EDF and other European incentives.

6. Conclusions

When looking at the aftermath of the COVID-19 pandemic, it is possible to develop a best and worst-case scenario for the subsequent economic recession, thereby reducing military budgets, losses to the European aerospace and defence industry, more transatlantic tensions and, above all, damage to the cohesion of the European integration process that has brought peace and stability to Europe.

At best, the EU institutions and the Member States would engage with solidarity and cooperation to address the multiple aspects of the crisis, while, at worst, the EU would emerge from the pandemic with serious economic, social and political recessions.

These scenarios also relate to the international security environment. Some military experts were concerned, as the worst-case scenario now seems most likely, given the measures taken by national governments. They argued that the world risks becoming worse than it is today in terms of stability and security, with the US dividing the world between friends and enemies- according to a short-term, narrow interpretation of its national interests, and China has strengthened its military forces, as well as its influence abroad at an alarming rate.

In conclusion, the pandemic and its economic impact have direct and in-direct implications for defence policies in Europe and different scenarios are possible. The ability of Member States and EU institutions to act together in a decisive way will make a difference, with a significant impact on European security.

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WOMAN LEADER, MOTIVING FACTOR IN ACCEPTING CHANGE AT ORGANIZATION LEVEL

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Abstract*: The concept of Leading Woman represents the latest trend in career, personal and professional development, worldwide. Career plans initiated and developed by women are an important source of inspiration and result in increased living standards. Accepting changes from the classical leader - man to the innovative leader - woman comes with a lot of prejudices, but also with many benefits. The female leader creates a motivational juncture at the organizational level and facilitates acceptance of changes. The research methods used are: observation and analysis of documents and quantitative analysis based on questionnaires. Research Question: Is the female leader a motivating factor in accepting change at the organization level? Research hypothesis: The leading woman is a motivating factor in accepting change, whose central aim is to improve the management of the organization. Research Purpose: Female leadership is the motivation to facilitate change acceptance at the organization level.*

Keywords: *leadership, women leader, motivation, change.*
JEL Classification: *M12, H12, L26.*

1. Introduction

1.1. The woman leader - motivations and constraints

This work comes to ensure the overall satisfaction of the initiative to become a successful leader of the Romanian woman. Thus, we conducted a study at a representative sample of women leaders from the South-Muntenia Region. The perception of society about the role of the leading woman differs from one country to another, from one region to another and is influenced mainly by cultural differences. Female leadership is considered one of the most innovative and creative concepts. In the last decade, there have been researches based on comparing the performance of organizations led by women with those of men, by identifying the percentage of women involved in leadership activities, as well as analyzing the relationship between leadership experience and family life; identifying the resources that contribute to the success of women leaders, studying the motivations underlying the performance of women leaders, the influence of social and political constraints on women, the influence of the residential environment on women's leadership behavior. At the global level, women's leadership is constantly expanding, motivated by women's desire to balance work and work responsibilities with family commitments (Pocol and Moldovan - Teselios, 2014).

1.2. Women's leadership and sustainability

The concept of leading woman has been recognized, in the last decade, as a motivating factor in achieving organizational performance, and implicitly, as an important source of economic growth at the macroeconomic level. Leading women succeed in motivating employees in a different way than men, offering new solutions in terms of organization and management, as well as through different ways of exploiting economic opportunities. However, statistics show that the female leader is a minority. Unfortunately, the attention paid to women leaders in society did not appear natural, but came rather as a reaction to various decision-makers, such as: European Union directives on equal opportunities between women and men, International Labor Organization, agencies government, etc.

Although the characteristics of female and male leaders are generally similar, however, there are differences in motivation, education, and personality traits. Men are motivated by the desire to satiate their personal vanity, while women tend to be motivated by the lack of performance validation. Both leading women and leading men are energetic, independent and sociable. However, men are more self-confident and often less tolerant and flexible than women. This leads to the approach of totally different leadership styles (Ceptureanu and Ceptureanu, 2016).

The study carried out by the strategic consulting company Roland Berger, reveals that most inequities regarding the gender of the leader, reside from the unequal division of domestic responsibilities. Worldwide, women receive jobs with less responsibility than men. On the other hand, we are enjoying, with the digital revolution, the creation of a new business paradigm that favors the leading woman. These new technologies allow women to access the labor market more easily and to ensure a favorable climate for professional development.

The digital revolution facilitates the promotion of gender equality and supports the development of women's leadership by emphasizing the issues related to: high flexibility of the work program and the place where the activity is carried out, transparency in the measurement of results, as well as rewards, access to communities of women leaders who develops mentoring relationships. The Romanian society has learned that the notion of sustainability implies responsibility and leadership. This is how the concept of "Leaders for Life" was born, a new generation of leaders who are concerned about the positive impact on the environment and society, to the same extent as achieving the organization's objective.

The global trend is to integrate sustainability into the decisions of Romanian leaders from all fields. The concept of a common organizational objective loses its value, as non-renewable resources are reduced at an alarming rate, thus endangering the sustainability of our society. The economy and the environment must be in perfect harmony (Revista Cariere, 2020).

2. Results and discussion

According to Eurostar data, Romania holds a leading position in Europe, with a percentage of 41% women in leading positions, compared to the European Union average of 36% (Revista Cariere, 2020). The purpose of this scientific paper is to validate or deny the central hypothesis - "The leading woman is a motivating factor in accepting change whose central purpose is to improve the management of the organization".

In order to achieve the stated objective, we used as a research method the quantitative analysis, based on a questionnaire, at the South-Muntenia Region level. Through the questionnaire used we set out to gather information based on the experience and perception of the respondents regarding the quality of women to be a motivating factor in accepting change at the organization level and achieving organizational performance. Thus, we selected a few items that we considered relevant to the proposed theme and which we will interpret in this paper.

Table1. Do you consider that the employees of the organization in which you work express their opinions more easily in front of a female or male leader?

Respondents' opinion on the ease of expressing their opinion in front of a female or male leader	Male leader	Count	73
		% within Respondents' opinion on the ease of expressing their opinion in front of a female or male leader	100.0%
		% of Total	39.2%
	Female leader	Count	113
		% within Respondents' opinion on the ease of expressing their opinion in front of a female or male leader	100.0%
		% of Total	60.8%
Total		Count	186
		% within Respondents' opinion on the ease of expressing their opinion in front of a female or male leader	100.0%
		% of Total	100.0%

Source: by the author

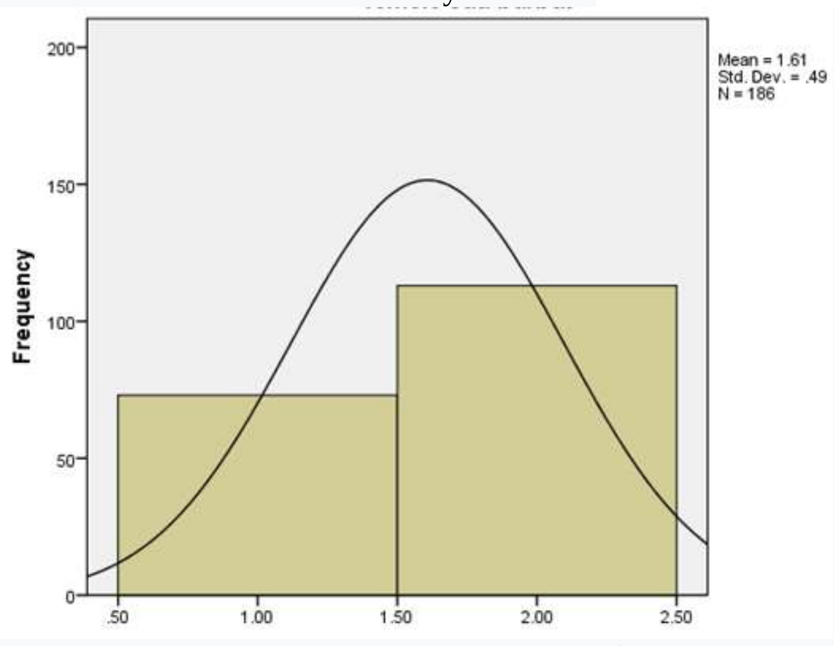

Figure 1. Respondents' opinion on the ease of expressing their opinion in front of a female or male leader

Respondents' opinions regarding the ease of expressing their opinions in front of a female or male leader are represented in Table 1 and provide us with the following information:

-39.2% appreciated that they feel less free to speak in front of a male leader;

-60.8% appreciated that they can express their opinion more easily in front of a female leader. The relatively average central tendency identified at the sample level is 1.61 (Figure 1.). It is worth noting that there is a considerable difference in the case of employees who seem to have more courage to express their opinions in front of a female leader.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	emotional balance	10	5.4	5.4	5.4
	ambition	24	12.9	12.9	18.3
	sociability	13	7.0	7.0	25.3
	capacity to accept change	15	8.1	8.1	33.3
	self-improvement	25	13.4	13.4	46.8
	intellectual curiosity	23	12.4	12.4	59.1
	orientation towards innovation	21	11.3	11.3	70.4
	emotional volatility	5	2.7	2.7	73.1
	handling	3	1.6	1.6	74.7
	skepticism	3	1.6	1.6	76.3
	melodrama	4	2.2	2.2	78.5
	precautions	9	4.8	4.8	83.3
	imaginativeness	11	5.9	5.9	89.2
	social disconnection	4	2.2	2.2	91.4
	perfectionism	13	7.0	7.0	98.4
	passive-aggressiveness	1	.5	.5	98.9
	tendency to dominate	1	.5	.5	99.5
	arrogance	1	.5	.5	100.0
	Total	186	100.0	100.0	

Table 2. Respondents' opinion on shaping the profile of the female leader
Source: by the author

From Table 2 it is observed that the respondents consider as important for a female leader, the following characteristics:
- ambition;
- sociability;
- capacity to accept change;
- self-improvement;
- intellectual curiosity;
- orientation towards innovation

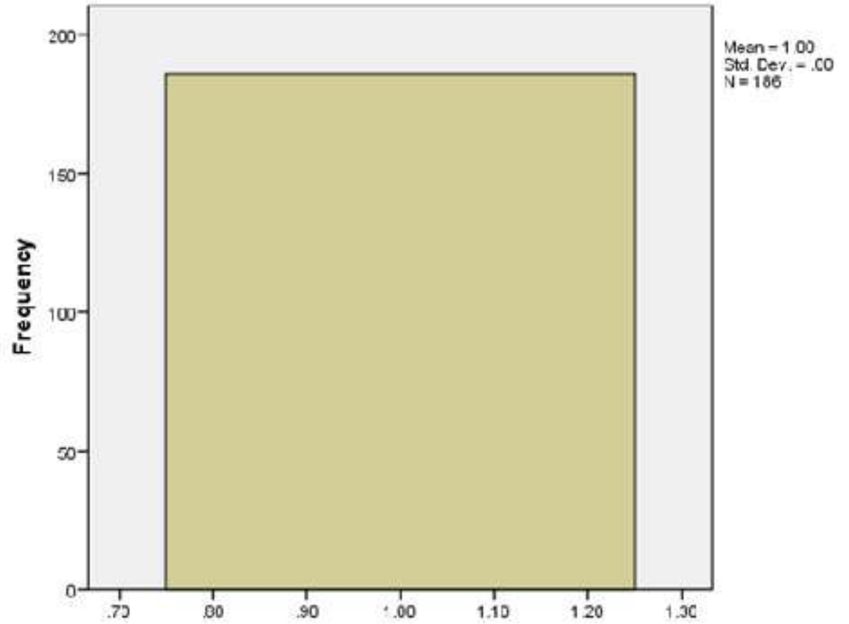

Figure 2. Respondents' opinion on the increased interest in achieving professional success of the female leader

The maximum central tendency identified at the sample level is 1.00 (Figure 2), and we found that the respondents unanimously appreciated the increased interest of the leading women in achieving professional success. Women with leadership status tend towards performance through their determined attitude and ambition.

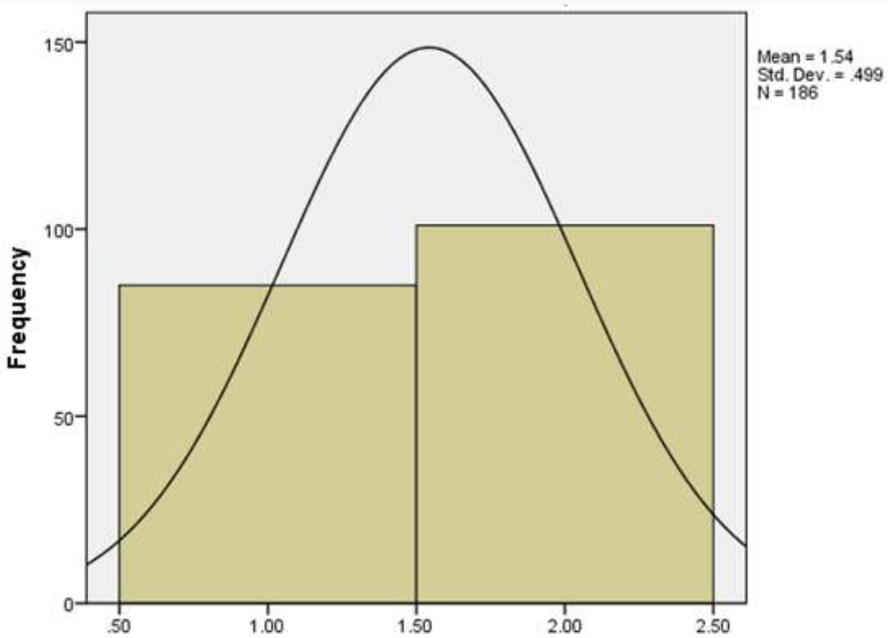

Figure 3. Respondents' opinion about women who are more concerned about the quality of relationships at work than men

The relatively average central tendency identified at the sample level is 1.54 (Figure 3), resulting in women being more concerned about the quality of human-to-work relationships than men.

3. Experimental

To validate the research hypothesis: The female leader is a motivating factor in accepting change, whose central aim is to improve the management of the organization. Likert type. Statistical data processing was performed using the IBM SPSS Statistics Version 20 (Statistical Package for the Social Sciences) program.

4. Conclusion

In order to achieve success in the field of interest, the female leader needs to fulfill a number of attributes: work power, knowledge, skills, courage and maturity. In conclusion, the leading women in the studied region are generally concerned with achieving professional success by developing the qualities highlighted in this scientific paper, resulting from interpreting the results of the case study. The originality and particularity of this research lies in the fact that the female leader was analyzed and evaluated, as a motivating factor in accepting the change in the South-Muntenia region, highlighting the results generated by the attempt to eliminate gender differences. The results of the research represent an important tool to know the position of the women leaders, as well as to monitor the progress made by the women leaders in the analyzed region. In conclusion, the central hypothesis of the paper has been validated.

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POSSIBLE MODEL OF DEVELOPMENT OF VEGETABLE YIELD IN ROMANIA BY 2040

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Abstract: *Food is one of the vital human needs and everything that is alive. In human nutrition, vegetables play a major role, bringing the body an important supply of vitamins, minerals and fibers. Therefore, horticulture is an important branch of the economy, especially since the Romanian people are one of the largest consumers of vegetables in Europe. Unfortunately, it is noted that the value of vegetable imports exceeds that of exports, although our country has the potential to offer a much higher of vegetables yield. The present research aims to outline some possibilities for increasing the economic efficiency of vegetable growing in Romania. For this purpose, the authors propose a number of possibilities, including increasing areas for growing vegetables in protected areas, gradually increasing vegetable production and export, lowering vegetable imports and bringing prices of exported vegetables closer to those imported.*

Key words: *vegetable growing, decrease of imports, growth of surface of plastic tunnels, balancing import-export prices.*

JEL Classification: *Q18, R32.*

1. Introduction

Vegetable farming is an important branch of the national economy through the contribution to ensuring large quantities of vegetables for population consumption (annual consumption over 180 kg/year/capita) (https://insse.ro/, https://ourworldindata.org/grapher/vegetable-consumption-per-capita?tab=chart&country =ROU), by providing an important source of income for vegetable producers (using about 240.000 ha) (https://insse.ro/, https://www.madr.ro/) and contribution to the development of other economic sectors (inputs insurance, trade, transport, food industry, etc.). For these reasons, it is very important to build a development model for this branch, which takes into account the national food habits, the soil and climate conditions of Romania and the economic and social conditions.

After accession to the European Union, the standard of living of the Romanian population has improved. The current trend in food is to diversify the products, to combine the consumption of vegetables obtained in the country with those of import. At the same time, there is an interest in consuming quality vegetables, including by increasing the consumption of "bio" vegetables (Stoian, 2004).

In order to create a Romanian economic model for vegetables growing on the horizon of 2030-2040, we started from the following principles:

a) the need to cover a larger part of the population's demand with vegetables from local production, to prevent the problems of deficiencies caused by the inability to bring products from abroad (pandemics, track driver strike etc.) (Lăcătuș et al., 2013);

b) the tendency of the Romanian population to decrease until 2060 ("Proiectarea populației României, în profil teritorial, la orizontul anului 2060", 2017);

c) moderate increase of annual consumption of vegetables / capita, considering that at present in Romania the consumption of vegetables / year / capita is among the largest in

Europe (https://ourworldindata.org/grapher/vegetable-consumption-per-capita?tab=chart&country=ROU);

d) the need to grow vegetable surfaces in protected areas (mainly in plastic tunnels), especially due to climate change, which makes it increasingly difficult to grow vegetables in the open field (Scurtu and Lăcătuș, 2013; Lăcătuș et al., 2013). The authors propose to invest every year in the construction of protected areas, so that in 2040 most tomatoes for fresh consumption, cucumbers, cauliflower, lettuce, long and sweet peppers and some green vegetables to be obtained in plastic tunnels. In the open field will continue to grow tomatoes for industrialization, bulbous vegetables, root vegetables, watermelons, peas and beans for canning and smaller quantities of vegetables for fresh consumption. The authors estimate the need to reach an area of 15,000-20,000 hectares of protected areas, while decreasing the cultivated areas in the field. Starting from about 7000 ha currently existing (Scurtu, 2016), an annual growth of about 500 ha is estimated, which would represent, in 2040, a cultivated area of 16,000 ha;

e) the authors continue to rely on European and national support programs for farmers in the effort to build and modernize protected areas and other necessary farm facilities (refrigerated warehouses, washing and conditioning equipment, packaging facilities etc);

f) further maintaining the import of vegetables at the level of about 10% (of the consumption requirement, because some people have a habit of eating vegetables that are produced less in Romania during the cold season, and their production during that period would be more expensive than thouse imported;

g) the gradual increase of the export of fresh or processed vegetable products, so that the value of the vegetable export equals and possibly exceeds the value of the imports;

h) the gradual increase of the average production/ha in both the protected areas and in the field, as a result of the use of high-yielding varieties and hybrids, of the modernization of the spaces and technologies of production of the seedlings, of the use of economic systems of irrigation and fertilization and of other technological procedures. (Glăman, 2015) .

The construction of the economic model for vegetable farming started from a series of statistical data obtained from different sources: https://www.madr.ro/ and https://insse.ro/ (Tables no.1).

Table no. 1. Vegetable surfaces, total and average production during 2012-2017

The year	**2017**	**Average 2012-2017**	**Average yield t/ha**
I. Total area cultivated, (thousands ha), of which:	224.6	241.4	
Tomatoes	40.0	44.5	
Pepper	17.7	18.6	
Onion	30.0	31.2	
Garlic	10.0	10.6	
White cabbage	46.2	48.8	
Watermelons and melons	23.4	27.0	
II. The total production, thousand tons, of which:	3631	3660	15.2
Tomatoes	679.8	690.9	15.5
Pepper	226.5	219.6	11.8
Onion	352.2	360.3	11.5
Garlic	55.7	59.7	5.6
White cabbage	1026.6	1060.3	21.7
Watermelons and melons	553.5	542.8	20.1

Source: https://www.madr.ro/ and https://insse.ro/, data processed by the authors.

Table no. 1 shows that the surface of vegetables decreased in 2017 compared to the average of the last 6 years, while the average production registered the value of 15.2 t/ha. Every year, in Romania large quantities of vegetables were imported, respectively 373,455 thousand tonnes in 2017, while exports were insignificant (only 18 thousand tonnes in 2017).

The forecast regarding the evolution of the population of Romania shows that it will decrease in the coming decades and will be approximately 18,487 thousand people in 2027, 17840 thousand people in 2034 and 17,305 thousand people in 2040 (”Proiectarea populației României, în profil teritorial, la orizontul anului 2060”, 2017). Table no. 2 presents a possible scenario proposed by authors of vegetable consumption per year between 2027-2040.

Table no. 2. Estimated consumption of vegetables kg/capita/year (domestic production and imported)

The year		2020	2027	2034	2040
The population (thousand inhabitants)		19,259	18,487	17,840	17,305
Tomato consumption	From domestic production	34.2	36	39	42
	From import	6	6	6	5
	Total	40.2	42	45	47
Pepper consumption	From domestic production	11.4	13	14	15
	From import	4	5	4	4
	Total	15.4	18	18	19
Eggplant consumption	From domestic production	6.4	7	7,5	7.8
	From import	1	1	1	1
	Total	7.4	8	8.5	8.8
Onion consumption	From domestic production	17.7	19	20	22
	From import	3	2	1	1
	Total	20,7	21	21	23
Garlic consumption	From domestic production	2.8	3.2	3.4	3.6
	From import	0,5	0,3	0,2	-
	Total	3.3	3.5	3.6	3.6
Cabbage consumption	From domestic production	51.7	52	53	53
	From import	1	1	1	1
	Total	52.7	53	54	54
Watermelons and melons consumption	From domestic production	27,9	29	30	32
	From import	0.5	0.5	0.6	0.6
	Total	28.4	29.5	30.6	32.6
	From import	16	15.8	13.8	12.6
	Total	168.1	175.0	180.7	188.0
Other species consumption	From domestic production	29.9	35	38	40
	From import	2	2	2	2
	Total	31.9	37	40	42
Total consumption /year/capita (kg)	From domestic production	182	194.2	204.9	215.4
	From import	18	17.8	15.8	14.6
	Total	200	212.0	220.7	230.0
Totally required thousand tons	From domestic production	3505	3590	3655	3757
	From import	347	329	282	253
	TOTAL	3852	3919	3937	4010

From the data in Table no. 2 it is observed that the demand for vegetables for domestic consumption will increase as a result of the increased consumption/capita/year i, even if the population is decreasing. At the same time, the trend of decreasing imports from 347 thousand tonnes in 2020 to 253 thousand tonnes in 2040 is observed.

Table no. 3 presents a forecast of the import of vegetables, starting from the evolution of population and the annual average consumption for a person.

Table no. 3. Import of vegetables in 2020-2040

The year		**2020**	**2027**	**2034**	**2040**
The population		19,259	18,487	17,840	17,305
Tomatoes to be imported	Consumption / capita (kg / year)	6	6	6	5
	Total thousand tons	115.6	110.9	107.0	103.8
Peppers to be imported	Consumption / capita (kg / year)	4	4	4	4
	Total thousand tons	77,0	73,9	71,4	69,2
Eggplants to be imported	Consumption / capita (kg / year)	1	1	1	1
	Total thousand tons	19.3	18.5	17.8	17.3
Onion to be imported	Consumption / capita (kg / year)	3	2	1	1
	Total thousand tons	57.8	37.0	17.8	17.3
Garlic to be imported	Consumption / capita (kg / year)	0.5	0.3	0.2	-
	Total thousand tons	9.6	5.6	3.6	-
Cabbage to be imported	Consumption / capita (kg / year)	1	1	1	1
	Total thousand tons	19.3	18.5	17.8	17.3
Watermelons and melons to be imported	Consumption /capita (kg / year)	0.5	0.5	0.6	0.6
	Total thousand tons	9.6	9.2	10.7	10.4
Other species to be imported	Consumption / capita (kg / year)	2	2	2	2
	Total thousand tons	38.5	37.0	35.7	34.6
Total required from import kg / capita		18.0	16.8	15.8	14.6
Total from import, thousands of tons		346.6	310.6	281.9	252.6

It can be seen from Table no. 3 that it is proposed to keep imports constant or even to increase them for some species that are consumed frequently, even during times when demand can not be covered by own production (these species can be grown in our country only during between spring – autumn period) (like tomatoes, peppers, eggplants, watermelons or melons). However, for some species, like onion or garlic, our country can cover almost entirely the necessary for consumption.

Table no. 4 presents the calculations for the foreign exchange effort for the expected vegetable imports.

Table no. 4. The value of vegetable imports - RON (millions)

The year		2020	2027	2034	2040	Medium price RON/kg
Vegetables imported, thousand tons		346.6	310.6	281.9	252.6	
Million RON value		1405.6	1285	1200.9	1129.75	
Million Euros value		293	268	250	235	
Tomato	Thousands tons	115.6	110.9	107.0	103.8	4
	Value (RON)	462.4	443.6	428.0	415.2	
Pepper	Thousands tons	77.0	73.9	71.4	69.2	7
	Value (RON)	539	517.3	499.8	484.4	
Eggplant	Thousands tons	19.3	18.5	17.8	17.3	2.5
	Value (RON)	48.25	46.25	44.5	43.25	
Onion	Thousands tons	57.8	37.0	17.8	17.3	1.5
	Value (RON)	86,7	55,5	26,7	25,95	
Garlic	Thousands tons	9.6	5.6	3.6	0	10
	Value (RON)	96	56	36	0	
Cabbage	Thousands tons	19.3	18.5	17.8	17.3	1.5
	Value (RON)	28.95	27.75	26.7	25.95	
Watermelons and melons	Thousands tons	9.6	9.2	10.7	10.4	3
	Value (RON)	28.8	27.6	32.1	31.2	
Other species	Thousands tons	38.5	37.0	35.7	34.6	3
	Value (RON)	115.5	111.0	107.1	103.8	

From the total consumption requirement, we decreased the imported quantities and resulted the quantity of vegetables needed for domestic consumption product (Table no. 5).

Table no. 5. The necessary vegetables to be produced for domestic consumption

The year		2020	2027	2034	2040
The population		19,259	18,487	17,840	17,305
Tomatoes to be produced	Consumption / capita (kg / year)	34.2	36	39	42
	Total thousand tons	658.7	665.5	695.8	726.8
Peppers to be produced	Consumption / capita (kg / year)	11.4	13	14	15
	Total thousand tons	219.6	240.3	249.8	259.6
Eggplants to be produced	Consumption / capita (kg / year)	6.4	7	7.5	7.8
	Total thousand tons	123.3	129.4	133.8	135.0
Onion o be produced	Consumption / capita (kg / year)	17.7	19	20	22
	Total thousand tons	340.9	351.2	356.8	380.7
Garlic to be produced	Consumption / capita (kg / year)	2.8	3.2	3.4	3.6
	Total thousand tons	53.9	59.2	60.7	62.3
Cabbage to be produced	Consumption / capita (kg / year)	51,7	52	53	53
	Total thousand tons	995.7	961.3	945.5	917.2
Watermelons and melons to be produced	Consumption / capita (kg / year)	27.9	29	30	32
	Total thousand tons	537.3	536.1	535.2	5538
Other species to be produced	Consumption / capita (kg / year)	29.9	35	38	40
	Total thousand tons	575.8	647.0	677.9	692.2
Annual consumption / capita from domestic, kg		182	194.2	204.9	215.4
Totally needed internally, thousands of tons		3505.2	3590.1	3655.4	3756.9

The necessary vegetables for domestic consumption will be provided from three sources: import (which will decrease from about 9% of the necessary to about 6% in 2040), domestic production in protected areas and production in open field. A certain part of the production of vegetables, both from the field and from protected areas will be destined for export, thus balancing the balance of external payments in this field. Considering the increase of the areas of plastic tunnels and the increase of the average production in both systems (field and protected areas), after about 20 years the quantity of vegetables exported will be greater than the imported one and the value of the exports of vegetables will be slightly higher than the imports.

Table no. 6 presents a possible variant regarding the production of vegetables from protected areas. It can be assumed that the average yields could be higher than the ones proposed, but we have taken into account that in the newly built plastic tunnels, less experienced farmers will work. The production obtained in plastic tunnels is divided for domestic consumption and for export.

Table no. 6. Production of vegetables from protected areas (plastic tunnels + greenhouses) - thousand tons (for domestic consumption and export)

		The year			
		2020	**2027**	**2034**	**2040**
Total *	ha	5,000	8,500	12,000	15,000
Totally cultivated cycle I + II	ha	7,400	11,550	14,870	18,940
Tomato (cycle I + II)	ha	4000	6000	7500	10.500
Average yield (cycle I + II)	t/ha	50	55	58	60
Total yield, from which:	t (thousand)	200	330	435	630
for export	t (thousand)	30	45	100	134
for domestic consumption	t (thousand)	170	285	335	496
Pepper - long cicle	ha	600	900	1100	1400
Average yield	t/ha	46	48	50	52
Total yield, from which:	t (thousand)	27.6	43.2	55.0	72.8
for export	t (thousand)	8	13	16	20
for domestic consumption	t (thousand)	19.6	30.2	39	52.8
Eggplant	ha	400	650	770	850
Average yield	t/ha	50	52	54	60
Total yield, from which:	t (thousand)	20	33.8	41.6	51.0
for export	t (thousand)	5	12	15	18
for domestic consumption	t (thousand)	15	21.8	26.6	33
Cucumbers (cycle I + II)	ha	1050	2100	2800	3240
Average yield	t/ha	50	58	62	64
Total yield, from which:	t (thousand)	52.5	121.8	173.6	207,4
for export	t (thousand)	15	42	62	75
for domestic consumption	t (thousand)	37.5	79.8	111.6	132.4
Lettuce (5 cycles)	ha	350	500	600	650
Average yield	t/ha	120	140	150	160
Total yield, from which:	t (thousand)	42	70	90	104
for export	t (thousand)	5	10	15	20
for domestic consumption	t (thousand)	37	60	75	84
Other species	ha	1000	1400	2100	2.300
Average yield	t/ha	30	34	37	40
Total yield, from which:	t (thousand)	30	47,6	77.7	90

for export		t (thousand)	5	12	25	28
for domestic consumption		t (thousand)	15	35,6	52,7	62
Total yield in plastic tunnels, from which		Mii t	372.1	646.4	872.9	1155.2
for export		Mii t	68	134	233	295
for domestic consumption		Mii t	304.1	512.4	639.9	860.2
Average yield** t/ha	On built area		74.4	76.0	72.7	77.0
	On cultivated area		50.0	56.0	58.7	61.0

*The cultivated surface is larger than the physical surface because some species are cultivated also in cycle II.

**The average yield on the built area is higher than the one reported on the cultivated area due to the use of spaces also for the second cycle.

Determination of the yield obtained in protected areas helps us to calculate the amount of vegetables to be produced in the open field (Table no.7).

Table no. 7. The necessary vegetables to be produced for internal consumption in protected areas and fields - thousands of tons

The year		**2020**	**2027**	**2034**	**2040**
The population		19,259	18,487	17,840	17,305
Tomatoes to be produced	Total (thousand tons)	658.7	665.5	695.8	726.8
	From plastic tunnels	170	285	335	496
	From field	488.7	380.5	360.8	230.8
Peppers to be produced	Total (thousand tons)	219.6	240.3	249.8	259.6
	From plastic tunnels	19.6	30.2	39.0	52.8
	From field	200	210.1	210.8	206.8
Eggplants to be produced	Total (thousand tons)	123.3	129.4	133.8	135.0
	From plastic tunnels	15	21.8	26.6	33.0
	From field	108.3	107.6	107.2	102.0
Onion o be produced	Total (thousand tons)	340.9	351.2	356.8	380.7
	From plastic tunnels	-	-	-	-
	From field	340.9	351.2	356.8	380.7
Garlic to be produced	Total (thousand tons)	53.9	59.2	60.7	62.3
	From plastic tunnels	-	-	-	-
	From field	53.9	59.2	60.7	62.3
Other species to be produced (including cabbage and melons)	Total (thousand tons)	2108.8	2144.4	2158.6	2163.2
	From plastic tunnels	89.5	175.4	239.9	278.4
	From field	2019.3	1969.0	1918.7	1884.8
Total yield needed internally	Total (thousand tons)	3505.2	3590.1	3655.4	3756.9
	From plastic tunnels	304.1	512.4	639.9	860.2
	From field	3211.1	3077.7	3015.5	2896.7

By introducing a slightly higher average yield than the present one, we have calculated in Table no. 8 the necessary of the surface with field vegetable for internal consumption.

Table no. 8. Field surface cultivated with vegetables needed for domestic consumption

The year		2020	2027	2034	2040
The population		19,259	18,487	17,840	17,305
Tomatoes to be produced	Total (thousand tons)	658.7	665.5	695.8	726.8
	Average yield (t/ha)	18	20	24	26
	The surface (thousands of ha)	37	33	29	28
Peppers to be produced	Total (thousand tons)	200	210.1	210.8	206.8
	Average yield (t/ha)	16	18	21	23
	The surface (thousands of ha)	13	12	10	9
Eggplants to be produced	Total (thousand tons)	108.3	107.6	107.2	102.0
	Average yield (t/ha)	18	19	21	25
	The surface (thousands of ha)	6	6	5	4
Onion to be produced	Total (thousand tons)	340.9	351.2	356.8	380.7
	Average yield (t/ha)	15	19	23	28
	The surface (thousands of ha)	23	19	16	14
Garlic to be produced	Total (thousand tons)	53.9	59.2	60.7	62.3
	Average yield (t/ha)	5.5	7	8	9
	The surface (thousands of ha)	10	9	8	7
Other species to be produced (including cabbage and melons)	Total (thousand tons)	2108.8	2144.4	2158/6	2163.2
	Average yield (t/ha)	25	27	29	30
	The surface (thousands of ha)	85	80	75	72
Total yield needed internally	Total (thousand tons)	3211.1	3077.7	3015.5	2896.7
	Average yield (t/ha)				
	The surface (thousands of ha)	174	159	143	134

If about 10 thousand ha of solar are built during the period 2020-2040, in 2040 Romania will realize the necessary vegetables for domestic consumption on an area of about 150 thousand ha, of which, in field crops only 134 thousand ha (Tabel no. 8). Compared to the average area cultivated with vegetables in the period 2012-2017 (241 thousand ha), the area will decrease by 92 thousand ha, which will stimulate greater investments in mechanization of vegetable farms, irrigation water supply and other inputs. To the areas deduced from Table no. 8, regarding the supply of vegetables cultivated in the field for domestic consumption, is added those proposed in Table no. 9 necessary for field production of vegetables for export. Our country has good conditions for the production of vegetables for export such as tomatoes for industry, peas, green peppers, bell peppers, peppers for industry, melons and others. From this table it can be seen that vegetables for export can be produced on at least 4000-5000 ha, at an average production of 35 t / ha, which means 120-150 thousand tons, thus managing to balance the import-export balance in this case.

Table no. 9. Surface with field vegetables for export

Cultivated species	Specification	The year			
		2020	**2027**	**2034**	**2040**
Tomatoes (turning into pasta, 6/1 ratio)	Thousands of tons	40	50	60	80
	Average yield (t/ha)	25	30	35	40
	The surface (thousands of ha)	2	2	2	2
Bell, long and round pepper	Thousands of tons	5	8	10	12
	Average yield (t/ha)	18	20	22	24
	The surface (thousands of ha)	0.3	0.4	0.5	0.5
Eggplant	Thousands of tons	6	7	9	10
	Average yield (t/ha)	20	24	26	28
	The surface (thousands of ha)	0.3	0.3	0.4	0.4
Onion	Thousands of tons	10	12	14	16
	Average yield (t/ha)	25	30	35	40
	The surface (thousands of ha)	0.4	0.4	0.4	0.4
Other species	Thousands of tons	30	32	34	36
	Average yield (t/ha)	25	30	32	34
	The surface (thousands of ha)	1.2	1.1	1.1	1.1
Total field yield for export	Thousands of tons	91	109	125	154
	Average yield (t/ha)	21.7	25.3	28.4	35.0
	The surface (thousands of ha)	4.2	4.3	4.4	4.4

Tables no. 10 and 11 present a separate assessment of the export of vegetables from the field (53 million euros in 2040) and from protected areas (185 million euros).

Table no. 10. The value of the export of field vegetables

Cultivated species	Specification	Anul			
		2020	**2027**	**2034**	**2040**
Tomatoes (turning into pasta, 6/1 ratio)	Thousands of tons	40	50	60	80
	RON/kg	0.5	0.7	0.7	0.8
	Total RON (thousands)	20	35	42	64
Bell, long and round pepper	Thousands of tons	5	8	10	12
	RON/kg	4	4.5	4.8	5.2
	Total RON (thousands)	20	36	48	62.4
Eggplant	Thousands of tons	6	7	9	10
	RON/kg	2	2.2	2.2	2.3
	Total RON (thousands)	12	15.4	19.8	23
Onion	Thousands of tons	10	12	14	16
	RON/kg	1	1	1.2	1.2
	Total RON (thousands)	10	12	16.8	19.2
Other species	Thousands of tons	30	32	34	36
	RON/kg	2	2	2	2,5
	Total RON (thousands)	60	64	68	90
Total field yield for export	Thousands of tons	91	109	127	154
	RON (millions)	122	162.4	194.6	258.6
	Euros (millions)	25	33	40	53

Table no. 11. The value of the export of vegetables produced in plastic tunnels

Cultivated species	Specification	The year			
		2020	2027	2034	2040
Tomato	Thousands of tons	30	45	100	134
	RON/kg	3	3.2	3.2	3.3
	Total RON (millions)	90	144	320	442.2
Pepper	Thousands of tons	8	13	16	20
	RON/kg	5	5.2	5.5	5.8
	Total RON (millions)	40	67.6	88	116
Eggplant	Thousands of tons	5	12	15	18
	RON/kg	2	2.2	2.2	2.3
	Total RON (millions)	10	26.4	33	41.4
Cucumbers	Thousands of tons	15	42	62	75
	RON/kg	2	2.2	2.3	2.5
	Total RON (millions)	30	92.4	142.6	187.5
Lettuce	Thousands of tons	5	10	15	20
	RON/kg	3	3	3	3
	Total RON (millions)	15	30	45	60
Other species	Thousands of tons	5	10	15	20
	RON/kg	2	2	2	2
	Total RON (millions)	10	20	30	40
Total yield from plastic tunnels for export	Thousands of tons	68	132	223	287
	RON (millions)	195	380.4	658.6	887.1
	Euros (millions)	40	79	137	185

If these forecasts are made, we have presented in table 12 a calculation of the import-export balance of vegetable products.

Table no. 12. Import-export balance for vegetables

Import/export	Specification	The year			
		2020	2027	2034	2040
Total import	Thousands of tons	346.6	310.6	281,9	252.6
	Value RON - millions	1405.6	1285	1200.9	1129.75
	Value Euros - millions	293	268	250	235
Export to vegetables produced in field	Thousands of tons	91	109	127	154
	Value RON - millions	122	162.4	194.6	258.6
	Value Euros - millions	25	33	40	53
Export to vegetables produced in plastic tunnels	Thousands of tons	68	132	223	287
	Value RON - millions	195	380,4	658,6	887.1
	Value Euros - millions	40	79	137	185
Total export	Thousands of tons	159	241	350	441
	Value RON - millions	317	542.8	853.2	1145.7
	Value Euros - millions	66	112	177	239
Differences +/-	Thousands of tons	-187.6	-69.6	+68.1	+188.4
	Value RON - millions	-1088.6	-742.2	-347.7	+15.9
	Value Euros - millions	-226	-155	-72	+4

Starting with 2034, Romania can export an amount of vegetables at least as large as the imported one. However, if export prices remain lower than import prices, the balance of external payments will continue to be unbalanced. In order to create the desired balance, we will increase the quantity of vegetables exported from the plastic tunnels or we will increase the quality of the vegetables exported to obtain prices similar to those of the imported products. Another possibility would be to keep the export at the level shown in Table no. 12 and to reduce the imports at the level of about 200 thousand tons annually.

The economic model of vegetable growing involves the construction of about 500 hectares of protected areas each year. There are a variety of types of solariums with different surfaces and different prices/sqm depending on height, materials used, equipment, etc.

We propose that during the period 2021-2040, by introducing in the National Strategic Plan (NSP) a measure: *Investments in new plastic tunnels*, to build 500 ha new plastic tunnels annually. The costs per m^2 of a modern plastic tunnel, equipped with fertigation, amounts to 20 € / m^2, the costs for the period 2021-2027 being 700 million euros for an area of 3500 ha, respectively 100 million euros/year;

The development of vegetables growing also involves other investments:

- Storage spaces for 200 thousand tonnes of root vegetables, bulbs vegetables or cole crops, by introducing in the NSP a measure: *Investments in vegetable warehouses.* The costs are 2000 euros/ton. Between 2021-2027 it is proposed to build warehouses for the amount of 80,000 tons, totaling 160 million euros (about 29 million euros/year);
- Introducing in the NSP (2021-2027) of a special measure: *Modernization of field vegetable farms* (irrigation and mechanization to reduce labor costs). These amounts can be provided by European funds (50%), by NSP (25-30%) and farmers funds (20-25%).

A total of the financial effort for the development of vegetables is presented in Table no. 13.

Table no. 13. Investments needed to support the vegetable development program (2021-2040)

Specification	UM	2017	Proposals for development		
			2021-2027	2028-2034	2035-2040
New plastic tunnels constructions	ha	5000	3500	3500	3000
Costs / hectare	€ thousands /ha	x	200	200	200
Total investment costs	€ (millions)	x	700	700	600
Warehoses, including conditioning and delivery facilities	thousands of tones	12	80	80	30
Costs / 1000 tons	€ (millions)	2	2	2	2
Total investment costs	€ (millions)	x	160	160	60
Field farm modernization	ha	x	35000	35000	20000
Costs /hectare	€/ha	x	2600	2600	2600
Total investment costs	€ (millions)	x	91	91	52

Conclusions

Vegetable growing is an economic branch with a big development potential, but has not received support from the successive governments in Romania between 1990-2016. For this reason, vegetable consumption is based too much on imports.

The proposed economic model aims to increase the area of vegetables grown in plastic tunnels (500 ha/year) and to increase the average yield. Thus, the import will be reduced and the quantity of vegetables destined for export will increase, which would lead to a balance of payments while reducing the area under cultivation in the open field.

There are favorable premises for the realization of this model including: human potential and favorable climatic conditions for the production of quality vegetable products, as well as an internal market favorable to the consumption of local products.

The realization of the proposed model involves a series of costs for investments (plastic tunnels, warehouses, machining systems, etc.) and the modernization of production technologies, encouraging local research, restoring the consulting system and encouraging the association to allow farmers to enter into sales contracts with retail networksand export contracts.

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ON THE CONCEPT OF ECONOMIC ORDER

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Abstract: *The paper aims to approach the concept of the economic order as a mandatory framework inside which any economic activity can occur. To this end, after setting the definition of the economic order, a set of criteria to identify it are proposed and, based on them, a typology of the economic order is inferred. Both criteria and the typology are from the most general and abstract level, so any economic (empirical) order in the mankind history can be found. Finally, the paper proposes a protocol to reveal (that is, to observe, record, and recognize) the economic order by a generic individual.*

Key-words: *economy, economic order, order revealing, list of orders.*
JEL Classification*: B40, N00, P00.*

1. Preamble

The concept of order is extremely abstract and involves considerations that can range from the purest transcendentalism (such as the phenomenological one) to the most radical materialism. Of course, in this chapter, the concept of order will not be approached from these philosophical perspectives, but from a much more modest one, namely from a praxiological perspective. In general, human action is of three categories: a) theoretical action – it concerns the object/object interaction (ex: Physics or Mathematics); b) practical action – aims at the subject/subject interaction (e.g. Politics or Religion); c) praxiological action – it concerns the subject/object interaction (as the case of Economics). Of course, there are no pure "versions" of any of the three categories of action, the theoretical action involves inter-actions with the subject, the practical action involves inter-actions with the object, and the praxiological action involves both object/object interactions, as well as subject/subject inter-actions. However, the distinction between the three categories of human action can be made based on the dominance of one of the three distinct relationships that can occur between subject and object. In this conceptual context, we suggest that economic action in society is a praxiological type of human action. At least two important arguments can be made in the direction of acceptability of this suggestion:

- the economic has as a reason to be the procurement of the principles of biological existence of the individual. Although economic action has always been socially organized (for reasons of efficacy and, in the case of the current paradigm of optimality, for reasons of efficiency), its ultimate purpose has been the biological existence of the individual. The social is a gnoseological category, not an ontological one – more precisely, the social is an objectified reality (Popper's 3rd world), while the individual is an objective category (Popper's 1st world; NB: not to confuse the individual as object with the individual as subjectivity – the latter enters Popper's world 2); the actual individual is a natural individual of biological type that is connected, from an entropic perspective, with the non-anthropic natural environment. This means that the acquisition of the principles of biological existence of the individual demands, as a crucial function, its interaction with the natural environment – be observed this is the very definition of human action of praxiological type, that is, the subject/object interaction;
- the economic implies also to construct the means of achieving the goal (in general, the procurement of neg-entropy) which involves the non-anthropic nature. The economic inter-action of the individual generally involves two types of means:

- anthropic means – that is, inter-actions with other individuals, generated mainly by the division of labour which, in turn, necessarily leads to the exchange of activities with other individuals;
- non-anthropic means – that is, inter-actions with the non-anthropic natural environment. The category of non-anthropic means, indispensable in the economic process (at least, for the moment), therefore forms the second argument in favour of considering the economic as a praxeology. Although not necessarily from a logical perspective, as we proceed here, the suggestion that economics is a praxiological activity is not new in economic philosophy (and, more generally, in social philosophy) (Mises, 2018).

In this context, in the following, the concept of economic order will be approached under the "key" of praxeology. Of course, from the epistemological point of view, the next step is not difficult: that is, from the economic activity as a praxiological activity, to the economic discipline as a praxeology.

2. The concept of order

2.1. A common definition of the concept of order

The common language (natural or "civil"), of course, has a definition of the concept of order – this is considered a configuration, either spatial or temporal, or (most often) a combination of the two that characterizes a phenomenon and which is detectable in such a configuration, that is, it is intelligible to the empirical observer, without the latter having special powers for this observation. In other words, the "common" order is simply a pattern, static or cinematic, which the ordinary observer "throws" on a real phenomenon (either objective, subjective or objectified) and that pattern "fits" on the reality in question. Two aspects seem important in this point: a) what is the "method" by which the pattern in question is detected; b) what is the potential of truth (more concretely, of true prediction) of that pattern.

- it is quite obvious that, in the common acceptance of the term, the order observed at the non-specialized empirical level is of inductive type. The observer finds regularities, periodicities and other characteristics of replicability of a phenomenon and, by inductive inference, that is, by generalization, builds the order in question. Of course, inductive inference is liable to false, which is why the common concept of order is a vulnerable concept (deductive inference, to which we will refer immediately, is not less liable to false, but it is a different falsely, namely it is from a logical point of view. – see, here, the factual falsifiability of Popper) (Popper, 1981);
- as for the potential of allowing true predictions to be formulated, the common concept of order is extremely deficient. Of course, predictions can be made, but they are true (i.e. the previous predictive statement coincides with the later descriptive statement) only by chance. The explanation is that the generalization has an enormous probability of being local (both temporal and spatial), while the truth of a prediction is "governed" especially by the universal character of the major premise, not by its general character. Universality (at least hypothetical) is provided only by deductive inference. This is the logical difference between the inductive and the deductive truth: in the case of the inductive truth, the major premise of the syllogism is a *general* coverage law, while in the case of the deductive truth, the major premise of the syllogism is a *universal* coverage law.

Therefore, the common acceptance of the concept of order consists in considering the reality as it appears to the non-specialized observer and inferring the causality (so the pattern of order) by generalization, that is, by induction, not in its uncritical form, which we discussed above, but in the form of the *abduction* – which is the most plausible explanation, prima facie, obtained inductively but subsequently subjected to the deductive mechanism).

2.2. Sufficiency predicates of the concept of order

It is obvious that, from a scientific perspective (first of all, from an epistemological perspective), we need a different examination of the concept of order. This consists in identifying the attributes (or predicates) of sufficiency that the concept of order must verify in order to qualify as such. We propose that the list of these predicates of sufficiency be as follows (NB: $SPOx$ means sufficiency predicates no. x):

- ($SPO1$) *sensitive observability*: the phenomenon that will be the basis of the finding (or non-finding – from a gnoseological, but not ontological perspective!, the non-establishment of an order is equivalent to the non-existence of the order, because the order exists only associated with a subject. From such a point of view, the phenomenology is very close to the opinion expressed here) of an ordered configuration must be observable at the sensitive level, even though, of course, after this episode, the perception, conceptualization and judgment (reasoning) that ultimately lead to the formulation occur, by universalization of the order in question;
- ($SPO2$) *intellectual observability*: if $SPO1$ involves the natural senses of the cognitive subject, $SPO2$ involves the intellect of that subject. As we know, perception is the form that consciousness gives the sensation. For the formation of concepts and the preparation of judgments, the intellect of the subject is needed, which transforms perception into concept. Conceptualization is the crucial stage in the deductive identification of the order;
- ($SPO3$) *catalogue registration*: the application of the first two predicates of sufficiency leads only to the possibility of notifying an order. The effective notification of the order occurs only if the result of the $SPO2$ application is found in the already existing catalogue of possible orders, a catalogue that is, of course, accessible to the cognitive subject in question.

We can write that order (O) is given by logical conjunctions of the three predicates of sufficiency:

$O \leftarrow (SPO1) \wedge (SPO2) \wedge (SPO3).$

A brief discussion can be useful here:

(a) how does the cognitive subject come into possession of the catalogue containing the list of already known orders (with the basic characteristics, the defining ones, to ensure the recognizability of each one)? Obviously, only as a result of previous experience, therefore it will have to be accepted that this catalogue is a posteriori one;

(b) how effectively is the comparison of the conceptual sketch of the new possible order with the catalogue records made? Someone might ask, here, the postulation of a fourth predicate of sufficiency that would guarantee this operational capability. We consider, however, that this predicate would be redundant, which is why we presume that the cognitive subject has this intellectual capacity in the simple basis of its quality as a cultural subject;

(c) if the cognitive subject does not find, in the catalogue, the order that seems to him to be identified on the basis of the first two predicates of sufficiency, how s/he will proceed? Here are two alternative options:
   (c.1) s/he "decrees" that there is no order in the phenomenon concerned; here is a type 1 error – rejecting a true hypothesis;
   (c.2) s/he completes the catalogue with the new presumed order, with the distinguishing characteristics from those already existing in the catalogue; here is a type 2 error – admitting a false hypothesis. From a logical point of view, if we do not accept a priori nature of the order catalogue, the catalogue is formed, in time, and for each cognitive subject in part, exclusively practicing the type 2 errors;

(d) are there catalogues of orders that are over-subject (over-individual)? The answer is, obviously, affirmative: in the society, a common catalogue (social, communitarian) of orders works (and is admitted at the level of all individuals). Their inclusion in the common catalogue is made by democratic "vote" (for example, the second law of thermodynamics, also called the entropy law, to which we'll refer later, is imposed by the "vote" of the scientific community – mostly by the qualitative theoretical physicists. Also, in Economics the same thing happens, with the distinction that, this time, we no longer expect unanimity from economists involved, but only a majority that are, in time, reversible);

(e) both the order catalogues of individuals and those at community (social) level are, in their turn, on fields of interest or on typological fields: ontological orders, gnoseological orders, axiological orders, praxiological orders, etc.

2.3. A logical definition of the concept of order

Based on the three sufficiency predicates set out above, a logical definition of the concept of order can now be formulated: *order is a configuration, either spatial or temporal, or (most often) a combination between the two, which characterizes a phenomenon and is detectable as such a configuration, that is, it is intelligible to the empirical observer, cognitively and performative competent*. A summary of all the considerations regarding the concept of order from a logical perspective is provided, from a synoptic point of view, by Figure 1.

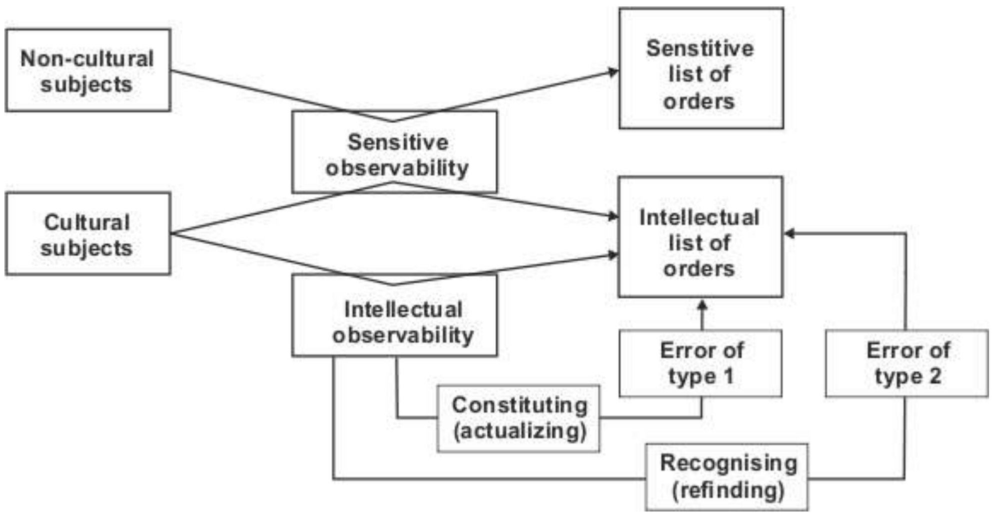

Figure 1. The mechanism of constructing the list of orders

Source: author

2.4. Revealing the order

Revealing the order refers to the conviction, at the level of the empirical observer, that there is an order in the entity that is the object of observation. As already shown, order detection is operated by the intellectual finding of the existence of the type of order detected observationally in the pre-existing list of orders. At least two questions result from this way of defining order relevance: a) what happens if the order is not disclosed; b) what happens if the empirical observation reveals a single order; c) what happens if the empirical observation reveals more than one order. We will examine them one by one.

(a) the survey does not indicate any order

If the result of the empirical observation does not overlap with any order existing in the list of orders, the subject will "decree" that, in the observed entity (thing, phenomenon, process), there is no order. The absence of an order does not prohibit praxeology in the entity concerned, but this praxeology will either be operationalized "in the blind", or will be based on the imposition of a sui generis order, generated by the operationalized praxeology itself. The second alternative – the imposition of a sui generis order – will enter in the order list a new order, by the type 2 of error;

(b) the survey indicates a single order

This is the standard case, in which the cognitive (and praxiological) subject identifies an overlap between the empirically observed order and a record (only one) in the previous order list. This is a conservative and unproblematic case;

(c) the survey indicates more than one order

Finding multiple records in the order list following empirical observation is more problematic than the two cases discussed above, for the following reasons:

- how will the order that governs praxiological action be "chosen"? We should point out that the situation where the praxiological action will take place in two or more orders simultaneously is not acceptable, because each order has, as we have shown above, its "logic". Operating under multiple orders at the same time not only introduces inconsistencies (or even contradictions) in the action (Mises, 2018), but can even evade rationality as such, given that a certain order is univocally associated with a certain model of rationality.
- in this situation the concept of adequacy is useful. This concept has a vagueness generated by its use in the common ("civil") language, so we will have to associate it with a rigorous meaning. We propose that, by praxiological adequacy of the revealed order, we understand the property of the order in question to be located at the smallest "logical distance" from the intrinsic logic implied by the praxiological action expected (we note that the adequacy of the relevant order does not refer to the adequacy of this order for the purpose of the praxiological action involved, but for the "middle" of that action, that is, as I said, to the intrinsic logic of the action in question). It is pedantic (and useless) to formulate models of "choosing" the appropriate order, because the real actor will never use such models (either because he does not know them or because the transaction cost for their use is prohibitive). We think that each actor will notice, on an intuitive basis, but above all, using past experiences, which is the most appropriate order among the ones revealed. The question arises: will the selection of the most appropriate order between two or many of my revealed orders influence the performance of the expected praxiological action? The answer is, of course, affirmative but, in most real cases – which are non-counterfactual – one will not be able to detect the "gain" or "loss" from choosing the most appropriate order (of course, ingenious speculation, but without any psychological basis or

praxiological can be done at any time, for the purpose of writing "scientific" articles);

- could the lexicographic ordering of the pre-known orders from the list of orders available to the observer provide a criterion for choosing the most appropriate order? We think that the answer here should be negative. A lexicographic order (that is, essentially a-criterion based) will not be of any use, since each praxiological situation has its own description of the intrinsic logic that is, as proposed above, crucial in choosing the most appropriate order.

3. Order and entropy

The concept of entropy (εντροπία, formed from "εν" – towards, and "τροπή" - turn, return) means to move towards ..., or to transform into the direction .... Therefore, the meaning is that of a propensity needed in a non-ambiguous direction) is a concept of maximum generality, having a triple significance:

- *ontological* (more precisely, *ontic*): parameter of a real existential entity (objective or subjective);
- *epistemological*: cognitive significance for the subject (indicates the level of order of the entity);
- *methodological*: selects the procedure by which the subject "interrogates" the object.

The referent (denoted) of the entropy concept is a state of an existential entity (system, phenomenon, process). This state is of the nature of order. Entropy is a parameter that moves "inversely" proportional to the order, more precisely: the size of the entropy is inversely proportional to the degree of ordering of the entity concerned. It is worth mentioning that entropy is non-static: in a closed system (e.g. our universe) the entropy increases permanently, i.e. spontaneously, in other words, the global entropy is irreversible: in a closed system the entropy cannot decrease or remain constant (this characteristic seems to have the nature of vitalism – Boltzmann tried to introduce a reversibility of entropy in closed systems, but the question is still unresolved, including mathematically).

Among the characteristics of entropy, we mention:

- is a size (function) of state; in addition, the value of the entropy variation does not depend on the intermediate stages (of the "path" – see the concept of path dependence), but only on the initial and final point;
- is a macroscopic property; more precisely, it means a macroscopic irreversibility derived from a microscopic reversibility;
- has a statistical meaning (based on the statistical formulation of the thermodynamics); this fact justifies the appearance of probability in the analytical formula of entropy from statistical thermodynamics (because probabilities can only model the average of a population);
- is additive.

Based on the above, entropy (Sethna, 2006) can be seen as an ordinator of reality (either objective or subjective). The most effective proxy for perceiving/identifying the order of reality seems to be the structure (Cramer, 1993) of the intentionally targeted entity. There are two categories of primitive structures, of ontological order, of the order:

- *causality structure*: "responsible" for explanations/predictions and for altering the identity of the entity (the explanation and prediction are logically equivalent and chronologically substitutable);
- *coexistence structure*: "responsible" for the functions/outcomes and for preserving the identity of the entity.

The preferential sense of change in the entities of objective reality is given by necessity, which is the only "arrow" of finality. Necessity is "designed" exclusively by physical laws (biological or chemical "laws" are ultimately reduced to quantum physics considerations).

Increasing global entropy is a macro-necessity (wrapping necessity), which is fuelled by local needs (including those in dissipative systems), although here a problem arises: even if we admit the comparability of static structures with each other, how can we compare a static structure? (a spatial configuration) with a functional structure, to decide on the order level?

Based on the concept of entropy and the entropic mechanism, let us examine the relationships that may exist between it and the concept of order. The following suggestions seem relevant to us:

- according to its significance from thermodynamics (the only "legal" meaning, although, especially economists but also researchers from other social fields, have demonetised the concept, as they usually do also, with other concepts taken from the natural sciences), entropy signifies a tendency towards homogeneity, to non-differentiation, of a process or system. In this sense, the idea that increasing entropy indicates an increase in disorder is wrong – any spatial-temporal, causal or functional configuration can mean an order. For example, financial stability is perceived as signifying a high degree of economic order, although it is characterized by a greater homogeneity of the financial process (by reducing the number or amplitude of the monetary shocks);
- in our opinion, the use of the entropy concept for identifying, "measuring" or evaluating the order must be done with great caution. We consider that, from a performative point of view, this concept does not bring much added value to the debate on the concept of order;
- in the case of dissipative systems (as in the case of economic systems) the concept of entropy can play a role but probably only under the aspect of an exotic label for phenomena/events that already either have their own associated terms, or can be called without calling the entropy term.

4. The concept of economic order

4.1. The additional sufficiency predicates for the concept of economic order

We have seen the predicates of sufficiency that ensure the identification of an order in general: a) ($SPO1$) sensitive observability; b) ($SPO2$) intellectual observability; c) ($SPO3$) catalogue registration. For the order notified on the basis of these sufficiency predicates to be an economic type order, the order in question must verify two more sufficiency predicates, namely:

(d)($SPO4$) *social nature of the phenomenon*: the phenomenon in question must be a

phenomenon that does not exist (does not occur) else than through social inter-action. As it is known, social "objects" exist only if and insofar as they represent artifacts, that is, are results of the action (more precisely, of the inter-action) of the individuals. A social "object" disappears if the social inter-action that gave rise to it ceases;

(e)($SPO5$) *the entropic nature of the social phenomenon*: as it is known, the

economic property refers to the property of entropic exchange between the individual (or groups, considered as a set of individuals) and the non-artefactual nature. Although the economic, on the line indicated by Lionel Robbins, is still considered to be that property related to the scarcity of resources in relation to the needs (on this line developing the ridiculous neoclassical economic quantitative modelling and not only), the definition of the economic must be restricted to the entropic processes (Georgescu Roegen, 1996).

Therefore, in order to have an economic order, the five sufficiency predicates must be checked simultaneously (Figure 2 summarizes the emergence of the concept of economic order).

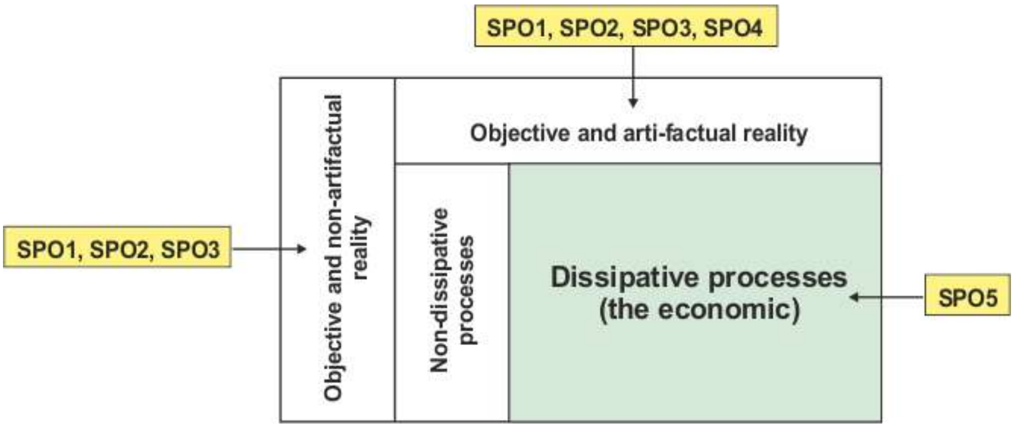

Figure 2. Logical genesis of the economic order

Source: author

From a formal point of view, the economic order (EO) is given by the following logical relation:

$EO \leftarrow (O) \wedge (SPO4) \wedge (SPO5)$

4.2. Revealing the economic order

Applying to an economic "object" (we have seen that an economic "object" is a social "object" that has a dissipative nature, i.e. entropic exchange between the individual and the non-artefactual nature), the relevance of the economic order is subject to the same commands to which a certain order is revealed. We would like to add here the idea that, in principle, there can be three types of economic order revealing:

(a) *anamnesic revealing*: the observer finds that the economic entity of interest is subsumed to an economic order that already exists in its list of economic orders;

(b) *projective revealing*: the observer, which is always theoretically loaded (even if this load is, for example, of the type of prejudgment), is therefore prepared and has the propensity to identify in the examined reality the order that it envisages as "necessary". The overlap between the intellectual desirability of the observer and the spatial-temporal configuration of the economic reality examined leads to the inclusion in the list of economic orders of an economic order – the one "just discovered";

(c) the *fantasy revealing*: the observer does not find, between the economic reality examined, and his/her list of orders no overlap and, at the same time, his intellectual baggage (his theoretical loading) does not lead him to the identification of an economic order. In this case, the observer can imagine an economic order either according to the wishes or according to a certain interest. For example, dictatorships are very inclined to disregard reality as it is (often aided by the obedient bureaucracy in this direction) and then imagine their economic order closest to their wishes or interests, and decisions made for the economy are subsumed by the economic order imagined, and not by the real economic order (the notorious cases in recent history refer to the communist dictatorships).

5. Economic order and economic entropy

Economic "objects" (phenomena, events, processes, systems) are dissipative objects, that is, objects that at least maintain (or even decrease) their entropy on account of the entropic exchange with the non-artefactual environment – the dissipative objects extract from the non-artefactual low entropy environment, or free energy (also called negentropy) and eliminates in the non-artefactual environment high entropy or bound energy. The standard case, which sends directly to thermodynamics (as it is, in our opinion, correct, as said before) is the increase of the entropy of the non-artefactual environment by converting the free energy (for example, the energy stored in oil) into heat. It is worth mentioning that, always, the high entropy eliminated in the environment is higher than the low entropy extracted from the environment, which leads to the idea of accelerating the entropization of the Universe (which is a closed system) in the presence of dissipative systems (the most "entropic active" dissipative systems are living systems).

It seems, therefore, that, as far as the economic order is concerned, the connection with entropy is much more obvious and, it seems, logically necessary. In this regard, we will keep the following considerations:

- in the economic field, the concept of entropy should refer to the degree to which economic freedom is self-testable (the closest proxy here seems to be the free functioning of the market). By economic self-testability we propose to understand the self-regulation of the economic system without generating in society (Marro , 2014) negative non-treatable externalities (either in nature, or in terms of quantity or in terms of their production speed) or treatable with unacceptable costs that can cause unsustainable situations (the so-called social cost of Ronald Coase);
- therefore, no matter the volatility, disorganization or the like, which the half-learned economists introduce with enthusiasm under the entropy label (especially in the financial field);
- it turns out that, from the perspective of economic policy, a government intervention must necessarily occur whenever economic freedom becomes entropic above a certain degree. This intervention will provide exactly those "ingredients", which take the form of mandatory rules, which will help the economic system (market) to reduce its production of negative externalities beyond the allowable limit for sustainability;
- of course, such a concept of economic entropy must simply be developed from the beginning (from „zero”), and not necessarily based on a simple instrumental perspective, but on a much broader and more substantiated one – that is, from the perspective of social philosophy.

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THE INCREASE OF GRADUATES' EMPLOYMENT: A 360° APPROACH

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Abstract: *In the current context of the dynamics and volatility of the global labor market, the employability of graduates of higher education is a key indicator of identifying the extent to which a university successfully fulfills its assumed mission - education. At the international level, the researchers have proposed different approaches to the concept of employability and have built different models to determine the components of the employability and the ways to increase it. The purpose of this paper is to present the most important models of employability and to introduce a new approach that extends the debates on this concept by involving all stakeholders - students, graduates, employers, university. The paper also identifies the role of the university in supporting the employability of the graduates and introduces a model of curricular development applied to reduce the gaps between the competences provided in the curriculum and those required on the labor market in order to increase the rapid insertion in the labor market of the graduates. The proposed model has been applied and validated within a project funded by the European Social Fund, generating significant results by redefining the practical competences and improving the practical training of the students from 8 degree programs.*

***Key words**: employability, employability of graduates, model of employment, curriculum development model, 360 degree approach.*
***JEL Clasification**: A23, D01, I25.*

1. Introduction

The success of a higher education institution is determined by the extent to which it manages to successfully achieve the three components of its mission: education, research and the economic and social development of the community in which it operates. On the other hand, a university measures its success in the educational component of its mission through the success of its graduates. In the Romanian universities, the success of the graduates is given by the extent to which they managed to find a job in the first 6 months after graduation in the field in which they were trained. However, employability in higher education must be understood and addressed not only by measuring the number of those who have found a job at the 6-month interval after graduation, but must also be addressed by the correspondence between the skills and competences acquired by the graduate and those required on the labor market, respectively in terms of the extent to which the graduate uses the knowledge, skills and competencies gained in a "post acquired after graduation". Thus, the employability of the graduates of higher education has become an important debate at international level, both from the perspective of defining, but also from the perspective of measuring and developing models that establish a framework of measures, tools, strategies that will lead to increasing the insertion of graduates on the labor market by supporting their employability. For example, Hillage and Pollard (1998) quoted by Dacre Pool, Lorraine and Sewell, Peter John (2007, p. 2), suggest that: "In simple terms, employability is about being capable of getting and keeping fulfilling work. More comprehensively employability is the capability to move self-sufficiently within the labour market to realise potential through sustainable employment". They define the content of the concept of employability through the following main elements:1. the "employment assets" of a person consisting of his knowledge, skills and attitudes; 2. "implementation" includes career management skills, including job search; 3. "presentation" refers to "skills for obtaining jobs", for example CV writing, interview techniques. Finally, Hillage and Pollard mention that the maximum use of "employment assets" is highly dependent on personal circumstances and external factors (for example, the current level of opportunity in the labor market). Therefore, the approach of employability must be complex, it goes beyond the qualities and characteristics of the graduate and the door involves all stakeholders - students, graduates, employers and the university.

In this context, the purpose of the present paper is to make an inventory of the most important models of employability presented in the international research, on the one hand, and to propose a new way of approaching this concept, starting from the experience generated within the project. *Integrated activities and measures to support students in the process of transition from school to the labor market in conditions of non-discrimination and social inclusion*, funded from the European Social Fund, on the other hand.

2. Models of employment: analysis of specialized literature

The framework tools that allow students to become successful, "value-added" graduates are so-called employability models.

USEM model of employability (Yorke and Knight, 2004; Knight and Yorke, 2004) is probably the best known and respected model in this area. USEM is an acronym for four interrelated components of employability: understanding, aptitudes, efficacy beliefs. The authors suggest that behind the USEM model is:"an attempt to put thinking about employability on a more scientific basis, partly because of the need to appeal to academic staff on their own terms by referring to research evidence and theory" (Knight and Yorke, 2004, p. 37).

Knight and Yorke (2004) have provided a list of thirty-nine attributes that fall into three categories of personal qualities, core skills and process skills - Aspects of Employability (Yorke and Knight, 2004, p. 22) quoted by Ahmed Umar Rufai, Ab Rahim Bin Bakar, Abdullah Bin Mat Rashid (2015, p. 51).

A. Personal qualities

1. Malleable self theory: belief that attributes (e.g. intelligence) are not fixed and can be developed. 2. Self-awareness: awareness of own strengths and weaknesses, aims and values. 3. Self-confidence: confidence in dealing with the challenges in employment and life. 4. Independence: ability to work without supervision. 5. Emotional intelligence: sensitivity to others' emotions and the effects they can have. 6. Adaptability: ability to respond positively to changing circumstances and new challenges. 7. Stress tolerance: ability to retain effectiveness under pressure. 8. Initiative: ability to take action unprompted 9. Willingness to learn: commitment to ongoing learning to meet the needs of employment and life. 10. Reflectiveness**:** the disposition to reflect evaluatively on the performance of oneself and others

B. Core skills

11. Reading effectiveness: the recognition and retention of key points. 12.Numeracy: ability to use numbers at an appropriate level of accuracy. 13. Information retrieval: ability to access different information sources. 14. Language skills: possession of more than a single language. 15. Self-management: ability to work in an efficient and structured manner. 16. Critical analysis: ability to 'deconstruct' a problem or situation. 17.Creativity: ability to be original or inventive and to apply lateral thinking. 18. Listening: focused attention in which key points are recognized. 19. Written communication: clear reports, letters, etc., written specifically for the reader. 20. Oral presentations: clear and

confident presentation of information to a group. 21. Explaining: orally and in writing. 22.Global awareness: in terms of both cultures and economics

c. Process skills

23. Computer literacy: ability to use a range of software. 24. Commercial awareness: understanding of business issues and priorities. 25. Political sensitivity: appreciates how organisations actually work and acts accordingly. 26. Ability to work cross-culturally: both within and beyond UK. 27. Ethical sensitivity: appreciates ethical aspects of employment and acts accordingly. 28. Prioritizing: ability to rank tasks according to importance. 29. Planning: setting of achievable goals and structuring action. 30. Applying subject understanding: use of disciplinary understanding from HE programme (e.g. marketing, finance, human resource mgmt. etc). 31. Acting morally: has a moral code and acts accordingly. 32. Coping with ambiguity and complexity: ability to handle ambiguous and complex situations. 33. Problem-solving: selection and use of appropriate methods to find solutions. 34. Influencing: convincing others of the validity of one's point of view. 35.Arguing for and/or justifying a point of view or a course of action. 36. Resolving conflict: both intra-personally and in relationships with others. 37. Decision making: choice of the best option from a range of alternatives. 38. Negotiating: discussion to achieve mutually satisfactory resolution of contentious issues. 39. Teamwork: can work constructively with others on a common task

Lorraine Dacre Pool (2007) designed and published the CareerEDGE model and then developed the Employment Development Profile. Both concepts have appeared in many publications and are used in many universities nationally and internationally. The CareerEDGE model provides the framework through which students take responsibility for developing their own employability, and for the stakeholders in higher education ways to support students in order to develop from well-trained and successful graduates. CareerEDGE stresses that it is essential for students to be given opportunities to reflect (reflective learning) and evaluate experiences, in order to develop higher levels of self-efficacy, self-confidence and self-esteem, the fundamental elements of employability.

CareerEDGE model of the employability of the graduates was introduced in 2007 and since then it has been extremely positive, both nationally and internationally. The original article (Dacre Pool and Sewell, 2007) published in Education + Training magazine, has been downloaded nearly 30,000 times, and the model has appeared in a number of other authors' publications (figure no. 1).

CareerEDGE model the model reproduces the basic elements of employability, respectively self-esteem, self-confidence, self-efficacy, elements that are built by reflecting and evaluating key elements that highlight the most important facets of "employability", respectively Career Development Learning-CDL experience-work and life, degree subject knowledge, skills and understanding, generic skills (including enterprise skills, emotional intelligence).

Career Development Learning-CDL in the context of higher education it has been described as being „the concern to help students acquire the knowledge, concepts, skills and attitudes that will equip them to manage their careers, that is, their permanent evolution in learning and work" (Watts, 2006, p. 2).

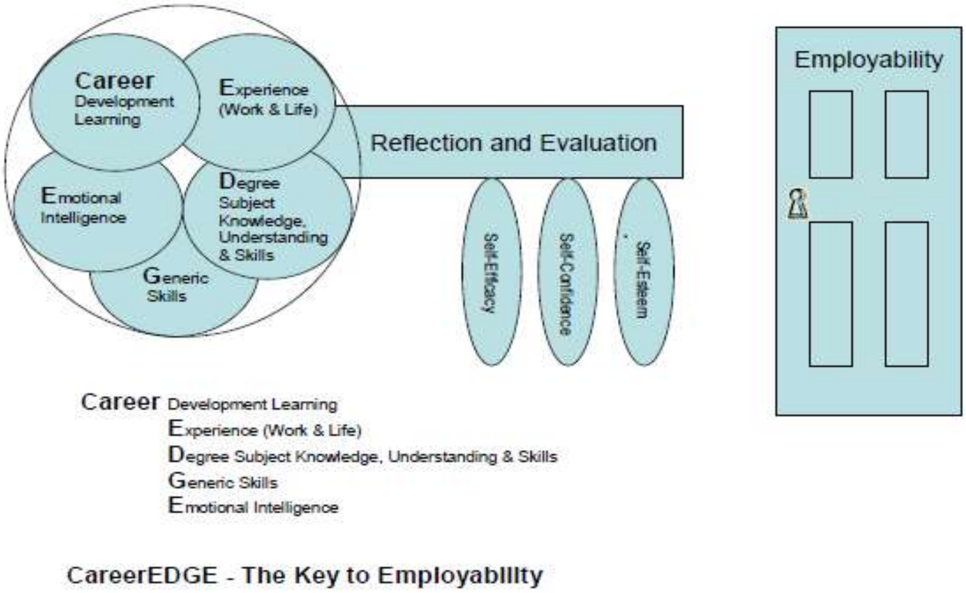

Figure no. 1. CareerEDGE - The Key to Employability

Source: Dacre Pool, L. and Sewell, P., 2007. The key to employability: developing a practical model of graduate employability. *Education + Training,* 49(4), pp. 277-289.

Experience (work and life) - work experience requested by employers and approved by most HR staff was one of the major points presented by Wilson Review of Business-University Collaboration (2012). Most universities have recognized this thinking and have dedicated staff to help students get involved with a form of work-related learning. Learning activities in connection with practical activities allow students to develop the professional skills expected by employers, but also to develop thinking about how the theory and knowledge gained through their undergraduate studies can be related to the real world.. They can thus incorporate real-life experiences into their studies.

Degree subject knowledge, skills and understanding refer to the capabilities of the student.

Generic skills (including enterprise skills) - generic skills, including creativity and innovation skills. Many of the generic skills listed by employers as essential to graduates, such as communication, teamwork, problem solving, digital literacy and more, including those sometimes classified as "enterprise skills" such as creativity and innovation, are also skills that help students make the most of their academic studies. As such, they can be developed within the university curriculum as a result of learning to make students aware. Thus, students can see how they develop their skills and competencies that employers are looking for and will be able to provide evidence to this effect.

Emotional intelligence - has a significant effect on relationships and well-being (Mayer, Roberts and Barsade, 2008). It is a desirable attribute for potential leaders (Walter, Cole and Humphrey, 2011). It refers to how people perceive, understand and manage emotion; The activities that help this type of development can be, and in many cases are already incorporated in the curriculum. Any activity that encourages students to work together, communicate effectively, negotiate with each other and reflect on their learning experiences can be used to develop Emotional intelligence (EI). Research has shown that it is possible for students to improve their Emotional intelligence ability (EI) along with confidence in this ability (Dacre Pool and Qualter, 2012).

Emotional Intelligence was defined by Coleman (1998) as “the capacity for recognizing our own feelings and those of others for motivating ourselves, and for managing emotions well in ourselves and in our relationships”, and Jaeger (2003, p. 634) has indicated that emotional intelligence can be improved by teaching and learning in higher education and is positively correlated with academic achievements.

Another model identified in the literature is Model of Graduate Employability for Higher Education created by Ahmed Umar Rufai, Ab Rahim Bin Bakar, Abdullah Bin Mat Rashid (2015) and which takes into account the gap between the demands of employers and the preparation of graduates of higher studies. The model establishes the connection between higher education and the labor market. The components of this model (figure no. 2):

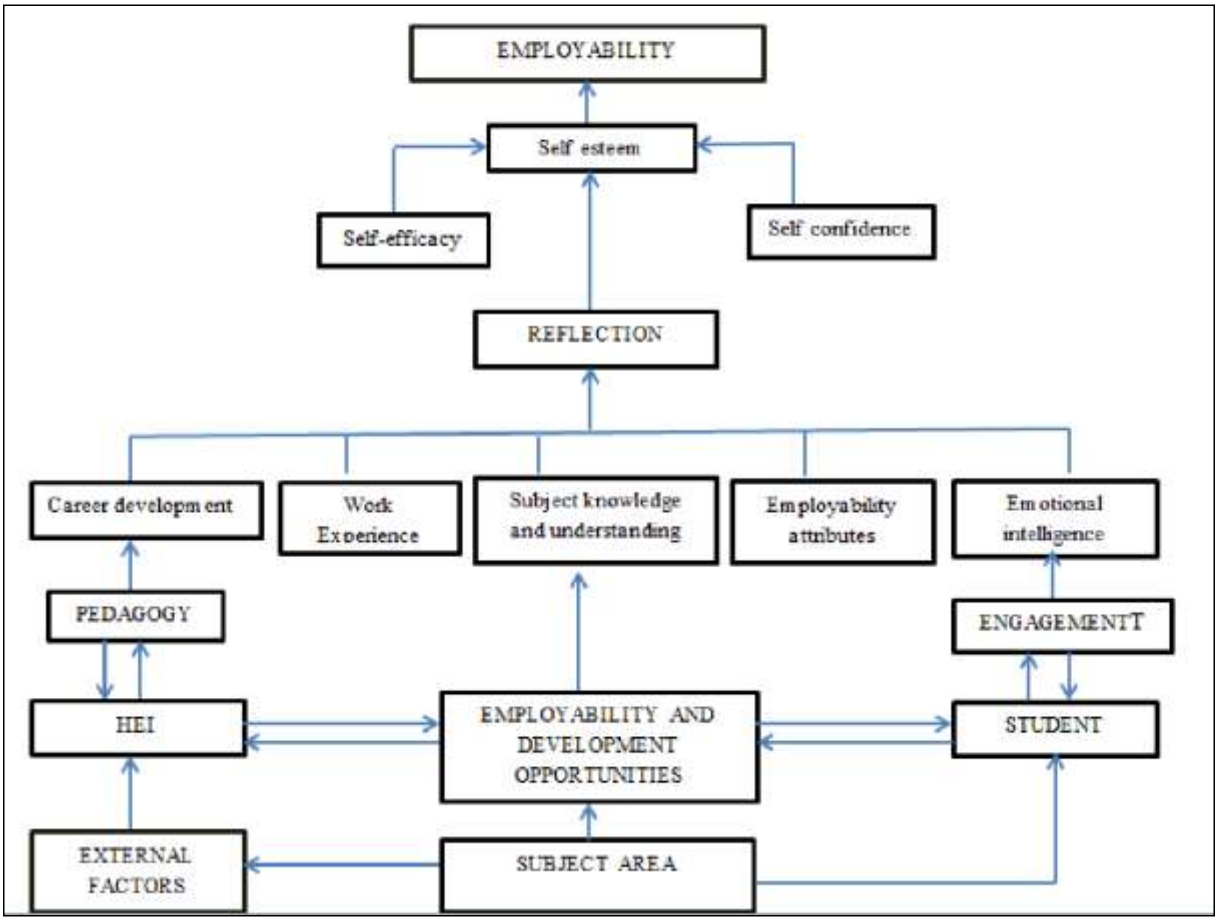

Figure no. 2. Model of graduate employability skills for Higher Education

*Source***:** Ahmed Umar Rufai, Ab Rahim Bin Bakar, Abdullah Bin Mat Rashid, 2015. Developing a Sustainable Practical Model of Graduate Employability for Higher Education**.** *International Journal of Education & Literacy Studies*, 3(1), p. 47.

The "Key to Employability" model reproduced in The Pedagogy for Employability Group (2004, p. 5) provides a list derived from research carried out over the last twenty-five years and suggests that employers expect to find that the following generic skills have been developed in graduates: imagination/creativity, adaptability/flexibility, willingness to learn, independent working/autonomy, working in a team, ability to manage others, ability to work under pressure, good oral communication, communication in writing for varied purposes/audiences, numeracy, attention to detail, time management, assumption of responsibility and for making decisions, planning, coordinating and organising ability, ability to use new technologies (not included in the list above but mentioned in many others and an important element). The starting point for the "Key to Employability" model was the theoretical DOTS model (Law and Watts 1977), which consists of:

– ”Planned experiences designed to facilitate development:
– Decision learning - decision making skills;
– Awareness of the opportunity - knowing the existing job opportunity and the imposed requirements;
– Transitional learning - including job search and self-presentation skills;
– Self awareness - in terms of interests, abilities, values, etc.”(Watts, 2006, pp. 9-10).

All the models identified and presented were based on the identification of those competences, skills and qualities that the graduate of higher studies must possess in order to integrate quickly into the labor market. In general, researchers have adopted different approaches to make this identification.

3. Development of a model to increase graduates' employment based on 360° feedback

Starting from the premise that the employability of the graduates represents a concern not only of the future employee, but also of the institution that trains it, respectively of the future employer, the development of a model of employability must integrate all the stakeholders (figure no. 3).

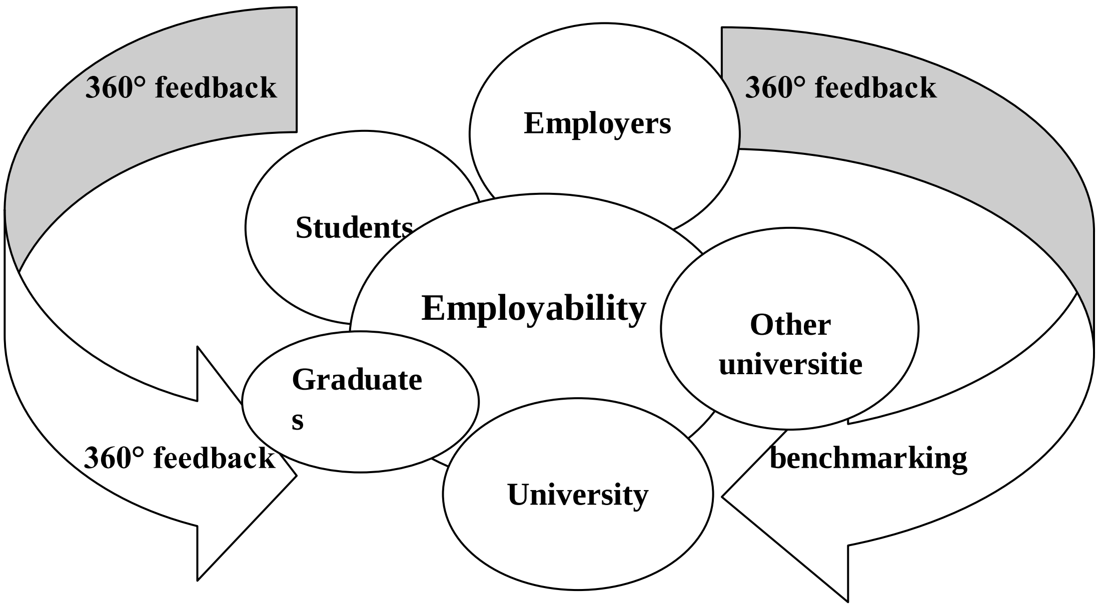

Figure no. 3. Groups interested in supporting employability
Source: the authors

However, we appreciate the fact that the university is the catalyst for employability through the role it plays in its development, such as (figure no. 4):

1. Development of consultation mechanisms to identify the set of knowledge, skills and competences that ensure high employability in the field of studies, with the involvement of all interested groups;

2. Develop a curriculum that ensures the provision of that set of knowledge, skills and competences with the consultation of interested groups;

3. Developing new methods and experiential learning contexts to support the provision of the set of knowledge, skills and competencies that ensure employability with the involvement of all interested groups;

4. Developing interaction contexts between students/graduates and employers;

5. Providing career counseling services to assist the student/graduate in approaching the career and choosing a way to integrate into the labor market in accordance with personal interests, qualities and values.

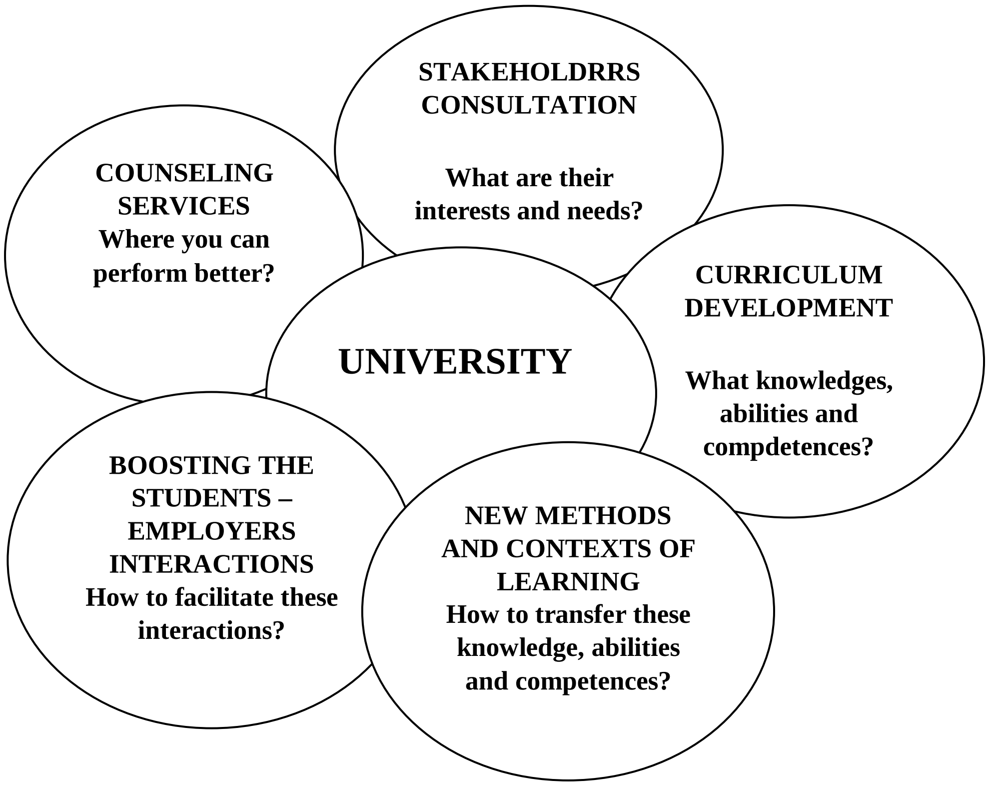

Figure no. 4. The role of the university in supporting the employability of graduates
Source: the authors

In this context "360° feedback" is a method that was developed and implemented within the project *Integrated activities and measures to support students in the process of transition from school to the labor market in conditions of non-discrimination and social inclusion*, funded from the European Social Fund, for consulting all interested groups internal and external to the university for the development of the practical component of the curricular offers that will lead to a better correlation of the skills and competences formed with those required on the labor market and, thus, to a much faster insertion of the future graduates. The model was developed and applied to improve the practical training of the students by conducting the internships provided for in the curriculum. This development process was approached according to the transformation process as follows (figure no. 5):

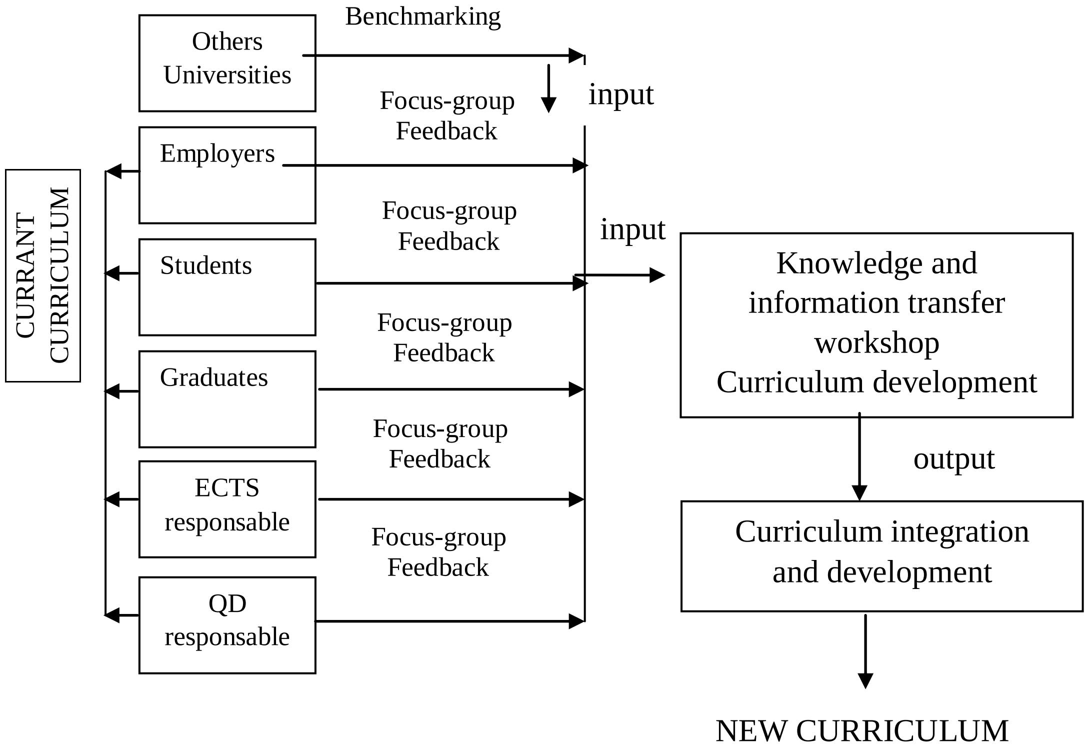

Figure no. 5. Curriculum development model for increasing employability
Source: the authors

The input within the curricular development process was ensured by two methods: benchmarking analysis and focus group development. Thus, the input of knowledge and information within the process was ensured by involving all groups interested in employability. On the other hand, it was aimed to identify good practices at national and international level regarding the set of professional and transversal competences developed through internships, aspects of curriculum and discipline contents, respectively models of partnership and collaboration with the socio-economic environment. for conducting internships, etc. The documentation, in order to identify the best practices, was done in the online environment and by contacting directly the selected universities as benchmarking references for collecting the data and information necessary to carry out the analysis (educational plans, methodologies and regulations regarding the development of the specialized practice, partnerships and modalities. for the implementation of students at a potential workplace etc.). Following the analysis, a final report was drawn up, which represented an input in the development of focus groups but also in the activity of integration and curricular development. Focus groups were conducted on field of study based on the discussion guide and structured questionnaires were used to collect data and information from employers, students, graduates, ECTS leaders of the targeted study programs, as well as the managers of the Center for Management Quality and University Programs. The working support tools, consultation and feedback collection (interview guide, structured questionnaires) were developed based on the benchmarking analysis report and the current curriculum of each study program considered. Thus, the practical and transversal competences, methods of providing the competences, the way of organizing the specialized practice, as well as other aspects were viewed and analyzed at 360°, which allowed to identify the existing gaps between the current curriculum and the market requirements so that the conditions of the graduates' employability are ensured. Within each focus-group (study program) the following participated: minimum 10 economic agents in the field, minimum 5 students from the target group representing the study program, 2 graduates of the study program, 1 ECTS manager, minimum 1 responsible for the quality of education within the applicant university). For each focus group, a final report was drafted, which represented an input into the curricular integration and development activity. Also, for the transfer of the results, workshops were held with the persons designated for curricular development at the level of the selected study programs. Each person in charge of curricular development, redefined the set of professional competences related to the specialized practice in correlation with the educational plans, identified and established the correlations between the redefined professional competences and the contents related to the specialized practice, respectively the number of hours allocated on contents that lead to their development at the study program level.

4. Conclusions

In this paper, the employability is approached as a quick and directly productive integration to a job compatible with the graduated field of study. The speed of integration in the labor market, as well as the ability of the graduate to put into practice in the particular context of a job and of a certain company.Thus, we appreciate that a comprehensive approach to the concept must bring into play the role of each party. The models presented in international research as tools for increasing employability are focused largely on identifying a set of skills, competencies and characteristics of the graduate that lead to its rapid integration into the labor market.This paper emphasizes that beyond the personal capacity of the graduate, there are a number of methods by which the university, together with the partners in the socio-economic environment, identifies and provides the set of skills that make the graduate immediately productive, on one hand, respectively support the graduate to choose that job where he can perform and achieve professional success, on the other hand. In this context, in order to support employability, universities must develop consultation mechanisms to identify the set of knowledge, skills and competencies required in the labor market, develop a curriculum that ensures the provision of that set of knowledge, skills and competences, develop new methods and experiential learning contexts that support the provision of the skills set, develop contexts of interaction between students / graduates and employers and not least help the student / graduate in approaching the career and choosing a way to integrate into the labor market in accordance with the interests, personal qualities and values. "360 ° Feedback" is a method that was developed and implemented within the project *Integrated activities and measures to support students in the process of transition from school to the labor market in conditions of non-discrimination and social inclusion*, funded from the European Social Fund. The model can be extended to be applied for the design of the entire curriculum related to a study program.

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THE ROLE OF ECONOMIC INEQUALITY IN ACHIEVING THE SOCIAL JUSTICE

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Abstract: *The paper aims to analyse from a logical and philosophical standpoint the role of economic inequality in achieving social justice by answering a series of questions pertaining to the area of interest of this problem. Thus, the concept of inequality and some perspectives of inequality will be examined when it is applied in the social field defining, within the paper, the concept of social inequality. Next, we will define the concept of economic inequality as a species of social inequality, identify some causes of economic inequality and make some assessments regarding the sustainability of economic inequality. The definition given to the concept of social justice will help us to observe how economic inequality influences the achievement of social justice. At the end of the paper we will refer to the mechanism by which economic inequality can improve the achievement of social justice and we will answer the question why the government should improve the achievement of social justice.*

Keywords: *inequality, economic inequality, social inequality, commutative social justice, distributive social justice, social fruits.*
JEL Classification*: A14, D63, Y20.*

Preliminaries

The economic inequality is most often seen as something wrong or unacceptable in a free and democratic society. There exist analysts, either from economic field or from other disciplines (especially from sociology or social philosophy) (Piketty, 2013), who thunder against such an inequality. Of course, there exist also analysts which consider not only the economic inequality is not wrong at all, but even it is beneficial for the society as a whole, even if some individuals must pay the price for that (Hayek, 2011). The fact that scholars having so penetrating minds, get so polar (in fact, diametrically opposed) position regarding the economic inequality is sufficient to invite us to think about.

The paper has two main aims: a) to provide a general examination of the concept of inequality and, more specifically, of the concept of economic inequality; b) to draw a logical and philosophical link between the economic inequality and the social justice, under the idea of the possible role of the economic inequality to achieve (although it seems be quite paradoxical), either directly or indirectly, the social justice. We'll proceed by formulating ten questions which we formulate our answers to.

1. What the inequality is it?

In the most common sense, by inequality is understood an unbalance between two entities (numbers, objects, properties and so on). So, the inequality means a difference between two (or more) entities of interest, based on given criterion. For example, two entities can be unequal based on a criterion and equal based on another one, or may be more unequal from a perspective than from another one. Logically, the property of a comparable pair of entities to be unequal has not a negative meaning per se, but only if the criterion used to extract the inequality is „endowed" with such a meaning, whatever be it.

2. What the social inequality is it?

A more complicated issue is constituted by the concept on inequality when it is applied to the social field. In such a case, the inequality is focused on the individuals - sometimes the concept of social inequality is applied to groups, to regions, or even to countries. Such applies are very problematic, because there is not a consciousness of groups, or of population in a region or in country to assess the state of the social inequality.

Here we have to do with statistical/econometrical standpoint - so we have two perspectives of the social inequality: a) the assessment of the involved individual – s/he feels be in an inferior state compared with other individuals from the point of view of a given criterion (for example, social position); b) the assessment of an external observer (be it researcher, policy maker and other of the same). The two evaluations have a big probability to be different.

From a psychological point of view, it seems be genuine the self-assessment of the involved individual, while from a sociological (or political) point of view, it seems be more „objective" (that is, more qualified to be generalized at the entire society) the assessment of the external observer. This is way many scientific researches use the interviews or questionnaires to get the expected results, although an aggregation of individual perception is quasi-impossible because the impossibility to aggregate or to ranks the individual preferences (see, here, the famous theorem of Kenneth Arrow regarding the impossibility to order (to rank) the hierarchies of preferences) (Maskin and Sen, 2014). The social inequality can be seen from many criteria, beginning with the primary goods (for example, the freedom) and ending with the social benefits granted by the government, passing through differences in the degree of education, of abilities, of talent, of health, and so on.

Essentially, the social inequality cannot be established without a general accepted benchmark. For example, no inequalities could be found if the society in case has as general value the inequality, but only if that society has as general value the equality (for example, the old Indian social organization on closed castes was based on the value of social inequality, so nobody could observe a social inequality from that perspective. More than that, even the involved individuals do not feel themselves experiencing a social inequality). More than that, there is an issue very interesting which is raised especially by the mathematicians, namely: at a certain rate of exchanging the places among involved individuals in an unequal society (given a criterion of the social inequality), the social inequality does not exist. Of course, the issue has not only mathematical (statistical) implications, but also psychological and sociological ones (and, of course, it will be not developed more now).

3. What the economic inequality is it?

The economic inequality is a species of the social inequality. To extract the economic inequality from the social one, it is sufficient to assign the social inequality to an economic variable. The most used such a variable is the income (no matter in its gross or net variants). There are many arguments to choose the income as benchmark for judging the economic inequality, the most relevant being the amazing versatility of the income (especially in its monetary kind) to get any other economic (and not economic only) goods and services. Such versatility is explained by the fact the money has the greatest liquidity among all assets an individual could get. Before examining the meaning of the economic inequality, it is useful to add that another economic variable is a good candidate to extract the economic inequality from the social one: the wealth.

There is an interesting scientific debate regarding the primacy of either the income or the wealth to be the genuine benchmark for the economic inequality. Because the two concepts are causally correlated (the wealth is nothing else than the accumulated income - here resides the controversial debate regarding the taxation of the wealth: since the income has been already taxed when it has been received, it results that taxing the wealth, which is the taxed accumulated income, means to tax twice the income) it seems to be more adequate to consider the income as benchmark for assessing the economic inequality.

Figure 1 gives a visual expression to the relationships between the social inequality and the economic one.

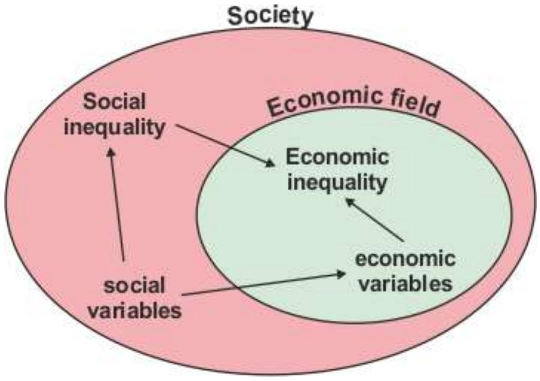

Figure 1. The basic relationships between social and economic regarding the inequality

Source: author's own works.

4. Which are the sources of economic inequality?

The economic inequality can occurs from many causes. It is not necessary to qualify the causes for economic inequality as unfair causes. It is easy to show that the economic inequality can arise (in fact, in the most cases arises) based on law, correctness, fairness and so on. Of course, illegal or unfair causes or mechanism by which the economic inequality rises, could exist, but this is not sufficient to establish a ”criminal hand” in occurring of such an inequality. Briefly, the „natural” causes based on which the economic inequality occurs are also of inequality type: a) the inequality in education, which leads to inequality in productivity, so to inequality in income; b) the inequality in chances (opportunities) to get good jobs and, so, to gain good incomes; c) the inequality in talent, to identify and exploit businesses, financial speculations and other of the same; d) inequality in wealth inheritance, to start from a better line in competition with others; e) the inequality in own capacity to deliver work, imagination, ideas, innovation, etc. in the economic activity. The five basic sources of arising the economic inequality are simply facts, they do imply no value judgment. However, there are social philosophers (for example, Hayek) who argue not only on the inherence of the economic inequality, but also on the desirability of such an economic inequality. The main two arguments of this position is, roughly, the followings: 1) the individuals who experience the low level of income (or wealth, if the case) will desire to make efforts in order to enter the middle, and, after that, the high level of income, so the economic inequality constitutes an causal impulse to exchange the held position with a better another; 2) the high social class from the income criterion, just because has a high level of income, will tend to use the income (or the wealth) to get new products, new services, new scientific researches, etc., and from these results will also benefit the low social class. In our opinion, the two arguments are not invalid or false, but they do not exhaust the economic inequality problem. By the contrary, the negative effects of a large economic inequality seems go beyond the positive effects mentioned before. Any case, the economic inequality should be examined more analytical and, if possible, without any ideologically prejudges.

5. How sustainable the economic inequality is it?

A question can arise: from the standpoint of its own kinematics, the economic inequality is increasing or decreasing. Social. When we speak about its own kinematics, we understand the internal mechanism of the economic inequality phenomenon, without any governmental intervention. We’ll make some qualitative comments in this matter:

- the economic inequality means, in last instance, the inequality of the economic action potential. The individual who stays in low level of income (or wealth) has less resources to use in order to improve its state;
- based on the previous, it can be said the economic inequality is auto-catalysing, so it is characterized by positive feedbacks;
- so, by itself, the economic inequality never will reduce, but by contrary, it will increase;
- the result is the economic inequality is not sustainable (Dinga, 2018) by itself (for example, it has not the capacity to become, by itself, invariant around a natural level - for example, the labour market, by itself, is moving the rate of unemployment around the natural rate of unemployment - either as NAIRU or as NAWRU).

This auto-catalysing feature of the economic inequality leads us to understand that this phenomenon must be controlled from exterior. Clearly, the economic inequality is a species of the market failure - as, for example, the case of positive externalities which the free market has not the capacity, by itself, to produce them. But the external control should control what exactly? In our opinion, the economic inequality, as automatic and inherent result of the free market mechanism, should be controlled for one and only one reason: the social justice achieving.

6. What means social justice?

First of all, the social justice must be distinguished by…justice understood as judiciary process, that is, as the process to generally apply the law. By the contrary, the social justice applies primary principles which, in turn, constitute basis for the law applying.

Secondly, the social justice is characterized by the following fundamental features:

- it doesn't depend on the normative framework of the society. The social justice is based on the same principles either in a cvasi-anomic society or in an over-nomic society. This autonomy of the social justice from the normative framework means it has not only a primacy face to codified norms, but also a primacy face to democracy (however, the social justice hasn't primacy face to freedom, which is the most primary good) and other predicates of modern societies (equity in treatment, equality of chances, etc.);
- it addresses basically the primary goods only (the primary goods are the goods established by the social contract: equality of freedom, equality of access to social opportunities, equality before the law, etc. The secondary goods (for example, the economic goods and services) are conditioned in their availability by the initial distribution of the primary goods)
- the social justice has two basic effects (results) of its functioning:
    - an equitable social fruits distribution: the functioning of society produces social fruits (economic product – PIB, opportunities for social positions, education, health and so on). The first basic effect of the social justice (Dinga, 2018) is to distribute equitable – that is, proportional with the merit (by merit we understand the degree of contribution to obtaining the social fruits (that is, not the passive endowment of individuals with potential, dexterities, talent, etc., but the result of effectively applying of that endowment) such social fruits
        - the social justice having such an effect are called commutative social justice
        - the commutative justice is based on fairness

- a fair social fruits redistribution: based on and, at the same time, despite the correct functioning of the commutative social justice, social inequalities (and, as consequences – see Figure 1 – economic inequalities) could appear. As shown above, these inequalities rise naturally. But, no matter how the inequalities occurs, those of them which are not the result of the individuals fault must be compensated by society based on a primary goods named solidarity. This time, the distributed social fruits must be redistributed in order to (partially) mitigate the social (and economic) inequality. So, the redistribution of distributed social fruits are not based on merit, but on the inherent incorrect asymmetries generated by the (either correct or incorrect) functioning of society
- the social justice having such an effect are called distributive social justice
- the distributive social justice is based on rightness

Figure 2 illustrates the above conceptual consideration regarding the concept of social justice.

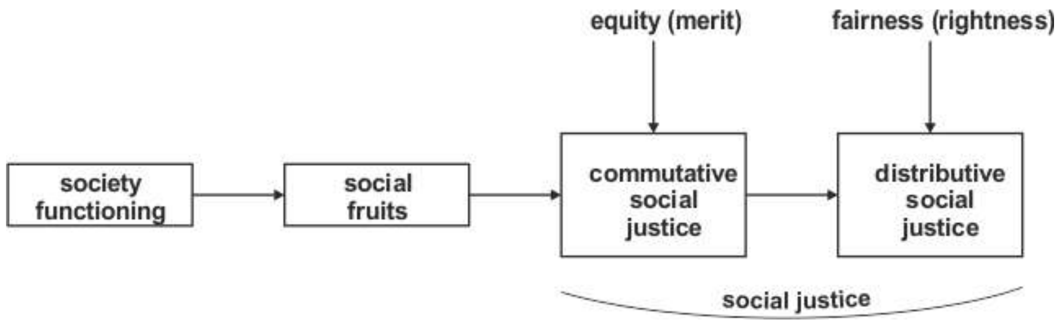

Figure 2. The two kinds of social justice functioning

Source: author's own works

7. What means to achieve social justice by the economic inequality?

To achieve by social justice by the economic inequality should mean to use either the increasing or the decreasing of the economic inequality to get the social justice. Before give a description of such a possibility, some preliminary considerations must be done:

- firstly, using the dynamics of the economic inequality (James, 2016) in order to achieve (or, at least, to ameliorate) the social justice implies to use the second type of social justice, namely the distributive one. Indeed, the commutative social justice, which acts proportionally with the objectified merit, cannot do else than to replicate the state of economic inequality as it is. Instead, the distributive social justice, by its possibility to modify the degree (or even the structure) of the inequality could lead to an improvement of the social justice (obviously, from the social justice standpoint, we cannot say if an improvement of the economic inequality means its increasing or its decreasing. This ambivalence (or ambiguity) of the economic inequality improvement could be very provocative in deepening the research regarding the relationship between social justice and economic inequality);
- secondly, it must be previously and autonomously proved that the dynamics of economic inequality is a causal factor for the social justice improvement;
- thirdly, it must be clearly established what means the social justice improvement. Taking into account the distributive social justice only (as explained above) it seems an improvement of the social justice should mean an elimination (at least in some a measure) of the non-entitlement occurred in the society even by the commutative justice functioning;

- fourthly, it must be acquired assurance on the irreversibility of the social justice improvement gained by using the economic inequality appropriate changing.

Based on the four methodological a priori precautions, we can now address the issue of the meaning of social justice improvement by intermediation of the economic inequality changing, namely: to improve the social justice using the economic inequality changing means to drive the economic inequality level (and, if possible, the economic inequality structure) towards increasing of the degree of rightness within the society. In our opinion, an insidious risk arises, however, here, namely to „improve" so much the social justice by modifying the economic inequality so the beneficial social tension induced by the economic inequality into society (Dinga, 2018) be destroyed and, as consequences, be oriented to worsening the social justice (that is, the appearing of an adverse effect).

Figure 3 shows the evoked adverse effect in the matter.

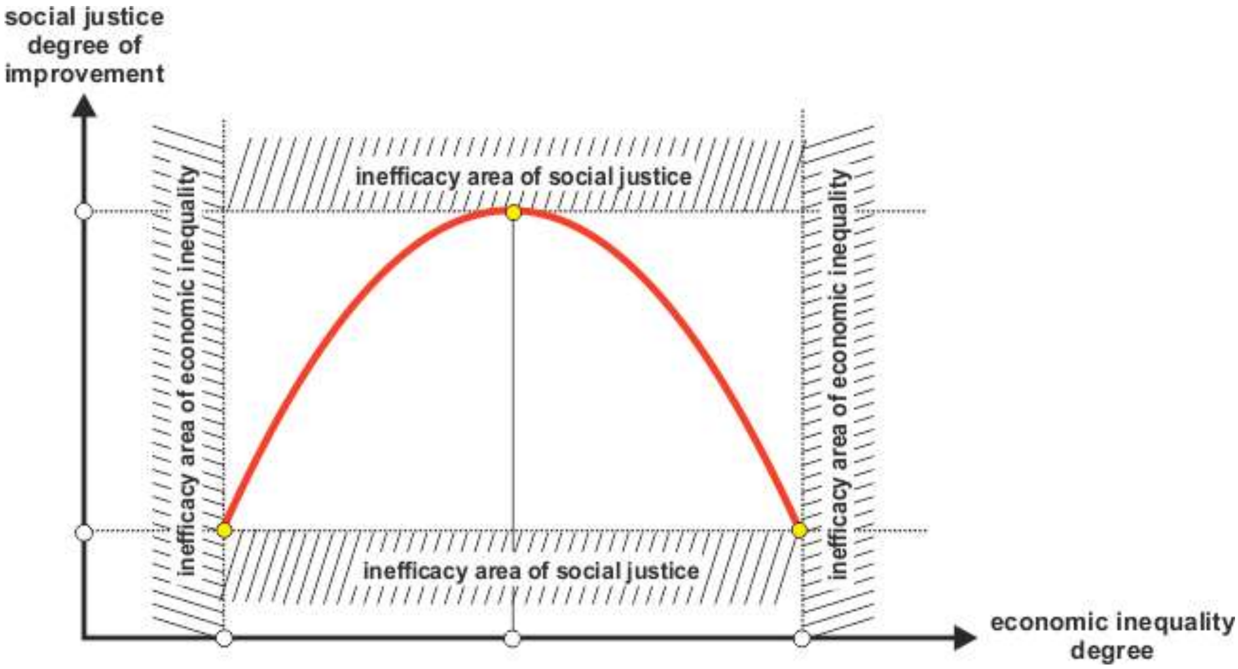

Figure 3. The dynamic relationship between economic inequality and social justice
Source: author's own works

8. Could economic inequality play a role to achieve the social justice?

We're dealing now with a significant issue linked to the hypothesis the economic inequality can be used as a vehicle to get (or improve) the social justice into the society. The main points in the matter are the followings:

- according to Figure 3, could exists either situations in which the social justice is improved (its curve is concavely increasing) by increasing the economic inequality or situations in which the social justice is worsened (its curve is concavely decreasing) by increasing the economic inequality (of course, the symmetry of the social justice curve is not mandatory. Figure 3 only tries to suggest a general relationship between social justice and economic inequality, not a realist one);
  - the second case – worsening the social justice by increasing the economic inequality – is manageable by applying the Rawlsian principle of difference;
  - but, what about the first case – improving the social justice by increasing the economic inequality? In our opinion, here another principle is needed (probably a „mirrored" principle of difference), so gaining more social justice

by accepting an increase of the economic inequality (the research of the author regarding such a „mirrored" principle of difference is in processing, and will come back, in another paper, with another intervention in the matter);

- there are four thresholds in the relationship between social justice and economic inequality:
  - a minimal threshold under which the economic inequality cannot be reduced without affect the „social competition" within the society;
  - a maximal threshold over which the economic inequality cannot be increased without affect the „social competition" within the society;
  - a minimal threshold of the social justice, under which the society cannot anymore considered as a free and democratic society;
  - a maximal threshold of social justice over which the society could become too homogeneous, dangerously approaching to a centralized society.

9. What about the mechanism which economic inequality deliver social justice through?

The social justice, as mentioned before, requires rightness within the society. Although the economic inequality is not always the necessary result of non-fairness (Rawls, 2011) (or of non-entitlement) (Nozick, 2013), however it signalizes either a risk regarding the social justice quality, or a risk of social justice worsening. Consequently, the economic inequality seems to be a good proxy to handle, at least partially, the process of social justice conservation. The mechanism (Dinga, 2020) through which the economic inequality could (or is expected to) improve the social justice can be as follows:

- previous information held:
  - the four thresholds above evoked;
  - criteria to verify the action of the two principles of difference which „govern" the process of reducing/increasing the economic inequality (to be mentioned that Rawls does provide no such a criterion – for example, how to assess that a given reduction of the economic inequality move the most disfavoured social class into a better state compared with any other possible state? Probably, a list of these possible states should be at hand for the political decision makers and, also, a procedure to compare the new state occurred with all the states in the list. Obviously, here is a large area of developing specific research);
- the „algorithm":
  - <u>step 1</u>: identifying the economic variable which can constitute the target for generating (and measuring) the economic inequality (the most probable such a variable could be the current income);
  - <u>step 2</u>: identifying the institutional (normative) way to modify the established target so the risk to induce non-entitlements be maximally reduced – for example, introducing the progressive taxation on the personal income where/when by then it had worked a flat tax in the matter;
  - <u>step 3</u>: assuring the new levels both of economic inequality and of social justice do not escape from the correct quadrilateral in Figure 3;
  - <u>step 4</u>: be possible to assess an improvement of social justice, more exactly, have a procedure to decide the society is in a better state for the most disfavoured social class as a result of algorithm applying, than in other possible (imaginable) solution (it is obviously that Rawls was influenced in such a statement by Leibniz – God cannot put us than into the best possible world).

10. Why should Government improve the social justice?

Government (that is, the state) has appeared as consequence of the social contract. The main clause of the social contract is the responsibility of the state for all the individuals (or, in modern societies, for all the citizens). The essential of this clause is to monitor that the distribution of the primary goods among the individuals be as equal as possible. The social justice is a signal regarding such equality of the primary goods distribution, so managing the economic inequality (based on the two species of the Rawlsian principles of difference) is one of the institutional path through which the social justice can be improved.

Conclusions

The paper aims to offer the scientific community, from the economic field, a logical and philosophical approach to the way in which economic inequality influences the achievement of social justice. Thus, the concepts of inequality, economic inequality and social inequality (Piketty, 2013) were definite and economic variables were identified that can be observed, analysed in the basic relationships between economic inequality and social justice, such as income and wealth. In the study of this problem, a number of five basic natural sources (causes) of the appearance of economic inequality were identified, mentioned and analysed. The evaluations, of a qualitative nature, focused on the internal mechanism of economic inequality and it has been concluded that this phenomenon must be controlled from the outside in order to obtain social justice The definition formulated for the concept of social justice, with its two categories, commutative social justice and distributive social justice, came to support the formulation of the specific characteristics of this concept, the way in which social justice functions and were has identified some effects in the correct social redistribution of the social fruits. There were also established a number of four precautions of methodological nature necessary to achieve social justice through economic inequality. The scientific formulation of the meaning of improving social justice, through the exchange of economic inequalities, led to the study of the identified adverse effect and proceeded to analyse the dynamic relationship of the two concepts.

Regarding the mechanism by which economic inequality could lead to the achievement of social justice, the paper established that it contains previously held information (4 thresholds were established, as well as the verification criteria) and the application algorithm (in four steps).

Finally, we have shown that social justice is a signal regarding the correct distribution of primary goods and thus economic inequality is one of the institutional modalities by which social justice can be achieved.

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THE ROLE OF THE LOCAL DEVELOPMENT STRATEGIES FINANCED FROM EUROPEAN FUNDS, THROUGH THE LEADER MEASURE - NATIONAL RURAL DEVELOPMENT PROGRAMME 2014-2020, IN SUPPORTING INNOVATION AND REGIONAL DEVELOPMENT IN ROMANIA

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Abstract: *The paper aims to carry out an analysis of the performance components of the local development strategies funded under the LEADER Measure from the National Rural Development Program 2014-2020. The article analyzes the Local Development Strategies financed in each development region of Romania from the perspective of the most relevant performance indicators achieved through the implementation of these strategies. The paper emphasizes the contribution of the Local Development Strategies to supporting the bioeconomy, as a smart specialization field, in the National Strategy for Research, Development and Innovation and within the smart specialization strategies adopted by Romania's development regions. The "bottom-up" approach, specific to the LEADER concept, is highlighted, and the role of the Local Action Groups implementing the Local Development Strategies is outlined, in supporting the development and innovation at the local level, as well as in supporting the areas of smart specialization within the relevant regional and national strategies. The paper concludes that the field of bioeconomy, benefiting from the huge potential of the Romanian agriculture, in the context of a growing food industry, could represent a key sector of development of the Romanian economy.*

Keywords*: Local Development Strategy, Local Action Groups, LEADER measure, smart specialization, bioeconomy.*
JEL Classification: *O10, O13, F63.*

1. Leader measure in Romania in the programming period 2014-2020

1.1. Leader characteristics. Local Action Groups common features

LEADER, the acronym for “Liaison entre Actions de Developpment de l'Economie Rurale”, is the European Community initiative assisting rural communities with the goal of improving the quality of life and economic prosperity of the local area. It has been used for about 20 years to engage local actors in the design and delivery of strategies, decision-making and resource allocation for the development of their rural areas. From the very beginning LEADER was a tool to introduce and test new methods and concepts, or allowing innovation in traditional approaches and linking the institutions.

Local Action Groups (‘LAGs’) are the local partnerships at the core of LEADER, associating public and private partners for composing well-balanced groups, representing the interests of the existing local groups coming from different socio-economic sectors in a particular area, created to develop and implement a Local Development Strategy for the respective territory. In terms of decision making, private partners and associations should participate at least by 50% in the local partnership. A LAG could be specially established to get LEADER preparatory support, but it could be also established on grounds of existing partnerships.

LAGs are allowed to apply for financial assistance in the form of grants for operating expenses in order to implement the Local Development Strategy (LDS) in its territory. A Local Development Strategy is meant to be a bottom-up decision-making process, addressing a well-defined local area (rural area and small cities with a maximum 20.000 inhabitants representing eligible LEADER territory). In addition, LDS is integrating activities concerning the proposed allocation of resources as well as the monitoring activities, and is taking into account the whole range of local stakeholder concerns. The main aim of the strategy is to plan and develop medium and long-term development policies, each strategy being based on a detailed analysis of the current situation of the area's local needs, in which the potential and development opportunities should be clearly identified. The objectives of Local Development Strategies are reached through individual projects, implemented by various stakeholders from the rural communities in question.

There are seven key features that sum-up the LEADER approach, outlined in the Figure no 1, each of them being complementary, having positive mutual impact with other features throughout the process of implementation, with permanent effects on the dynamics of rural areas and their capacity to solve their own problems.

Figure no. 1. Key features of the LEADER approach

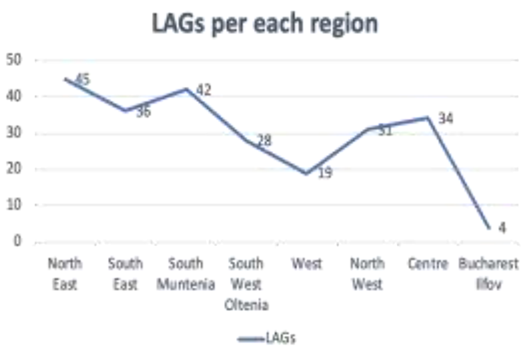
By the end of 2018, LEADER measure was implemented by 2.800 Local Action Groups (LAGs**),** covering 61 % of the rural population in the EU and bringing together public, private and civil-society stakeholders in a particular area.

Currently, LEADER measure is present in Romania for the 2014-2020 EU multiannual financial framework, being integrated into the National Rural Development Programme which is co-financed from the European Agricultural Fund for Rural Development (EAFRD). The measure is designed to draw on the community-based capacity and knowledge acquired through community-led local development in the previous funding LEADER and to further develop rural space and communities by targeted interventions on building infrastructure, developing businesses and assisting the poor with social inclusion and jobs.

1.2. LAGs in Romania

LAGs are very advanced institutional models of rural community actions in Romania, and were built on previous community action projects, such as the Romanian Social Development Fund project steering committees for small infrastructure projects, empowered to implement the actions financed in the rural areas, starting with 1999.

For the 2014-2020 multiannual programming period, there are currently 239 rural LAGs in Romania, implementing 239 strategies in the eight development regions, with an allocated budget representing 7% of the total public resources allocated for NRDP 2014-2020. The financed strategies cover territories inhabited by 90.81% of the rural population, with a large involvement of people living and working in rural areas in the planning and implementation of LDS and based on real needs of the territory. From the perspective of the correlation between the regional disparity index and the number of LAGs, North East region has the largest number of LAGs (45) with the lowest value of disparity index (62.5), while the smallest number (4) is in the more developed region, Bucharest Ilfov (221.5), thus showing that LEADER is operating where is most needed, thus creating favourable environment for stimulating individual initiatives. The disparity index is the report between the GDP of the region and national GDP.



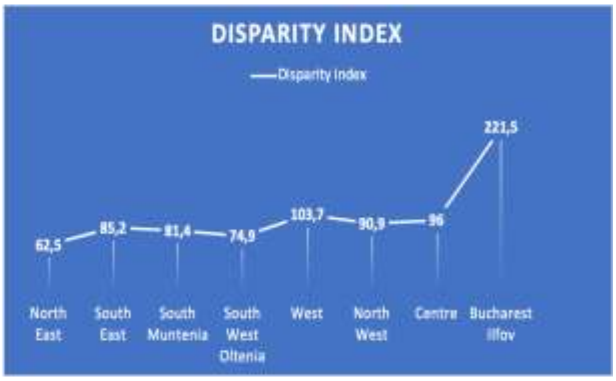


Figure no. 2. Correlation between LAGs/region and the disparity index

Source: National Federation of LAGs and National Commission for Strategy and Forecasting, 2019.

The promoters of the funded projects are represented mainly by SMEs (51%) and public institutions (35%), followed by other types of local actors (11%) and NGOs (3%), which ensure the adoption of a multisectoral approach in LDS implementation, representing a variety of needs, interests and points of view. Leader measure through LDS is a significant financial support for SMSs development.

2. Relevant measures in the National Strategy for Research, Development and Innovation and the eight smart specialization strategies

2.1. National Strategy for Research, Development and Innovation

The National Strategy for Research, Development and Innovation aims to support and invest in based on the following three categories of priorities:

- priorities of intelligent specialization that involve the definition and consolidation of areas of high competence in which there are real or potential comparative advantages, and which can significantly contribute to the economic growth. The areas of intelligent specialization are highlighted in Figure 3.

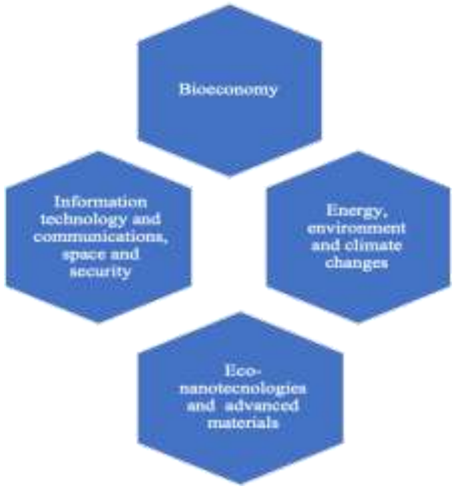


Figure no. 3. The areas of smart specialization for the strategic cycle 2014-2020

Source: adapted from NSRDI.

- priorities with public relevance, which aim to invest resources and creativity in areas where research and development respond to concrete and pressing social needs. The strategy supports the following priorities with public relevance: health, heritage and cultural identity, respectively new and emerging technologies;
- fundamental research that remains a priority in the strategy. The basic sciences (mathematics, physics, chemistry, as well as life sciences, nature and engineering) are targeted, as well as humanistic and socio-economic disciplines.

Even if the LEADER contribution is not outlined in the strategy, agriculture is considered as the one of the main sectors in Romania, both by its contribution in economy and the share of occupied population, demonstrating its vital social role. Therefore the present paper is focusing on the bio-economy contribution as national area of smart specialization in rural areas.

2.2. Regional strategies for smart specialization

The strategies for smart specialization aim to encourage the increase of economic competitiveness in the eight development regions, by creating and developing innovative companies, introducing modern technologies in the research-development-innovation units, capitalizing on these infrastructures and stimulating the partnership between universities, institutions of research and companies, in those areas where the competitive advantages for each region were registered. The strategies are meant to feed several Operational Programs (including the National Rural Development Programme) with actions' ideas to be implemented during 2014-2020.

Continuing the approach started at national level, this chapter is outlining the role of bio economy as regional priority. The authors have performed an analysis focused on this field, with the scope of revealing the relationship between areas of intelligent specialisation in NSRDI and the smart specialisation fields/priority areas in the eight regional smart specialisation strategies. The main conclusion is that, in terms of bio-economy priorities, the strategies are completely aligned. In addition, the analysis for North-West and Bucharest-Ilfov regions were performed considering the draft strategies prepared in 2019, thus confirming the interest for bio-economy field as smart specialisation for the future programming period. However, several regional strategies are proposing general indicators, with no specific indicators for bio economy. In addition, the LEADER contribution is not clearly underlined. These could be a key recommendation for the next programming period for all the regional priorities highlighted by the strategies.

Table no. 1. Analysis of regional strategies for smart specialisation

Region	Regional priorities of smart specialization related to bieconomy	Strong points of the region (SWOT analysis) related to bioeconomy	Indicators contributing to bio-econor
North East	Agri-food with the areas of competence: agronomy, horticulture, livestock, food engineering, forestry and wood engineering; agri-food biotechnologies	15 research stations in the agricultural and forestry field, which are subordinated to the Academy of Agricultural and Forestry Sciences; tradition in the field of organic farming	no specific indicators related to bioeconomy
South East	Agri-food and fishing industry; agri-food biotechnologies	Significant number of research and development stations in agriculture and fish farming. Revealed Export Advantage Index above 1 for relevant agricultural products	number of projects that created safe, affordable, and nutritionally optimized food; Number of RDI personnel involved in the development and application of agro-food biotechnologies ; Number of
South Muntenia	Agriculture and food industry. The activities of interest concern the agriculture and food industry (genetic material, species diversification, irrigation systems, high nutritional value products, fertilizers, short and online distribution chains, agricultural machinery). Bioeconomy-circular economy (bio fuels, eco-fertilizers etc.)	Over 60% of the area of the region is located in the Câmpia Română, an excellent agricultural area. The region presents the largest arable area at national level.	no specific indicators related to bioeconomy
South West Oltenia	Agriculture and food industry: safe, accessible and nutritionally optimized food products; innovative products, practices, processes and technologies in cereal crops, vegetables, horticulture, forestry; production of seeds for field crops adapted to extreme weather phenomena - drought, floods; agro-food industrial biotechnologies; bio-fertilizers etc	Functional clusters at regional level focused on agriculture. Revealed Export Advantage Index above 1 at regional level for the product group "Grain mill products" . 8 functional agricultural research stations in the region.	no specific indicators related to bioeconomy
West	Agri food sector: safe food products, accessible and nutritionally optimized, development of new products and processes; bio-energy; agri-food biotechnologies	Agri-food cluster; universities with activity field in agriculture; fertile soils	creation of centers for the production, collection, processing and marketing of local products; support for the implementation of product quality and safety standards; partnership of
North West	Agri-food field	Market leaders with majority domestic capital in certain markets including agri-food; clusters in the agri-food field; intensive research and development activity, demonstrated by the number of patents obtained in the agri-food field	no of companies supported in the field of agri-food; no of agri-food companies cooperating with RDI entities; no of researchers etc.
Centre	Agri food sector	Agriculture is the main occupation and source of income of the inhabitants of the rural area, benefiting from an important and diversified natural potential; the share of the population employed in agriculture is high (30.2%)	no specific indicators related to bioeconomy
Bucharest Ilfov	Food industry and food safety	critical mass of companies and researchers; existing RDI infrastructure with positive results of capitalizing on the research results; skilled workforce	no specific indicators related to bioeconomy

3. Contributions of LDSs financed through LEADER in reaching program monitoring indicators

The paper is continuing the approach of demonstrating the role of bio economy at the level of the LDS`s projects financed by the Leader measure. According to the Regulation for the European Agricultural Fund for Rural Development, LEADER proposed measures emphasize that special attention is given to the different categories of farms, activities or certain areas:

- young farmers: they are considered guarantors of the future of agriculture in that they can bring energy and new ideas for this sector. They are faced with various problems, particularly in terms of access to the land and credit;

- small farms: they have a special contribution to the diversification of products, habitats preservation, but in some areas of EU face different challenges than those faced by larger farms.

Taking on board the above suggestions, the projects considered for analysis in the present paper are related to the installation of young farmers (sub-measure 6.1) and development of small farms (sub-measure 6.3), financed by LEADER measure within the National Rural Development Programme (NPRD) 2014-2020.

According to this document, in Romania there are 427,074 farms with the economic size between 4,000 - 50,000 € SO (Standard Output is the measuring unit of the agricultural holdings), which are evaluated as having the potential to develop viable agricultural businesses at the market level, if they are supported.

The implementation of the sub-measure 6.1. at the local level through LDS aims to increase the number of young farmers who are starting, for the first time, an agricultural activity from a commercial point of view, as farm managers. The younger generation of farmers can more easily meet the demands of the society related to farmer profession and those demanded by Regulations of the Common Agricultural Policy: food security, organic farming, hygiene and animal welfare, diversification, obtaining high quality local products, awareness of the role that agriculture plays in combating climate change (use of renewable energy, biodiversity, reduction of carbon dioxide emissions), job creation and economic growth in rural areas, awareness of the negative effects caused by the abandonment of agricultural lands.

The sub-measure 6.3 is supporting small farms through investments, in order to increase the competitiveness of agricultural holdings by equipping them with efficient machinery and equipment in relation to the current agricultural structure, as well as investments to modernize the farm (especially those of medium size and small and medium farm associations) and to improve the quality of fixed assets.

The stage of implementation of these sub-measures in the current programming period is well advanced and, considering the high number of submitted and financed projects, it clearly demonstrates the high interest of the rural communities for these sub-measures (Table no. 2).

Table no. 2. Stage of implementation for the relevant sub-measures 6.1 and 6.3.

Title of the sub-measure	Allocation (MEUR)	Projects submitted (no)	Projects selected (no)	Projects contracted (no)/Value (MEUR)	Payments (MEUR, 2018
6.1. Support for the installation of young farmers	434	13.491	9833	9766 projects/Value 401	307,7
6.3. Support for the development of small farms	249,2	10.694	7671	7203 projects/Value 108	77,3

Source: National Federation of Local Action Groups

In terms of distribution of projects under the mentioned sub measures, the number of projects is correlated with the number of LDSs/each region (Figure no 1), taking into account the strenghts included in the regional smart specialisation strategies (Table no 1). In addition, if correlated with GDP/inhabitant, it demonstrates the projects are implemented where they are most needed, in the regions with lower GDP levels (Figure no. 4.).

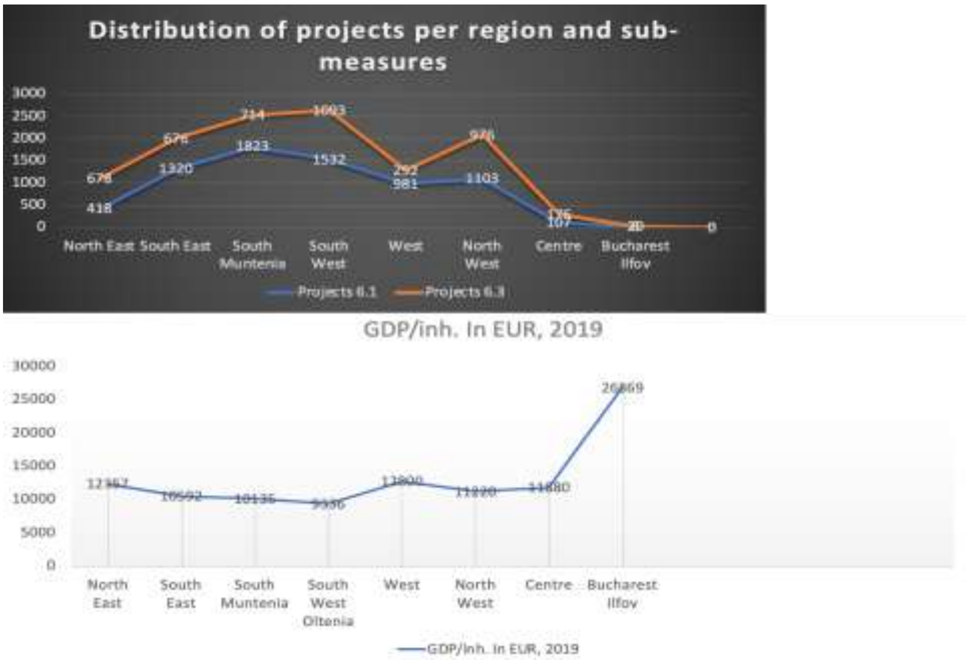


Figure no. 4. Distribution per regions of projects financed under sub measures 6.1 and 6.3.

Sources of data: National Federation of Local Action Groups and National Commission for Strategy and Forecasting, 2019

4. Conclusions and recommendations for the next multiannual programming period

The Local Action Groups in Romania are expected to intensify the participation of local stakeholders in decision-making processes in order to create Local Development Strategies that focus on a limited and more specific number of local real problems and needs.

After one complete multiannual programming period, LAGs have managed to gain maturity and began working properly. Even if LAGs still face institutional capacity and administrative difficulties, the sub-measures dealing with the bioeconomy field are successful being implemented on a large scale, demonstrating their usefullness and important role for the rural territories. Counterfactually, we can observe that, in the absence of these LEADER measures, many farmers would not have been installed and a significat number small farms producing revenues and growth in the rural areas would not exist today, thus leaving only fallow ground.

LEADER purpose is to contribute to the revitalization of rural areas thus having a positive effect on the small cities and villages. Community activation is a dynamic and continuous process with a significant impact on the development of local economies. Successful initiatives and measures will lead to an improved ownership of this concept at the local level. This ambitious experience of public-private cooperation in the rural areas, could be improved in the next multiannual programming period by further empowering LAGs with more delegated functions from national level.

Based on the findings in this paper, it is recommended for the institutions in charge with development of the National Strategy for Research and the Development, Managing Authorities and Regions responsible for planning and implementation of the regional strategies for smart specialisation, to consider embedding the LEADER approach in the documents prepared for the next programming, since this partnership is getting stronger as more and more people are becoming aware of its effectiveness and take advantage of its actions. Representatives of the National Federation of LAGs are key stakeholders to be invited to the consultation. In addition, introduction of bio economy indicators in the regional strategies for smart specialisations would bring coherence to the process.

The last, but not the least, it has to be considered that the world is facing now an unprecedent crisis due to the SARS-CoV-2, with the high probability of leading to a global food crisis.Food safety is becoming paramount. In this context, supporting bioeconomy is essential for food production. In this context, organisational innovation in the rural areas with the goal of improving food production and product innovation will become more and more important for the population.

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FINANCING PUBLIC HEALTH SYSTEM BY MUNICIPAL BONDS – A SOLUTION IN THE CURRENT PANDEMIC

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Abstract: *The social reality of our times presents significant vulnerabilities in both the national and the international health systems. This pandemic reveals major shortages in hospital endowment with the essential equipment for emergency or ICU medical assistance. Because of the economic and social impact the pandemic has generated, our paper has the aim to bring up a less used funding method by the local Romanian authorities: municipal bonds. Knowing that the financial credit instruments may be an important resource for the large strategic investments in the medical field, we have started a scientific project based on the quantitative analysis by tracking how the Romanian public health is financed, how the municipal bonds are used at both worldwide and local economic levels, and what impact a bond loan could have. This paper aims at being a useful instrument for the local authorities by explaining in a more accurate way how the municipal bonds work.*

Key Words: *health system financing, local public authorities, capital market, municipal bonds.*
JEL Classification*: I18, H51, G12.*

1. Introduction

Today, the world is facing an unseen and unknown danger with significant effects both at social and economic levels: SARS CoV2. The pandemic declared by the World Health Organization has affected almost all the countries in the world and on 19 April 2020 generated a number of 2,245,875 reported cases, 152,707 deaths (WHO, 2020), with the most cases of COVID 19 infected people in Europe, that is 1,122,189 reported cases, and the most affected being the United States of America, where there are 695,353 reported cases.

The current pandemic has brought forth several deficiencies of the health system, with the most important being the low ability to deal with global issues, from the perspective of equipment and also work procedures.

The COVID 19 infection is not the only pandemic that has affected the world throughout history. There have also been: the Plague or Black Death which led to the death of a third of Europe's population, the Spanish Flu which killed 50 million people, and in our century, SARS has caused 70-billion euro damages along with others such as ZIKA; EBOLA or MERS-COV.

Those medical issues have the focus of specialists in order to identify the most appropriate global solutions implemented locally. Therefore, the PANDEM Project (Pandemic Risk and Emergency Management) conducted by a consortium made up of Galway University Ireland, Public Health Agency of Sweden, Swedish Defence Research Agency, IGS Strategic Communication, London School of Hygiene and Tropical Medicine, Université Catholique de Louvain, WHO Regional Office for Europe, coordinated by Galway University of Ireland and funded by the European Union in the period 2015-2017, had as main objective to identify innovative concepts that would strengthen institutional capacity to manage pandemic risks and to manage emergencies. With a budget of 1,384,807.50 Euros of which 1,277,307.50 granted by the EU, the PANDEM aimed at identifying the best practices on authorities' preparation and response to pandemics, the areas that should be improved, and how to perform communication under such circumstances.

Among the project results is the study conducted by Speakman E., McKee M. and Coker R. which draws the attention of the European Union upon its being unprepared to properly cope with a pandemic, its lack of appropriate steps or its inability to ensure continuity of steps. Speakman *et al.* (2017) show that after the EBOLA occurrence, the only step in the European Union meant to decrease the risks or effects that a pandemic can cause was the establishment of the European Medical Body in February 2016. However, it was deemed to remain without major visible effects as long as the countries' participation was just voluntary (in 2017, only 9 EU states were part of the European Medical Body). The authors point out that the EU can be characterized as having disrupted performance considering that no funding has been offered since 2017 for the FETP programme (Field Epidemiology Training Programme.)

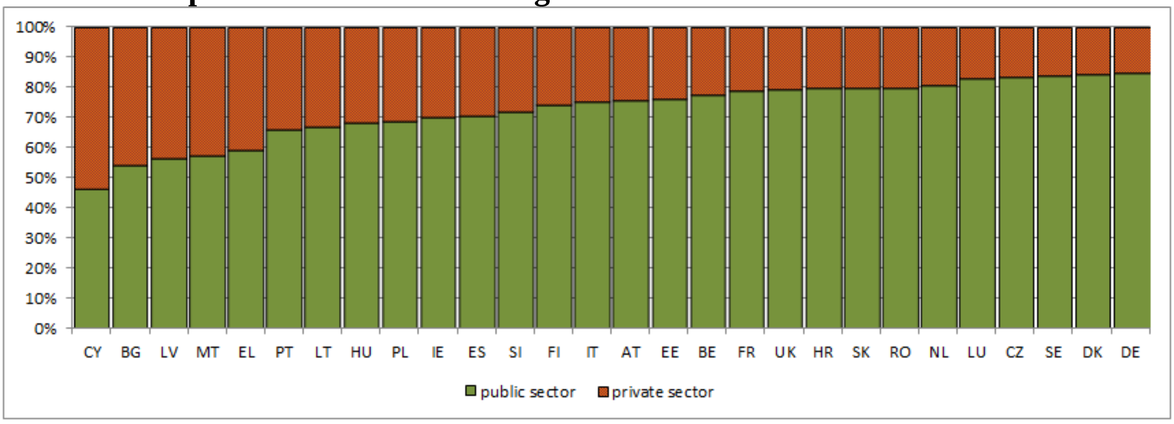
The PANDEM has stated that the European Union should generate a global health project aimed at improving laboratory infrastructure and equipment, increasing test diagnostic capacity, developing a management system based on relevant, correctly interpreted information, by applying the LIMS systems, etc.

2. The Need to Finance Public Health System

Starting from the above-mentioned considerations and from nowadays facts, one can see that the health system is subject to major pressure leading to increased funding. Countries are thus placed in a position to find new financing sources that will generate a reliable system to provide specialized efficient assistance to the population.

The data released by the European Commission show that in the vast majority of countries, the financing of health expenditures comes from the public sector (Graph no. 1).

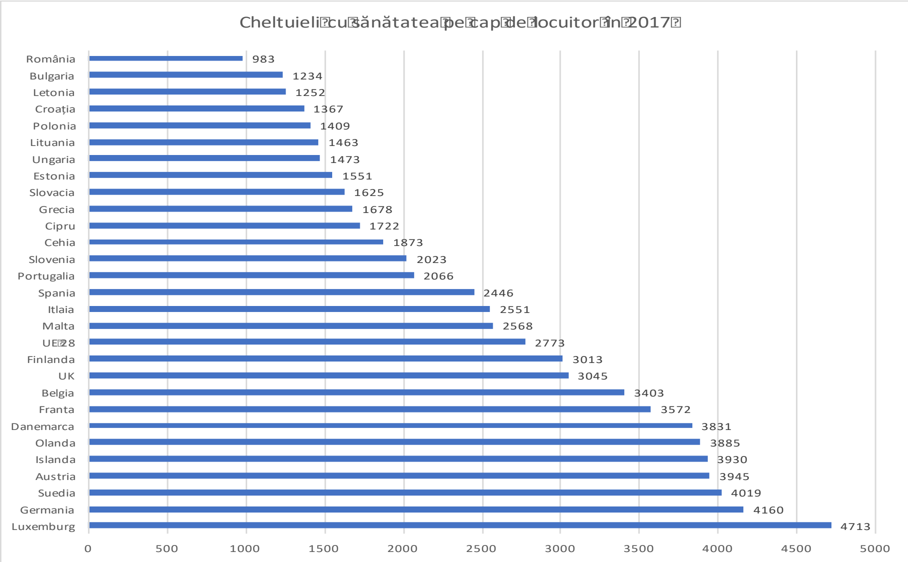
Graph no. 1. Health Financing Sources in EU Member States



Source: European term _ Theme file, health systems, www.ec.europa.eu

Regarding expenditure per capita, the data issued in the OECD/EU Report of 2018 show, in the EU Member States, the highest level in Luxembourg (4,713 Euros per capita) and the lowest level in Romania (983 Euros per capita) (Graph no. 2).

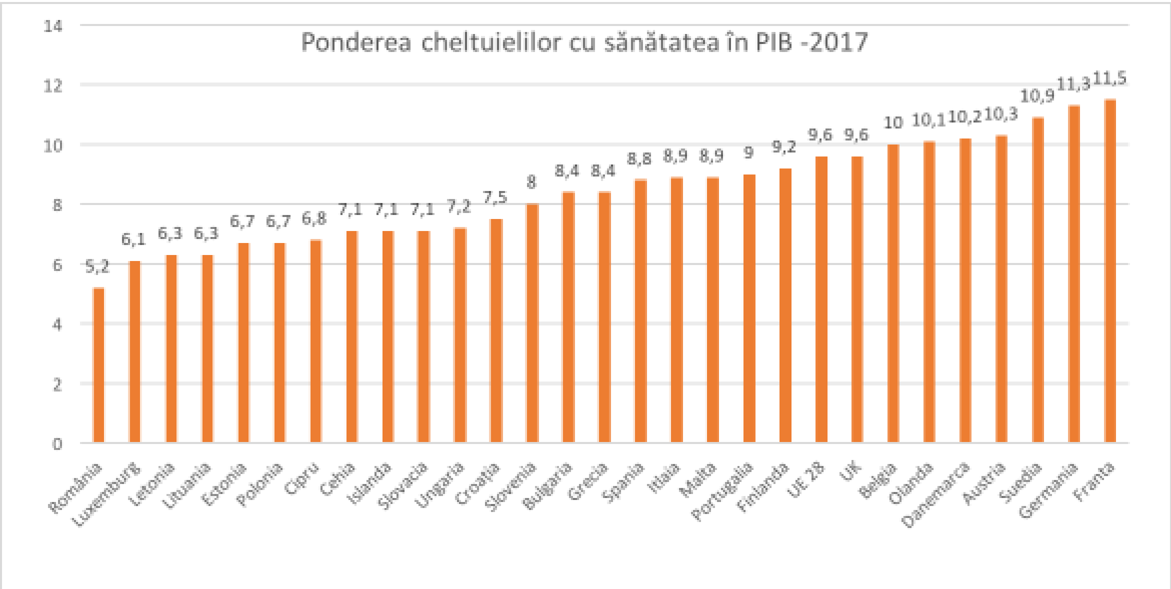
Graph no. 2



Source: Made according to data issued by the OECD/EU (2018), Health at a Glance: Europe 2018: State of Health in the EU Cycle, OECD Publishing, Paris, available at: https://doi.org/10.1787/health_glance_eur-2018-en

In terms of GDP share, the first ranking country is France with 11.5%, followed by Germany with 11.3% and Sweden with 10.9%. Here too Romania ranks last, with 5.2% (Graph no.3).

Graph no. 3



Source: Made according to data issued by the OECD/EU (2018), Health at a Glance: Europe 2018: State of Health in the EU Cycle, OECD Publishing, Paris, available at: https://doi.org/10.1787/health_glance_eur-2018-en

A special status among European countries is held by Switzerland which, in 2017, reported both the highest expenditure per capita (5,799 Euros) and the largest GDP expenditure share (12.3%).

The little money granted to the Romanian health sector along with a number of factors identified by the State of Health in the EU Report (2019) mentioning: life expectancy of 75.3 years (among the lowest in Europe) and life expectancy for men with a low level of education (they live 10 years less than men with higher education); the highest number of tuberculosis patients in Europe - 13,000 in 2017; a vaccination rate below the EU average; the lowest number of doctors and nurses per capita, i.e. 2.9 doctors and 6.7 nurses per 1,000 inhabitants, whereas the EU average is 3.6 doctors and 8.5 nurses, raises a major issue: what funding sources can local authorities use in order to ensure major investment for health?

Today, more than ever, solutions must be identified for the health system to face global issues and to provide well-adapted, adequate quality services.

3. Municipal Bonds - Viable Source for Health Financing

The capital market provides issuers and investors with financial instruments that allow them to achieve their targets. Bonds have started to gain importance on the capital market (Table no. 1) given their characteristics and also advantages they generate to issuers. The data provided at the level of the world economy show an increase in that market from $46,189.2 billion in 2003 to $100,133.7 billion in 2017. The structure of the bond market indicates the US market dominance at a level of $39,335.9 billion in 2017 up from 19,829.5. Ranking second at a significant gap is the market for bonds issued in the EU, with $28,156.7 billion, going up by 93.31% compared to 2003 (Table no.1).

Table no. 1. Changes in the Bond Market

Country/Year	2003	2008	2015	2016	2017
Market total of which:	46,189.2	73,813.9	88,815.6	91,917.6	100,133.7
USA	19,829.5	30,296.1	36,924.1	38,099.7	39,335.9
Japan	8,729.6	12,329.8	11,239.7	12,031.6	12,665.1
EU 28	14,564.9	24,355.6	25,778.6	24,862.6	28,156.7
Canada	1,088.7	1,368.0	2,039.2	2,178.2	2,428.5
China	459.6	2,228.0	7,752.6	9,408.8	11,756.9
Australia	735.2	1,367.8	1,975.4	1,971.7	2,149.3
Emerging markets	447.3	1,280.0	1,986.1	2,196.0	2,289.2

Source: SIFMA Fact Book, 2018

The importance and role of bonds in financing local public services are also justified by the high level of using that financing source in the USA. Istrate (2013) shows that the US infrastructure was largely financed through municipal bonds: in the period 2003-2012, administrations used debt securities to achieve 21 investment objectives, with the most important being, through the funds obtained by means of municipal bond mechanisms: schools ($514.1 billion), hospitals ($287.9 billion), water and other facilities ($257.9 billion), roads ($178 billion). Moreover, the 2017 municipal bond market was characterized by a capitalization of 4 trillion Dollars, 55,000 issuers, 1.5 million bonds issued and 100 to 200,000 new bonds issued every year (Cestau et al., 2019).

In Europe, Poland offers a positive example of using municipal bonds to finance local interest objectives. Galinski (2013) shows that municipal bond financing had spectacular increases in the period 1996-2010, from 10 to 458 issues. There are at least two elements that encouraged the significant increase in the use of those financing instruments: the former envisages the use of municipal bonds to ensure the co-financing of European projects in the financial year 2007/2013 in the fields of infrastructure, local transport, environment, sewerage, etc.; the latter is defined by Poland's hosting the 2012 European Football Championship, which made it necessary for them to carry out infrastructure investment that was financed by issuing bonds.

Romanian Law 56/2006 on health care reform defines in Chapter 4 the sources for the financing of hospitals. Thus, the law shows that clinical hospitals with university departments are financed by the state budget, the county ones are financed by the county budget, and the local budgets can finance both county and local hospitals. The financing of hospitals carried out by local public authorities may target investments, modernizations, the purchase of medical equipment, the financing of management and operation expenses, goods and services.

Achieving well-defined objectives and long-term investment elements requires the mobilization of long-term capital. In this respect, potential financing sources can be: own sources, bank loans, special financing techniques such as leasing, factoring, capital market. The access to the capital market is allowed to all legal persons as issuers, and to natural and legal persons as investors.

As regards the issuers, they can be: state or private business agents, financial - banking companies, central and local public administration. Local councils, county councils and the General Council of Bucharest Municipality, as the case may be, may approve the contracting or guaranteeing of internal or external loans on short, medium and long terms for local public investment as well as for refinancing local public debt. Local investment in ensuring appropriate facilities for hospitals to provide good quality medical services may be financed by administrative-territorial units in compliance with the law on public finance which lays down that the total annual debt (consisting of due instalments of contracted and/or guaranteed loans, interests and fees thereof) must fall within the limit of 30% of the arithmetic mean of own revenues minus revenues from capitalization of goods during the last three years prior to the year when financing is requested by loans.

The law on local public finance describes the method of calculating the classification within that limit as such:

$$(C_c + C_n) \leq 30\%\ din\ \frac{(V_{pt\text{-}3}\text{-}V_{ct\text{-}3})+(V_{pt\text{-}2}\text{-}V_{ct\text{-}2})+(V_{pt\text{-}1}\text{-}V_{ct\text{-}1})}{3}$$

where:

C_c- loan instalment + interest + fees for contracted loans;

C_n – loan instalment + interest + fees for new loans;

V_{pti} – own revenues during the years prior to the years which loan contracting is requested for;

V_{cti} – revenues obtained from capitalization of goods during the years prior to the year which loan contracting is requested for.

Administrative-territorial units can finance investment projects using capital market-related instruments. In the category of financial instruments – stocks and shares, securities for participation in collective investment undertakings, monetary market instruments, including government securities with less than one year maturity and deposit certificates, financial futures contracts, FRA's, swaps, options - only bonds called municipal bonds can be issued by territorial administrative units.

Bonds are financial securities representing the claim of a bond's holder over the bond's issuer resulting from a loan for which the latter - a company, a public agency or a central or local government - periodically pays interest, which is usually fixed, in order to redeem the bond after a certain term. Bonds issued can be insured by means of specialized institutions or they can be issued based on the issuer's honour. (Denison, 2001)

Municipal bonds are in fact debt securities issued by cities and regional/county authorities for financing important goals for the community. (Brancaccio et al., 2017) In Romania, the first municipal bonds have been used since 2001 (Brașoveanu, 2011) by the Predeal Municipality which issued 50,000 bonds at a face value of 1,000 Lei. (Matei et al., 2009)

At present, 38 municipal bonds issued during 2005-2018 are being traded on the Bucharest Stock Exchange. The data provided by the Bucharest Stock Exchange show that 81.57% of the issuers were cities and municipalities, and 15.7% were county councils. An interesting element is related to the fact that during the 15 years only one rural town hall issued bonds: the Aninoasa Town Hall in 2008 which attracted 3,000,000 Lei for the building of a socio-cultural centre.

The municipal bonds accepted and traded on the Bucharest Stock Exchange did not cause any problems for the investors, except once: the bonds issued by the Băile Herculane Town Hall, which did not pay either interest or principal amount for the bonds issued in 2006 and accepted for trading in 2009, which led to the bonds' suspension from trading.

The most productive year in terms of bond issuing is 2009 when 9 issues were carried out, namely: the town halls of Năvodari, Focșani, Slobozia, Orăștie, Alba Iulia, Bistrița, Bacău, Siret and the Alba County Council.

The sector of municipal bonds is not developed enough, with fluctuating evolution: only 38 issues in 15 years, with periods of time with zero issues: 2012-2014, 2019; or a one single issue in 2018.

Technically speaking, commencing and developing such a financing technique involves the following steps:

1. Preparing and planning the offer - During this stage, the issuer makes the decision on financing via bond issuance through a cost-benefit analysis that will take account of: the costs generated by the issuance of bonds; the interest to be paid on the dates set by the issuer; the obligation to redeem the bonds issued; the way in which taxation reflects interest deductibility.

The costs of issuing bonds will also take account of the fees paid to the intermediaries who can ensure the development of the public sale offer. The issuer may resort to one or more intermediaries, in which case they will form an intermediaries' pool. An intermediaries' pool is formed by more than two intermediaries coming together who conclude two contracts, the former aiming to define the relationship between them and is concluded between the pool manager and the members of the intermediaries' pool, whereas the latter is concluded between the manager of the intermediaries' pool and the bond provider.

2. Preparing the issue prospectus. It must include all the elements required by the legal authorities.

According to the national legislation, the public sale offer prospectus must include necessary and sufficient information for investors to be able to make decisions knowingly, i.e. information on the issuers' or entities' assets and liabilities, financial statements, performance prospects, the rights corresponding to the stocks and shares and the reason why bond issuance takes place, as well as its impact on the issuer's performance.

Regarding the content of the public sale offer prospectus, Regulation no.5/2018 lays down the fact that the offer can be presented in a single form or by components. Irrespective of the wording, the elements contained in the prospectus will have to comply with the provisions of EC Regulation no.809/2004 as amended by EU Regulation no.2017/1129.

3. Submitting the application to the Financial Supervisory Authority (FSA) which will adopt the approval decision or not. For the approval of public sale offer prospectus, the bidder must prepare their application including several documents according to the legislation in force, namely Regulation no.5/2018 and Law 297/2004.

4. Releasing the issue is the stage during which the public offer is made public to investors concerned.

After the SFA has approved the application, the bidder will be able to advertise the issue. The legal regulations define the publicity system for public sale offers. Thus, Article 8 of Law 24/2017 clearly defines how a public tender announcement can be made: printed or online newspapers, the websites of the intermediary and the bidder, the FSA website.

5. Underwriting the securities. Allocating and distributing the securities – they correspond to the period during which the securities are purchased by those interested, then they will be distributed and allocated.

The public sale offer is considered to be over at the time of expiry of the date provided in the issue prospectus or at the time when the issued securities are purchased.

6. Reporting - within 5 days from the date of completion of the public sale offer, the bidder must notify the FSA and the market operator about the results of their public offer.

After the public offer has been over, the administrative-territorial unit can request acceptance for trading on the regulated market of the Bucharest Stock Exchange, in the sector of debt securities if it meets several conditions and submits necessary documents: concluding a public bond sale offer which meant a minimum obligatory loan of 200,000 Euros in Lei, or when it is less than 200,000 Euros, it must have the FSA's approval for acceptance to trading.

Acceptance of municipal bonds for trading imposes several, that is: the debt securities must be registered with the FSA, they must be freely transferable, fully paid, issued in a dematerialized form and highlighted by registration in the account (Articles 23, 24 of the BVB Code).

Additionally, the quota maintenance of municipal bonds urges the issuers should assume certain responsibilities typical of the capital market, namely ensuring equal treatment of all investors regarding the rights conferred by holding such stocks and shares, paying interests and repaying loans; appointing a payment agent to help bondholders exercise their financial rights.

Issuing municipal bonds offers investors an alternative for diversifying their portfolios (Pop and Georgescu, 2015) as they generate good returns and also lower risks.

Financing significant objectives by the administrative-territorial units through the Romanian capital market, that is through the issuance of municipal bonds, requires both following a specific methodology and assuming certain responsibilities, but municipal bonds can be regarded as advantageous financing instruments in terms of their costs which are lower than bank loans and of the possibility of monitoring the sources obtained, which is a corporate image contribution with positive effects on future loans (Danulețiu, 2010), completion of projects already started, accelerating local growth which will also lead to increased investor confidence in fixed income instruments. Such a financing system generates costs such as: approval of the preliminary announcement for initiating a public offer for municipal bond issuance, intermediary fee, processing fee for acceptance of bonds on the BVB market (1,200 Lei), fee for trading acceptance (0.001% of total face value), maintenance fee (0.05% of total face value but no more than 50,000 Lei) (www.bvb.ro).

Increasing the efficiency of local public expenditures makes it necessary for the authorities to target the investment that will generate positive effects upon the community and help achieve the objectives defined by development strategies. (Moșteanu, Lăcătuș, 2009)

Conclusions

This paper has aimed at drawing the attention of the Romanian local public authorities to a way of financing their investment objectives that should be performed in the health system via the use of municipal bonds. The relatively easy financing mechanism, not very high costs, and also increased interest of investors, individuals and legal entities in diversifying their portfolios, in reducing risks and ensuring constant incomes can be arguments in favour of using such instruments. It is believed that public authorities should consider this financing choice because neither the state budget nor even local budgets can support large-scale investment projects in the health sector. Investors' involvement can also be used as a good corporate image that the authorities can gain without too much effort and with long-term effects. All they have to do is require specialist advice, conduct market research to identify the attractiveness of instruments among investors, and thus generate added value for the local community and for the economy in its entirety.

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COMPARATIVE MANAGEMENT OF HUMAN RESOURCES BETWEEN USA AND JAPAN

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Abstract: *Interpretation by comparison of human resources management applied between two countries with different application methods and techniques of human resources management, yet with spectacular results in their economies (US and Japan). Despite the differences between Japanese and American management styles, both will have a huge impact on their national economies. In general, in the field of human resources, the labor relations within the organizations, are, mainly, characteristics that differentiate the Japanese management system from the other countries, especially the USA.*

Keywords: *management, skills, objectives, actions, comparison, USA, Japan.*
***JEL Classification**: M01.*

1. Management skills in U.S.

American Management Association has developed a model of competencies that must be met in any case a good manager. According to this model, the power of a good manager should materialize in the four areas:

Management objectives and actions - in this field, the manager is recognized by its ability to set realistic goals and initiating actions aimed at achieving performance. It also tends to evolve manager to analyze and understand the contents of activities, adopting decisions for the purposes of the initial shift. Long-term vision is one of the qualities of a good manager (Boyatzis, 1982).

Relationships with subordinates - a good manager should show perseverance to achieve performance exercising and sometimes the power and authority available to relations with subordinates. A condition for success is to provide feedback to employees who are in direct coordination thereof, so that they have the opportunity to know the results of their work and understand the need to continue improving its work.

Human resources management - characterized as a key area where a good manager should have a range of skills such as realism, the ability to link and create links between the individual needs of employees with organizational development, flexibility and adaptation occurring within the organization, the ability to express confidence in his colleagues and teamwork, availability, negotiator at international level, knowledge of at least one international language, understanding cultural differences, results orientation (Jackson, 2002, p. 67).

Leadership - a good manager must be characterized by a number of traits such as perseverance, self-confidence, communication skills, logical thinking, integrity, ability to influence the mentality and style of the employees. Thus, the American economic system can be defined by its decentralized nature, based on private property and free enterprise. Federal authorities to intervene in the economy is manifested through fiscal and monetary strategies. Meanwhile, the federal budget has a component that is to invest in research and economic legislation allows US government involvement in controlling business practices, the US government also acts as the supervisor of growth.

2. Management in United States of America

American cultural values specific emphasis on individualism and self-interest, based on the value system of most Americans, efficiency and pragmatism, freedom and patriotism to create an image of the American people all over the world.

From the organizational perspective, Americans prefer to satisfy their own interests or principles inspired bypassing objectives of the company. American society show a low power distance. Inequalities were abolished as from lower level employees have been given greater responsibility in terms of making decisions on their own and opportunity to question the vision of senior management. Americans also have a low level of uncertainty avoidance means that avoids or does not feel threatened by uncertain situations, ambiguous. American culture emphasizes quantitative aspect of life and is therefore regarded as highly materialistic and uninterested in cultivating long-term relationships; This may explain to some extent and more and more acts of fraud were reported in the US unlike Japan dominated mentality totally different welfare company.

The management style is based on Anglo-Saxon model of capitalism based on individual success and short-term profit, adding that manifested a strong authoritarian ideology determined that a person's status is determined solely by their performance at work.

Internal communication in American organizations based on the exchange of information on media written dashboards formalized. Meetings in the American enterprises has some particularities: are centered on a given objective is completed by concrete decisions and precise solutions and are led by a chairman of the meeting that is not necessarily the highest hierarchical level, but has a capacity recognized mediation. The whole communication process is influenced by the reduced distance to the power.

The employment

As organizations were more involved in international trade and labor fluctuations, lifetime employment is history in American corporations. Americans are recruited rapidly and are dismissed just as quickly. But being fired is not a stigma. Americans tend to change frequently firm and work, which is why companies prefer to change personnel as needed, instead of investing in its preparation. This policy is reflected in the fact that the greatest investment in human resources are focused on the selection and recruitment.

The promotion is based on skills, seniority level of training and personnel. Age senior managers support the conclusion that experience plays an important role in promotion positions.

A study showed that 75% of top managers were at least 45 years when they were.

Relationship with unions. In the US there are two types of unions: unions organized on the basis of professional and branch unions organized on the basis of activity. Relations unions - it was always tense and management employees are still attracted by the membership of such unions because collective representation allows managers to negotiate with companies on an equal footing. They had a great contribution to the improvement of workers, mainly by negotiating wage, non-wage benefits and improved working environment. The most sensitive areas of influence refers to wages and working conditions where predominates criteria, seniority at work and performance gained.

Trends in human resources management in the US

Currently, the big American companies there is a trend towards decentralization of decision-making. Americans believe that we must abandon the autocratic style of decision making where it was for senior managers responsible for taking most important decisions. Lately, more attention is given to investing with greater responsibility of line managers to comply with the following protocol: *the first step* is recognizing the problem faced and the need to take a decision; then the decision maker should identify the criteria for making decisions that determine what is relevant and useful for a correct decision. *In the second stage* it is identified most relevant criterion showing the importance of its effects, then draw up a list of viable alternatives that can be applied to resolve the impasse and analyzed individually. *The last step* is to choose the best of the set.

Starting with the question:

Why employees leave organizations? A common question for managers worldwide.

The study conducted by the American Society of Human Resource Management (*Society for Human Resource Management)* at a total of 473 human resource professionals revealed that 87% of US employees leave organizations on their own initiative (Deckop and Konrad, 2001, p. 270).

Of the total number of those that leave companies on their own initiative, 50% of employees do not require changes in contractual conditions, while 40% leave the organization they work because its management rejected contract changes required.

Share of employees leaving the company:

Company no. > 5001 employees - 26% leave the company;

Company no. between 2501 - 5001 employees - 21% leave the company;

Company no. between 100-300 employees - 16% leave the company.

For 87% of people leave the company, the main two reasons are:

- Package motivational attractive offered by the new employer, of which 75% is the salary offered by the new organization, and 25% are bonuses and other offers non-representative new employee.

- Career development prospects in the new job, of which 61% are complaints regarding career opportunities in the old job. 39% is the activity that will be held in the new job.

Companies have realized that constant turnover of staff and relatively early is one of the biggest problems they face in human resources, with multiple implications in financial terms and in the long term, the development of the company.

To combat staff turnover and turnover for cost human resources, companies have developed several means of motivation to limit the effects of fluctuations in staff, namely:

- ensuring career development opportunities;
- elimination conservative labor, labor motivation through diversification of the workplace or rotating staff level activity;
- motivational packages consistent and diversified;
- the organization's concern for employees' problems;
- security, health and welfare of employees at work;
- the definition of standards and benchmarks for empowering employees to achieve its business efficiency.

3. Human resources management in Japan

In the opinion of specialists (Lange and Maguire, 1998, pp. 138-144), Germany is the miracle of growth in Europe and Japan - term development model in Asia. In general, human resources, the activities such as: recruitment, selection human resources management, rewards, long term employment and labor relations within organizations are mainly features that differentiate management system Japanese other countries, especially the US.

Although many factors are responsible for "*economic miracle*" Japan, the focus was mainly on the methods and techniques used in human resources management. What is particularly interesting is the relationship between paternalistic management style and commitment to the work of employees because labor is considered to be the true secret of Japanese success.

The three pillars of Japanese human resource management are: the *principle of long-term employment*, *seniority principle* and *trade unions*, as an expression of the total commitment of employees.

Encourages *long-term employment* stability, commitment and sense of belonging of employees in the organization. Long term employment is not identical to maintain lifelong professional employee in the same post. On the contrary, this principle of Japanese human resource management encourages internal mobility of employees in their own companies. It is about ensuring long-term stability of employees in organizations, regardless of the positions they occupy. There is a tendency to analyze and understand the long-term commitment in terms of staff development, their promotion within the company.

Unions are generally interests of the majority of employees within one or more companies. The main feature of these is the problem solving and completion of negotiations with company management by consensus. Number of members belonging to each union highlights the principle of total commitment, specific Japanese management. The relationship is reciprocal, because unions are involved in solving a large number of failures that employees face at work: working conditions, health and safety at work, reward system, etc.

Although strikes are not a common phenomenon when they place strict measures are taken as demonstrations do not disturb the normal work process, they happen, usually after hours or on weekends.

Seniority principle has a bearing on activities to promote and reward employees.

Currently, the trend is to replace the concept of job stability at career development. Introduction of performance-based rewards and annual bonuses to employees represents HR practices found in Western companies. Although currently in Japanese management recorded a number of changes, it should be noted that the basics of the Japanese system of human resource management remains a high influence on the management practices.

If the US Protestant ethic emphasized self confidence, independence and individual wellbeing in Japan ethics based on a mixture of Shintoism, Confucianism, Taoism and Buddhism, has produced one of the companies most homogeneous and created an ideology paternalistic that led to the industrialization , organization and management of the Japanese economy.

The employment in Japanese companies

Japanese management pay special attention to human resources, recruitment is seen as a long term investment. The selection gives priority to the personal qualities necessary for the integration of knowledge and professional skills. Employment system practiced in Japan respond favorably to one of the fundamental aspirations of employees everywhere ie job security.

Using the rotation departments or educational training according to business needs, it tells the potential EMPLOYEE: "*We trust you and believe that you are the person we need for the next 50 years*", which amplifies his sense of duty shown by worker to repay their trust.

Pay and promotion system

In determining income business staff is envisaged preparation and his seniority. Wage gap between those with higher education and those with secondary education are small, however, the motivation criterion is age. Number of years worked in the company is the main foundation to establish the size of wage employment on features and promotions. It should be noted that wages grow very rapidly with age in the company. Usually, retirement salary is 3.5 times higher than employment. In addition, they receive bonuses, bonuses for hard work or hazardous work and overtime and salary thresholds based on family status.

Recruitment and selection of human resources

The first step is to recruit a large number of college graduates. This is relatively easy due to the number of students registered in Japan. The recruitment process is simplified because universities are themselves graded: national state universities and the most prestigious institutions, private. At this stage of development of the recruitment process, companies aim is to capture the interest of more able students or graduates, regardless of their specialty. From this point of view, the best students be offered employment at leading companies before the official start of the season of hiring.

Promoting employees takes place at a slow pace due to the principle of promotion based on age and experience. This allows companies to reward those employees who have shown loyalty lifetime to EMPLOYEE. Only after a long observation period, the company will be able to analyze the strengths and weaknesses of the new employee can then be placed in a position that will allow maximum development of their professional abilities. After about 10 years it is reached the first level of promotion process when the employee will be allowed to choose a "successor" to prepare staff in the same manner in which he was trained.

Internal staff training takes place mainly through job rotation where staff mobility is high and changes in positions are common. Japanese companies believe that continuous training is part of the duties of employees and permanent employment that an employee must be prepared not only for its current position, but all positions that correspond to its level hierarchy.

Trends in human resources management in Japan

Understanding the decision-making process of the Japanese system, like many Japanese management practices first requires understanding of national culture. A large part of the Japanese culture of labor relations can be explained under the "*wa*" meaning peace and harmony.

Management practice in Japan is based on the consensus established organizations known as ring. It is considered as one of the features most representative, which includes all the virtues of Japanese management, the focus on the global perspective, the situation overall interests before individual interests. Ringi system is presented as an evolving process that requires bottom-up and reach agreement on a proposal by the transmission system vertically and horizontally to all interested persons.

This document finally reach the top management to authorize formal and final implementation decision. The major disadvantages of the system Ringi consist particularly slow its progress and the fact that the system cannot work in situations of uncertainty, but only in very stable environments.

4. Comparison between US and management in applied management applied in Japan

In comparing Japanese management style at the US absolutely necessary a closer look at cultural differences, communication styles and contexts in which the two opposing economic forces arrived.

A study (*by Laurie Dennis in 1995)* highlighted some of the main cultural differences between Japanese and Americans. It is clear that the Japanese Americans in excess of the strong focus on education, family, workplace ethics and lasting relationships and long-term orientation in almost any kind of decision making. The only area where the Americans have a clear superiority refers to the difference between the sexes is much reduced while the traditionalist Society of Japan, 76% of women believe that their duty in life is to be a good wife and wise mother (Lee, 1982, p. 79).

5. Conclusions

Conclusion of the two major countries of the world, the US and Japan, on the benefits it can provide human resource practices to improve management applied by an entity for its prosperity by putting particular emphasis on methods and techniques used in human resources management :

Type the advantage that it confers human resource practices is a stable workforce with a high degree of commitment to the company, as follows:

• Staff oriented acceptance of change,
• Staff reluctant to strike or any form conflict,
• Staff put their own interests above the interests of the company.

Thus, the result is a high and increasing labor productivity and overall a work environment that allows planning and implementing management plans change both products and processes.

Experts say that these results are caused by the practices of human resources that put the company's commitment to its employees, which inspires them a feeling of security, status and material benefits and developing employees' potential in a systematic manner and term long.

Another feature that is often emphasized is how group cohesion and cooperation are encouraged instead of individualism and personal initiatives (White and Trevor, 1983, pp. 91-93).

Cultural diversity exists and affects how people act on the organization. Judging our cultural differences can lead to inappropriate attitudes and behaviors, undesirable when seeking to conclude business with foreign partners.

Despite the differences between Japanese and American management styles, both will have a huge impact on their national economies. In terms of cultural management styles will continue to present significant differences. Although nothing is certain, both Americans and Japanese must continue to adapt their management styles to maintain global competitiveness.

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THE ASSESSMENT OF THE INTERNAL AUDIT APPROACH IN THE CONTEXT OF CORPORATE GOVERNANCE

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Abstract: *Internal audits emerged and developed against the background of the need to prevent economic fraud and closely linked to the basic requirement of the existence of good corporate governance, namely to establish appropriate techniques and tools for managing critical situations that may affect the interests of all concerned. For a functioning within the parameters expected by all interested parties, any public interest entity shall take steps towards creating a strong link between risk management, the degree of development of the internal management control system and corporate governance. This becomes achievable only with the well-positioned support of the internal audit.*

Key words: *internal audit, corporate governance, risk management, public interest entity, audit committee.*

***JEL Classification**: M42.*

1. Introduction: Public enterprise and corporate governance

More and more governments around the world are improving their governance practices at the level of public enterprises, in order to increase their competitiveness, but also of the entire economy, to reduce the fiscal burden but also the financial risk to which they are exposed. to provide them with better access to financing, as well as to increase the degree of transparency and accountability of their own management. The guide of good practices in the corporate governance of the Ministry of Transport explains how the personnel employed, as well as the members of the Board of Directors and the executive management of the public companies that are subordinated, respectively under its supervision, as the supervisory authority, are to apply the specific current legislation. The guide is based on relevant legislative acts, supplemented by the good practices used in Romania and internationally.

The first Code of Corporate Governance in Romania, respectively that of the Bucharest Stock Exchange, was dedicated, in particular, to companies listed on the Stock Exchange. Its implementation was done only voluntarily. The only mandatory element of the Code was that companies must publish a Declaration of Conformity with the Corporate Governance Code, which mentions the extent to which they intend to comply with the recommendations contained in that Code. Although public undertakings under the authority of the Ministry of Transport are generally not listed on the Stock Exchange, they were expected to comply with the corporate governance standards of listed companies. In turn, the Public Enterprise Governance Guide (OECD Guide) has long been the only international guide dedicated to corporate governance of state-owned enterprises. The OECD Guide is a unique and valuable resource for state institutions that have the quality of guardianship authority, offering detailed explanatory recommendations and notes. Although it was established as a standard of good practice for enterprises in advanced countries, this Guide together with the provisions of the O.U.G. no.109 / 2011, updated, regarding the corporate governance of public enterprises, were the reference elements for the Ministry of Transport of our country.

The governing bodies that fulfill the specific tasks of the management of public enterprises in Romania are: the General Meeting of Shareholders; Board of Directors, Directorate of the company. According to the Guide, from the point of view of its shareholder role, the Ministry of Transport is represented by the Supervisory Unit.

2. Literature review

Authors like Iain, Stuart (Gray, Manson, 2008) mentioned that internal audit is a management function that seeks to establish recommendations for improving the real situation of the entity. Other specialists consider that the internal audit experienced a more marked development after the 1980s, when the internal audit function began to develop and the role of internal audit is to bring value to the entity (Renard, 2002).

Addressing the relationship with the management of the entity, Saam (2007) considers that the internal audit "supports the management of the entity in fulfilling its obligations and strengthens the confidence of the owners of the entity in the integrity of the management", and J. Renard, 2006, argues that "the internal audit is all that should be done" to be responsible for ensuring that he has good control over business if he has time or if he knows how to proceed.

In Romania, internal audit first appeared in public sector entities and was recommended to private sector entities (Ghita, 2004), as opposed to the global situation, where internal audit first appeared in multinational entities and then it was transferred to the national ones and adopted by the administration (Renard, 2002).

In our country, the specialists support explanations regarding the practices and procedures of internal audit necessary to reach the purpose of the entity (Dobroţeanu, Dobroţeanu, 2002).

Authors such as Morariu and Stoian ("Internal audit and corporate governance", Morariu, Suciu, Stoian, 2008) and Sabău and Nagy ("The necessity and role of the performance audit in ensuring enterprise's competitiveness", Sabău, Nagy, 2009) they analyzed the importance of internal audit missions and their role in increasing economic performance.

3. Research methodology

The methodology applied in the present study is characterized by the combination of the deductive-inductive research methods (the data interpretation method: comparative and interpretive), respectively, mainly inductive (data collection, information processing and interpretation methods).

Referring to the systematization of research methods developed by Septimiu Chelcea, 2001, transversal (observation) and longitudinal (case study), experimental and observation methods (documentation), case methods (organization analysis) were used in the research carried out. internal audit approach to a public company).

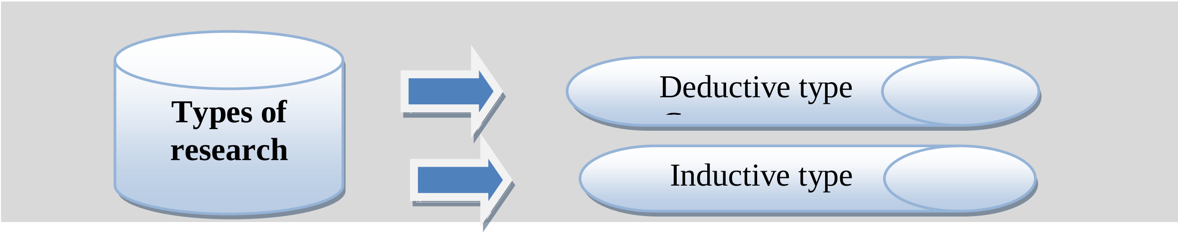
The elaboration of this research started from the theory, applying a deductive type research, to reach individual conclusions regarding the improvement of the internal audit, but also an inductive type research, starting from particular judgments to the formulation of general conclusions, by verifying the transposition. in practice the information obtained. In order to be able to achieve the objectives proposed in this scientific endeavor, the methodology used was based on:

Theoretical research, inspired by the following sources: corporate governance codes, international and national regulations regarding the internal audit activity, specialized books, information published on the Internet.

Empirical research, by applying research methods that verify the research hypotheses and establish their own conclusions of a general nature.

The conclusions of the theoretical and empirical research that have contributed to the argument of improving the internal audit approach and increasing its efficiency in the public interest entities.

Figure no. 1. Research methodology



Source: Own projection

The main methods used in the research that were the basis of this study were documentation, observation, deductive and inductive reasoning, analysis, synthesis.

The categories of documentation sources were obtained on the basis of bibliographic documentation and webographic documentation.

Of the two types of observation (external observation and participatory observation), participatory observation was used mainly, which led to generalizations and interpretations synthesized in conclusions and comments. The participatory observation involved the qualitative approach and the case study, which allowed a detailed description and a thorough analysis of the aspects analyzed.

3. Analysis of the internal audit approach in the context of corporate governance

The sample of economic entities analyzed is represented by the companies and autonomous authorities under the authority of the Ministry of Transport, in number of 25 entities with majority state capital.

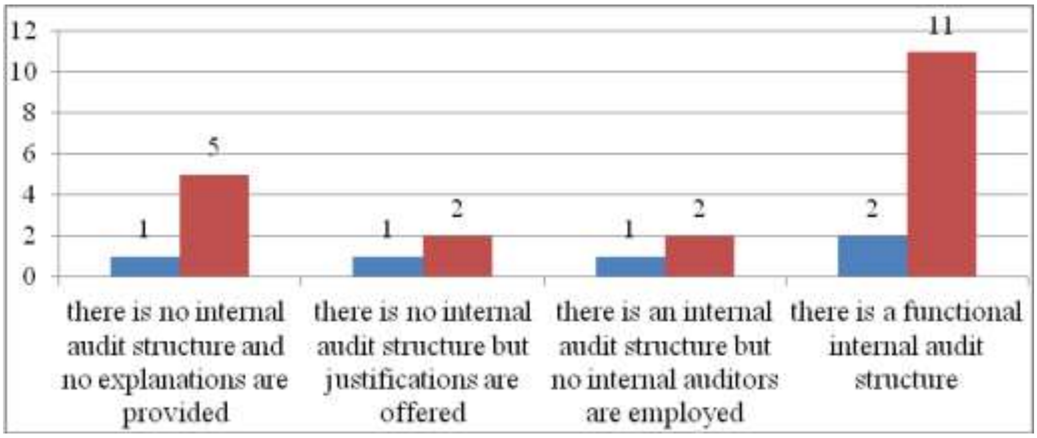
In the first stage, the level of assurance of the internal audit function was investigated within the 25 public interest entities, more precisely, the existence of the structure, the assurance of independence, responsibilities, the organization, the publication of the annual report on the internal audit activity.

3.1. Existence of the internal audit structures

From the total number of 25 entities, divided into 5 autonomous regions and 20 companies, the situation is presented, according to the graph above, as follows:

- 20% of the autonomous authorities did not set up an internal audit structure and did not explain why, 20% did not set up an internal audit structure but they motivated its non-existence, 20% set up an internal audit structure but this does not work in the absence. the internal auditors employed and 40% of the autonomous companies have functional internal audit structures;
- 25% of the analyzed companies did not set up an internal audit structure and did not provide relevant information on this situation, 10% did not set up an internal audit structure but explained the reason, 10% have an internal audit structure but no internal auditors employees and 55% have functional internal audit structures.

Chart no. 1. Existence of the internal audit structure



Source: Own projection

Comment: The Management of the analyzed public interest entities did not take into account the legal obligation to establish a functional internal audit structure in accordance with the provisions of Law no. 672/2002 regarding the internal public audit, republished with the subsequent modifications. Although in large numbers the managers have adhered to the legal provisions in the field of internal audit, there are exceptions, subsequently putting this aspect also on account of the lack of promotion at national level of the importance of this activity for the public interest entity.

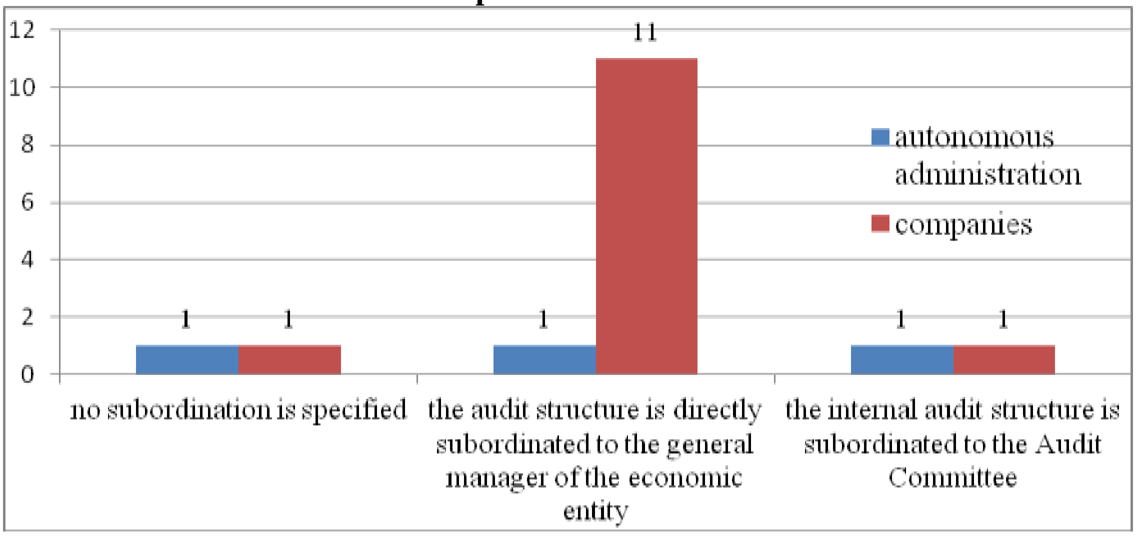
3.2. The independence of the internal audit structure

From the analysis of the position of the internal audit structure within the analyzed public interest entities, the following were found:

• 33% of the autonomous authorities did not locate the position of the internal audit structure within the organizational chart, in 33% of the cases the internal audit structure is subordinated to the general director of the autonomous administration and in 34% of the cases the internal audit structure is subordinated to the Audit Committee.

• 7.6% of companies failed to specify the degree of independence of the internal audit structure, 84.8% have internal audit structures that are subordinated to the general manager of the company and 7.6% of the companies have internal audit structures that shall be subordinated to the Audit Committee.

Chart no. 2. Independence of internal audit structures



Source: Own projection

Comment. The legislation in the field of internal audit, applicable to us in the country, explicitly provides that the internal audit structure is directly subordinated to the general director of the public interest entity. Moreover, the legislation in the field of corporate governance specifies that the internal audit structure reports to the Board of Directors, meaning that it reports the annual results of the internal audit activity or reports on the issues on which references were requested. The lack of concrete explanations but also the arbitrary interpretation of the legislation in the field of internal audit in conjunction with the one in the field of corporate governance has led to situations of subordination of the internal audit structure to the Audit Committee, which from the author's point of view is inappropriate, especially from the point of view of the advisory nature of this committee.

3.3. Responsibilities of the internal audit structure

The study considered the identification within the competences of the internal audit structure, if it:
• performs an evaluation of the efficiency with which all the operations within the public interest entity are performed;
• provides reasonable assurance on compliance with an applicable legal framework, internal rules and procedures;
• performs ad-hoc internal audit missions;
• monitors the risk management system, together with the risk management department;
• monitors ensuring the compliance of the public interest entity with the applicable corporate governance code.

The functional structures of internal audit both within the autonomous regions and within the analyzed companies provided for the first three competences as their own attributions. None of the internal audit structures provided for responsibilities related to the last two points.

Comment. As the empirical analysis shows, the functional internal audit structures took over the provisions of the legislation in the field of internal audit when they created their competence framework, but did not operate appropriate updates as the legislation developed. A normative act was passed, approving the Code comprising the standards of internal managerial control, and then appeared the legislation in the field of corporate governance, aspects on which the internal auditors did not focus or did it timidly or did not not directed at all. This is clearly the lack of promotion of the links between internal audit and corporate governance, respectively internal control. It can be noticed that the concerns of the internal auditors are not intense in this field, due to inadequate professional training.

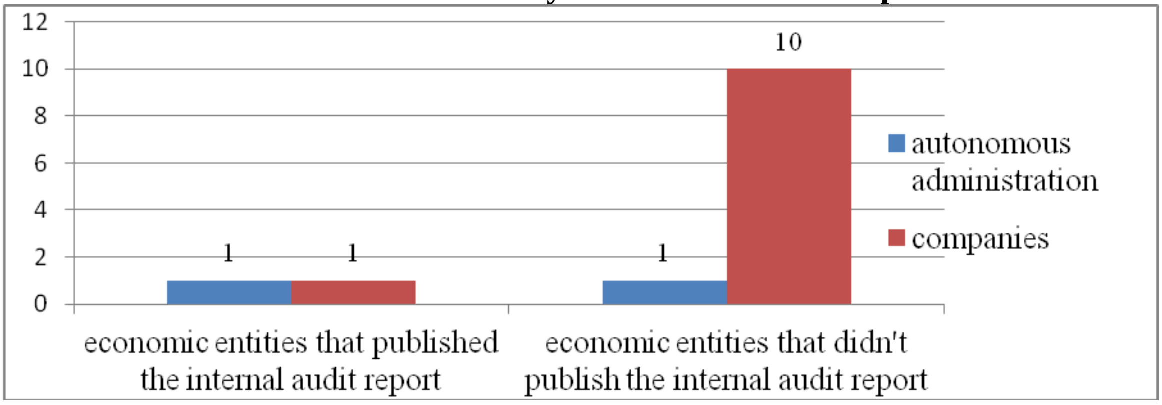
3.4. How to organize the internal audit structure

Following the analysis, it was noted that the functional internal audit structures at the level of the autonomous administrations and the companies analyzed are populated with internal auditors. In neither case are collaborations with third parties registered nor is the internal audit replaced with the external audit, which exists in all cases.

3.5. Publication of the annual internal audit report

The legislation requires that the financial reports be accompanied by the internal audit report on the reliability of the financial-accounting system. This report exists in a few cases due to the extension of the internal audit structure which does not allow an internal audit mission to be carried out on this subject at least every three years and due to the faulty planning of the internal audit activity.

Chart no. 3. Publicity of the internal audit report



Source: Own projection

The analysis reveals the following:

• 50% of the autonomous companies posted the internal audit report on the official website, the others not publishing this information;

• 9% of the companies analyzed posted on the official website the internal audit report the other 91% not having this information available

Comment. It can be seen that the financial reporting is incomplete in the absence of the internal auditor's report. Here the legislator intervenes annually and unfortunately has different approaches to the respective problem, sometimes specifying the obligation of the internal audit report on the reliability of the financial-accounting system to others, leaving the management of the subject to the public authority. Neither the organization of the internal audit activity or the level of consistency of the internal auditors helps much to get out of the deadlock.

4. Analysis of the Audit Committee's practices in the context of corporate governance

In the second phase of the study we set out to observe where the Audit Committee was set up, which is its level of independence, what powers the chairman of this committee has, what is the structure and how the meetings are conducted.

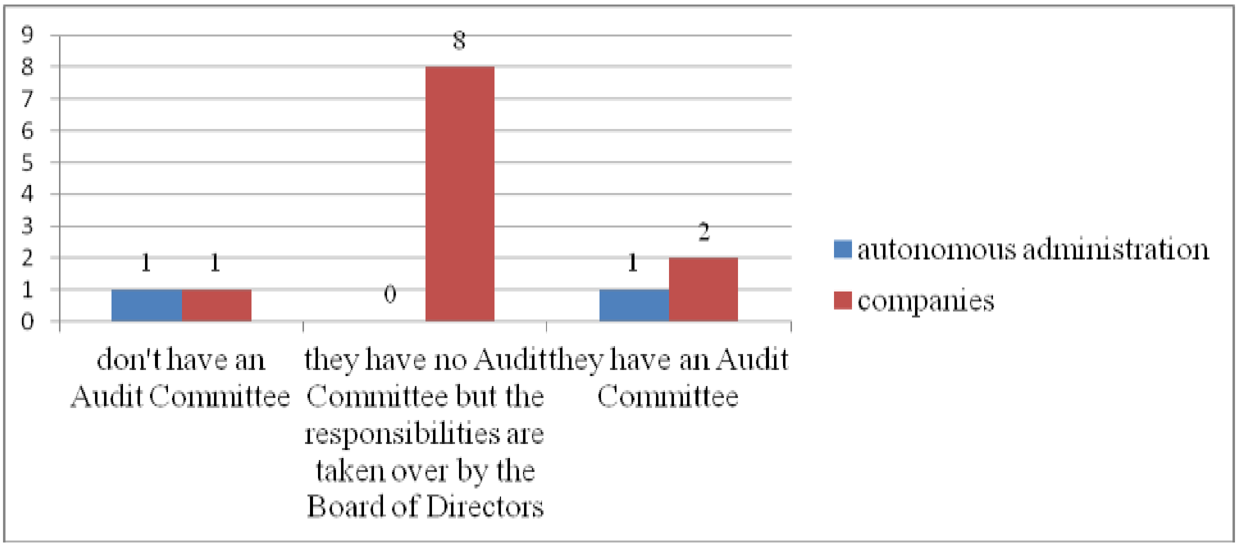
4.1. Existence of the Audit Committee

Chart no. 4 reveals the following:

• 50% of the autonomous regions do not have an Audit Committee and 50% have constituted an Audit Committee;

• 0.9% of the companies do not have an Audit Committee, 1.8% set up an Audit Committee and 97.3% do not have an Audit Committee, but its prerogatives are executed by the Board of Directors.

Chart no. 4. Existence of the Audit Committee



Source: Own projection

Comment. It is deduced that the legislation in the field of corporate governance did not have an expected echo among the public interest entities under the supervision of the Ministry of Transport, regarding the establishment of the Audit Committee. There are also some limitations imposed by the legal framework that does not allow the establishment of any committee without it being provided in the statute of the public interest entity, which makes the process somewhat difficult. In addition, there are limitations to the powers of the members of the Board of Directors that could also become members of the Audit Committee. But above all, there are obvious limitations to the perception of the role of this body in terms of internal control, external audit and internal audit.

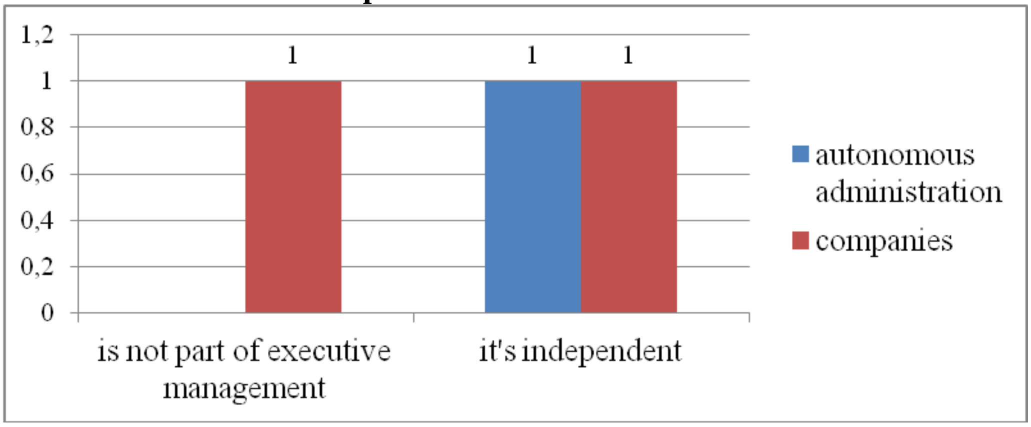
4.2. Independence of the chairman of the Audit Committee

Chart no. 5 notes that:

• At the level of the autonomous regions 100% of the leaders of the Audit Committee are independent;

• Within the companies 50% of the chairs of the Audit Committee are independent and 50% of the companies have an Audit Committee headed by a president who is not part of the executive management.

Chart no. 5. Independence of the chairman of the Audit Committee



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Comment. The independence of the Audit Committees is adequately ensured, being conducted by persons holding positions of non-executive directors within the Boards of Directors or even by directors with independent status that make it possible to carry out, under safe conditions, the responsibilities incumbent on them of this organism.

4.3. The powers of the Audit Committee's members

For the Functional Audit Committees within the public interest entities under the authority of the Ministry of Transport, an analysis of the competences held by their members in the financial accounting or audit fields was carried out. It was found that the legal provisions in force regarding these aspects are respected.

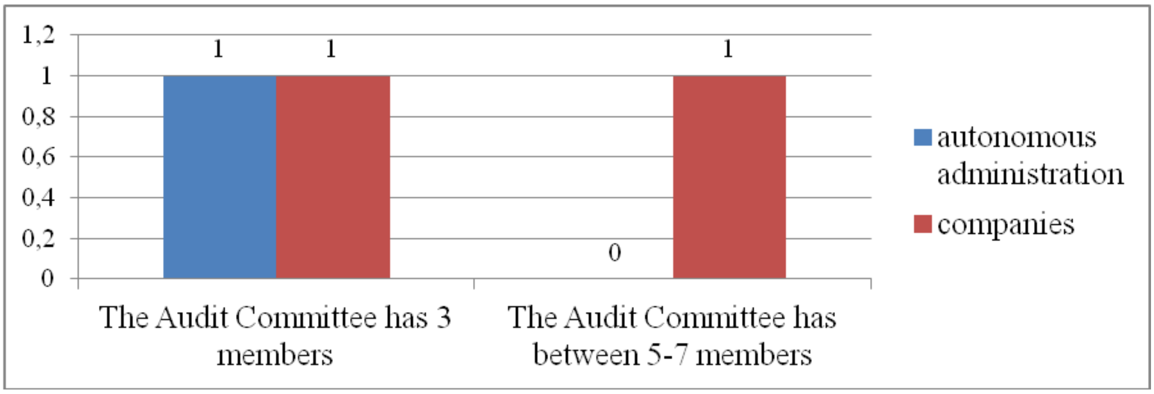
4.4. Structure of the Audit Committees

The analysis of the data presented in the previous graph allows us to find the following:

• At the level of the autonomous management that has organized the Audit Committee it consists of 3 persons, two members and a president;

• Within the companies that set up the Audit Committee, at 50% of them the structure of the body has three members, and at 50% of the companies the Audit Committee consists of 5 members.

Chart no. 6. Structure of Audit Committees

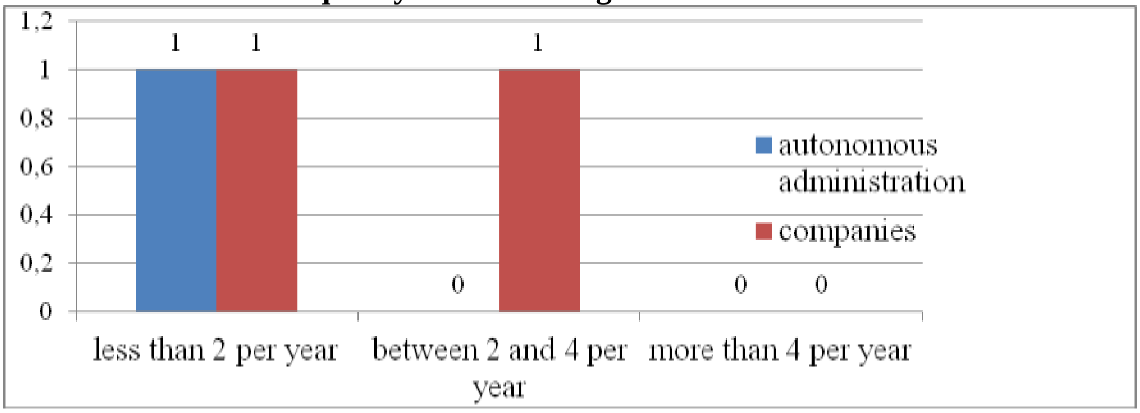


Source: Own projection

Comment. As we can can see from the small number of Audit Committees set up, there was not much interest in this aspect and we consider that also due to the difficulties of understanding the importance of the existence of this body. The number of members is not in this context relevant. It could change its significance if the Audit Committees were set up at all public interest entities that apply the principles of the code of good practice in corporate governance, interact and direct the audit and control missions in support of the management act and of the entity's ultimate goal: maximizing profit.

4.5. How the meetings of the Audit Committee's members are held

Chart no. 7. Frequency of the meetings of the Audit Committee's members



Source:Own projection

The results of the analysis are as follows: The members of the Audit Committee within the autonomous management meet less than twice a year, while the members of the Audit Committee from the analyzed companies meet less than twice a year, in the one committee and up to four times a year in another committee.

Comment. The schedule of the meetings of the members of the Audit Committee must be drawn up in order to take into account several elements: the level of development of the internal audit function; the level of development of the control function; the degree of implementation of the standards of managerial internal control, especially of the one of risk management; the need to select the financial auditor; periodic assessments on the relevance, transparency and credibility of financial reporting. This is how at the level of an economic entity that is adapting to the rigors of corporate governance, the Audit Committee becomes a busy body, as well as for the organizations that have gone through the aforementioned stages, proposing their systems and functions, respectively monitoring. measures to remedy errors and deficiencies.

5. Conclusions

The financial crises that have arisen and evolved in the economic life of the entities both in Europe and on the American continent have highlighted the fact that frauds have occurred due to the absence of control.

As a promoter of the efficiency of the internal control system, but also as an evaluator and management consultant, the internal auditor must play a very important role in changing the attitude, conduct and action of the management towards the requirements that must be covered for the implementation of good corporate governance. . Supporting the management through the two insurance and advisory components ensures, in the near and far end, the success of the public interest entity.

An entity of public interest develops good corporate governance within it if the internal audit is functional, it is based on long-tested procedures and adapted to the specific activity of the entity and formulates recommendations and proposals for solutions that adequately assist the management to achieve performance.

The evaluation of the research results justifies us to affirm that the process of corporate governance is the pillar on which the efficiency of the public interest entities should be supported, supported closely by the extension and development of the competences of the internal audit structure, as well as the establishment and functioning of the Audit Committees, which they come to facilitate the fluidization of the processes, the responsibility of the personnel, the improvement of the managerial act, the strengthening of the internal and external control.

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FACTORS FORMING THE STRUCTURE OF INTERNATIONAL TOURISM

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Abstract: *Modern tourism industry is progressing rapidly. Its development contributes to active economic growth of many countries on the globe. The development of tourism industry of a particular state is significantly influenced by world tourism development trends. Today, tourism has become an independent sector of economy, almost 6% of the global gross national product, 5% of all tax revenues and 7% of global investment. The future of tourism is closely connected to the ability of industry to introduce alternative energy technologies and design sustainable development strategies. Sustainable development strategies are a prerequisite for solving problems related to climate change, and play a key role in the implementation of the 2030 Agenda for Sustainable Development. The tourism market is part of national economy. In the case of international tourism, it simultaneously refers to two sometimes very different economic systems, one of which exists within the borders of the source country and the receiving country. International tourism contributes to the design of a new type of spatial connections that reduce risks of regional conflicts, contributing to cultural and technical enrichment of countries and peoples. The World Tourism Organization declared the year 2020 the year of rural and ecological tourism. The point is that tourism should develop and bring people financial resources not only in big cities, but also in provinces and in the countryside.*

Keywords*: tourism, development, benefits, travel, new directions, ecological tourism, agro-tourism, rural tourism, sustainable, spiritual satisfaction.*
JEL Classification: *H11, H23, Q58.*

1. Introduction

The tendencies in the development of international tourism depend on the influence of external and internal factors in relation to each particular country, on the market of the prevailing demand on the services market and, of course, on the people's desire to travel and to obtain positive impressions from different journeys. Both external and internal factors can have positive and negative impact on the development of tourism, on the quantitative change of the tourist flow, on the characteristics of investment activity in the tourism field and on the profitability of the industry compared to other fields of activity of the countries. By 2020, the most popular types of tourism can be attributed: adventure, environmental, cultural, educational, thematic, as well as cruises. The time that people spend on their vacation will be reduced, so tourists will look for a tourist product that gives maximum pleasure in a shortest possible time. According to the UNWTO and the authors 'research, China will top the list, the United States will come second, and France the third. The importance of tourism for the development of the economy and the humanitarian sphere can hardly be overestimated. About 30 branches of the economy are directly or indirectly connected with it; it accounts for 8% of world exports, more than 31% of the global services market, and 100 million jobs. Revenues from tourism activities reach nearly one trillion dollars a year.

2. Research degree

Over a long period of time, many scientists have developed various classifications of the factors that influence the development of tourism. We should mention the following scientists: Hillari Mimoun (Mimoun, 2019), Gribincea A. And Bîrcă I. (Gribincea nd

Bîrcă, 2016), Mariott, M.A. Ananyev, I.T. Tverdokhlebov, M.B. Birzhakov, V.A. Kvartalnov etc.

The purpose of the research consists in the study of the principles of classification of the tourism fields with a view to theoretical foundation, practical application, identification of methods to improve the management process of tourism industry directions in a competitive environment and to increase the efficiency of tourists' satisfaction.

The investigations were based on theoretical and methodological developments regarding the field of marketing and management in the tourism industry, materials and recommendations of scientific conferences, symposia and seminars. The research was based on official documentation regarding data from the tourism industry. The analytical works were anchored in practice, statistics, materials of the UNWTO, World Tourism Barometer [9], international organizations and the Statistical Committee (Eurostat, NBS), publications, personal interviews, observations and conclusions of the author obtained during the research. In developing theoretical questions, numerous works of both domestic and foreign scientists focusing on the development of the theory of organization, marketing and strategic management were used.

3. Results, analysis and discussions

In 2019, an increase in international tourism was observed in all regions of the tourist sectors. Nevertheless, the uncertainty surrounding Brexit, the collapse of Thomas Cook tour operator, geopolitical and social tensions, and a global economic downturn have jointly contributed to a slowdown in 2019 compared to an exceptional pace in 2017 and 2018. Coronavirus (Covid-19) from 2020 introduces its changes in the development of world tourism. This process affected not only developed countries and especially Europe and the Asia-Pacific region, but almost all countries of the world. In 2020, an increase from 3% to 4% is projected (with some skepticism), which is reflected in the latest UNWTO Confidence Index, which demonstrates cautious optimism: 47% of participants believe that tourism performance will improve, and 43% that it will remain at the same level as in 2019. Major sporting events, including the Tokyo Olympics, and cultural events such as the EXPO 2020 in Dubai are not expected to save the situation because of Covid-19.

The Covid-19 crisis raises problems in globalized tourism and causes us to rethink the tourism industry with a critical approach. Several transformation paths need to be studied. The basic idea would be that the vector of efforts should be oriented towards responsible, sustainable and innovative tourism. The conservation of natural, anthropic and cultural heritage is one of the pillars of responsible tourism and significantly improves perception of beneficiaries of tourism. To avoid failures in tourism, the key to success is planning, preferably of tourist-consumers. The development of a more inclusive and creative tourism must be developed in order to avoid a concentration of activities. Visitors' participation in cultural and creative experiences that reflect the identity of the territory and involve a co-creation process between the locals and tourists is desirable in this regard.

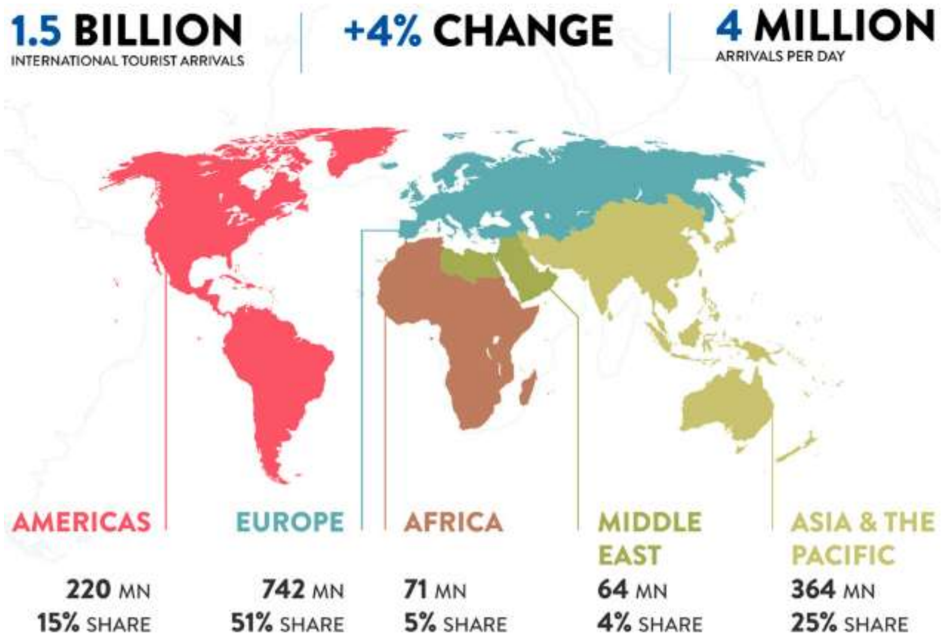

Figure 1. Global international tourism, 2019

Source: Planetoscope, 2018.

It is unimaginably difficult to cover, in a small research, the multitude of tasks that determine the vector of tourism evolution in the upcoming decades. The difficulty in question arises from the various changes regarding the actual civilization. Twenty-year-old ideas in the "third wave" of A. Toffler reminded us of new paradigms that came. The future, "... will extinguish past cultures and civilizations, testing culture and morals." Globalization and the speed of processes and phenomena have accelerated human evolution. The agrarian, industrial (4.0), informational (IoT) revolution speeds up socio-economic aspects. Some of the revolutionary processes are successfully implemented in the field of tourism (transport, accommodation units, food, tourism objects).

Table 1. Classification of tourism development factors [1; 3]

No.	Factors with a positive impact on tourism development	Factors with negative impact on tourism development
1	-geographical position of the country, favorable to the development of tourism; - presence of marine or oceanic beaches; - presence of natural parks	- separation of transport routes and inaccessibility of the territory of the country for tourists; - lack of reservoirs, marine or ocean beaches
2	-Comfortable climatic conditions, temperature	- The harsh climate, a small amount of sunny, warm days
3	- Potential rich in natural resources	- The presence of uniform landscapes, the absence of various species of flora and fauna
4	-presence of objects of cultural and historical heritage; -network of excursions developed throughout the country	- Lack of objects of cultural and historical heritage; - poorly developed network of excursion routes
5	- Availability of accommodation facilities of different comfort levels; - a wide variety of spa facilities; - availability of hotels in international chains	- The availability of the highest level hotels only in the big cities of the country; - lack of accommodation facilities; - lack or insufficient development of the facilities in the resort
6	-High level of tourist security; -political stability in the country; - low level of terrorist threat	- insufficient level of tourist security; - political instability; - high level of terrorist threat

7	- High level of welfare of the population; - availability of social guarantees; - high level of services and medical services for tourists	- low level of population welfare; - poor development of social guarantees; - low level of services and medical services for tourists
8	- High technological level of development of the country; - development of mobile communications, internet; - comfortable living and recreation conditions	- low level of technological development; - lack of comfortable living conditions; - lack of a developed communication system, Internet
9	- comfortable living and recreational conditions - Increased solvency of the population; - economic stability, lack of crises.	- Decreasing the solvency level of the population of the countries; - low level of economic stability, increasing phase of the crisis

Source: Gribincea and Bîrcă, 2016; FFTST, 2020.

The tourism sector will face serious consequences of coronavirus spread in the next few months. Factors affecting tourism are divided into two types:

• external (exogenous);
• internal (endogenous).

a) the content or nature

• *economic* (population incomes and their changes, tourist offer, prices of tourist products, etc.);
• *technical* (performances of the means of transport, technical endowments of tourist reception structures or of sports tourism agents);
• *social* (urbanization process, leisure time, fashion - in the sense of preferences for certain destinations or tourist products, etc.);
• *demographic* (population evolution, change of average life span, population structure by age, socio-professional categories or other criteria);
• *psychological*, *educational* and *civilizational* (level of training, desire for knowledge, culture, individual character, temperament of individuals);
• *natural* (geographical location of tourist locations and equipment, the relief, climate, elements of flora and fauna, position in relation to communication paths);
• *organizational* and *political* (visa regime, border formalities, facilities granted to organized tourism, typological variety of tourist arrangements, social, military, ethnic, religious conflicts, etc.).

b) duration of the action

• *with permanent or lasting action* (increase of free time, change of population incomes, demographic movement, etc.);
• *seasonal, with cyclical action* (succession of seasons, structure of the school year, activity in agriculture);
• *conjunctural, accidental* (weather conditions, economic, financial or political crises, armed confrontations, natural disasters, terrorist attacks, etc.).

c) importance / role

• *primary*, having a defining role in the evolution of tourist circulation (touristic offer, population incomes, demographic changes, prices, free time);
• *secondary* (complexity of visa formalities and border control, granting of facilities, international or regional climate, etc.).

d) direction of action

• *exogenous* (they include more general elements, outside the touristic offer, and which stimulate or, on the contrary, impede its development). Among these factors are: demographic evolution, population income evolution, urbanization increase, population mobility increase due to increasing the degree of "motorization" etc.;

• *endogenous* refers to the changes in the content of the tourist activity: diversification of the range of products and services offered, the level of the tariffs practiced and the granting of facilities, endowment with labor force, the level of personnel training, etc.

e) orientation of influence

• *factors of the tourist demand* (income, urbanization, free time);

• *factors of the tourist offer* (diversity and quality of services, cost of benefits, natural conditions, material basis);

• *factors of the supply-demand confrontation* (quality of the infrastructure, existence, quality and diversity of the travel agencies offer, the legislative system).

There are other ways and criteria for classifying the factors that influence tourism, which can be used according to the purposes of the analyzes (Mimoun, 2019). It is important to understand that these factors act simultaneously, with different intensities, in certain periods of time, making it difficult to accurately separate and quantify the influence of each. The following are some of the most important determinants of tourism:

Income of the population. Most specialists in the field emphasize the experience of the revenues as the main condition for the manifestation of the tourist demand. This indicator expresses, synthetically, the level of economic and social development of a country or region, or indirectly, the possibilities of the respective population for practicing some particular forms of tourism, the material support of tourism development (FFTST, 2020). As a rule, the level of economic-financial development is measured by the level of gross national product (GDP) per inhabitant.

The most important external factors affecting the development of tourism include: 1. Natural-geographical; 2. cultural and historical; 3. economic; 4. social; 5. demographic; 6. political and legal; 7. technological; 8. ecological.

1. *Natural-geographical* (sea, mountains, forests, flora, fauna, climate, etc.) and cultural-historical (architectural, historical and cultural monuments) factors as the basis of tourist resources are decisive when tourists choose some particular region for visits. The richness of natural and cultural-historical resources, the possibility and convenience of their use have a significant impact on the scale, pace and direction of tourism development.

2. The influence of *economic* factors on tourism is mainly due to the fact that there is a close relationship between the development trends of tourism and the economy. There is a direct correlation between the country's economic development, the volume of national income and the material well-being of its citizens. Therefore, states with developed economies, as a rule, lead the world market in the number of tourist trips of their citizens. Not only the incomes of the population, but also the level of development of the material and technical base and tourism infrastructure depend on the economic situation of the state.

3. Among the *social* factors of tourism development, it is first of all necessary to highlight an increase in the length of the population’s free time (reduction of working time, increase in the duration of annual vacations), which, combined with an increase in the standard of living of the population, means an influx of new potential tourists. Among the social factors of tourism development is also an increase in the level of education, culture, and aesthetic needs of the population. Studies show that there is a direct correlation between the level of education of people and their desire to travel (UNWTO, 2019). This is explained by the fact that people with a higher level of culture and education are able to more rationally allocate their free time, use it to learn about the environment with the help of tourism, familiarize themselves with the history, life, lifestyle, folklore and art of other countries and peoples.

4. *Demographic* factors affecting tourism development are constantly influenced by population size, location in certain countries and regions, gender and age structure, marital

status and family composition. So, the greatest inclination to active forms of tourism is shown by persons aged 18-30 years. However, the general tourist mobility of people reaches a peak of 30-50 years. Studies show that unmarried people are more mobile than family people, and women are more interested in tourism than men. Urbanization (an increase in the share of the urban population) also belongs to the group of demographic factors, the degree of which is directly proportional to the intensity of tourist trips. The highest level of urbanization is in North America (77%) and Europe (71%), which are the main "suppliers" of tourists.

5. *Political and legal* factors have a significant impact on the development of tourism: the political situation in the world and individual countries; border opening policy; easing administrative control in the field of tourism; unification of tax and monetary policies. Tourist activity depends on the political situation. A stable political situation contributes to the development of tourism and, conversely, the tense situation determines its low growth rate and even curtailment (Gribincea and Bîrcă, 2016). A serious threat to tourism is terrorism and extremism. The change in the political map of the world that took place in Europe in the late 80s - early 90s. XX century, the opening of borders and the transition to market transformations of the CIS countries and Eastern Europe predetermined an increase in tourist flows from these states. At the same time, some countries of Eastern Europe (Czech Republic, Hungary, Poland) (UNCTAD, 2013) took leading positions in receiving guests. EU's measures to establish a single market in Europe without internal borders with free movement of capital, goods, services, people, unification of tax policy, and the introduction of a single currency create all the prerequisites for the intensive development of tourism in this region.

6. *Technological* factors associated with advances in engineering and technology, have a significant impact on the development of tourism, open up opportunities for offering new types of services, their marketing and improvement of customer service. The development of science and technology helps to improve the means of mass production of tourist services (hotel industry, transport, travel agencies). Thus, technical reconstruction of transport has allowed us to create comfortable conditions for transporting a large number of travelers. Convenient, fast, relatively affordable vehicles (primarily aviation) for transporting tourists over long distances have greatly contributed to the development of tourism.

7. *Environmental* factors have a direct impact on tourism, as the environment is the basis and potential of tourism activities. Disproportionate development of tourism can undermine the very foundation of its existence: tourism consumes natural resources; in the centers of mass tourism, this process becomes destructive (changing natural conditions, worsening living conditions of people, flora and fauna, etc.). Seasonality is the property of tourist flows to concentrate in certain places for a short period of time. From the economic point of view, it represents repeated fluctuations in demand with alternating peaks and decay. In temperate climates of the Northern Hemisphere, the main ("high") seasons are summer (July – August) and winter (January – March). In addition, the off-season (April – June, September) and the "dead season" (October – December) are distinguished, in which tourist flows decay and demand is reduced to a minimum.

Internal factors also include tourism market factors:

1. The processes of supply, demand and distribution;

2. The growing role of market segmentation (the emergence of new ones within regional tourist segments. Increased travel distances, a variety of forms of vacationing, increased short-term stays, increased diversification of tourist development in the established tourist space etc.);

3. The increasing role of coordination of activities in tourism and the processes of monopolization (strengthening horizontal integration, i.e. the growth of partnerships of large firms with medium and small businesses; vertical integration through the creation of strategic tourism unions; globalization of tourism business, etc.);

4. The growing role of the media and public relations in the promotion, advertising and marketing of developed tourism products;

5. The increasing role of personnel in tourism;

6. The growing role of private tourism business.

The world will change in many ways. By 2030, the majority in many countries will have become the middle class, not the poor, who throughout the biggest part of human history have been the majority of the population.

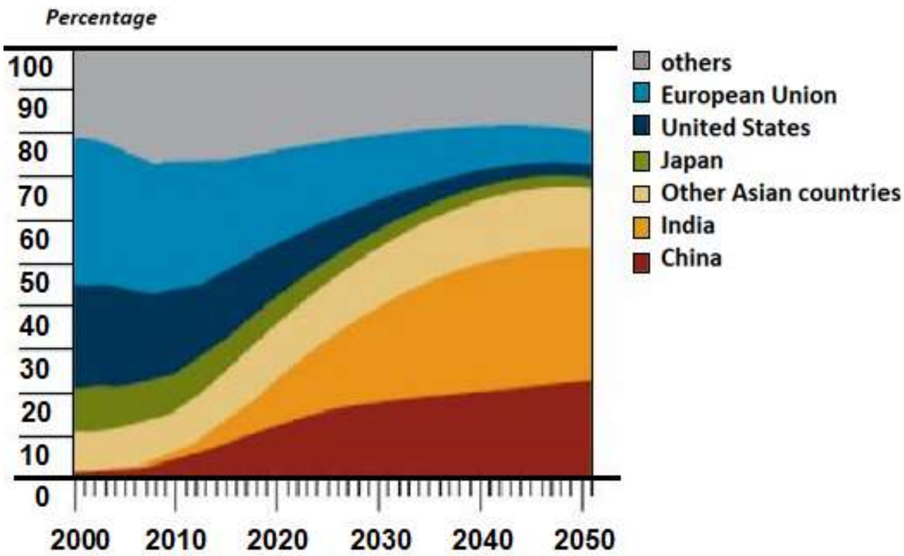

Fig. 2. Consumption shares in the middle class, 2000-2050

Source: UNWTO, 2020.

The development of new technologies by Americans will be even faster. The development speed in developing countries will also increase, allowing these states to skip the stages that developed countries had simultaneously to go through.

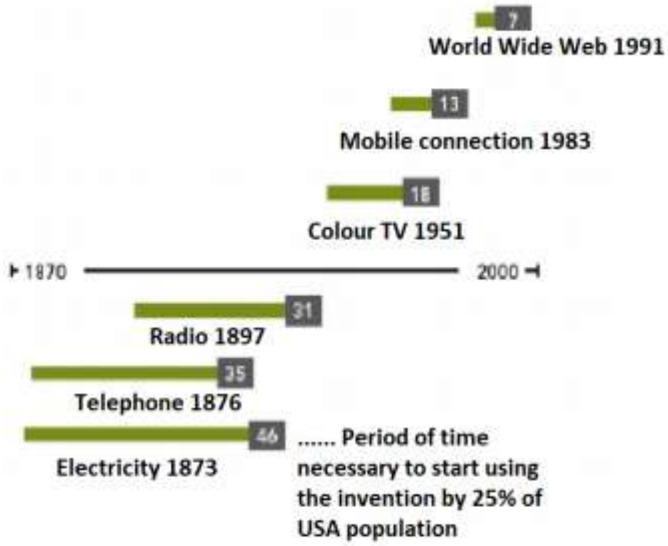

Fig. 3.The development speed in developing countries will also increase

Source: UN General Assembly, 2015.

4. Conclusions

We conclude by defining what we mean by our most important megatrends in a changing world. This is strengthening of the role of private interests, changing the global influence from the West to the East and South, demographic problems characterized by an aging population and a middle-class growth, as well as problems of using natural resources. These megatrends are recognizable. They indicate global transformations, but the world can change in any way, often diametrically opposed to all forecasts. We go along an unbeaten track. We argue that there are six megatrends with variable components. There are key factors that determine the options for a world we will live in 2030. These are the key factors: global economy, national and global power, the nature of the conflict, regional influence, high technology, as well as the role of the United States in the international arena. These are the primary factors that can sow seeds. global collapse or unprecedented development

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THE IMPORTANCE OF MARKETING RESEARCH FOR THE SUSTAINABILITY OF MEDICAL SERVICES

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Abstract: *Marketing strategy has an important role in the success of a business because it ensures consumers access to information related to the products / services of the organization. Like businesses in other areas, medical businesses follow the same rules and are strongly influenced by political, social, economic and natural factors. A marketing strategy that is well conceived could ensure the competitiveness and survival of the business in the context of the obstacles that are shown to it. As a result, a strong marketing strategy cannot be achieved without consistent market research that encompasses current and potential customers. Our paper provides arguments on the importance and added value for the company of marketing research, based on a study of consumer behaviour in the field of dental services, the results of which deserve to become the foundations of business decisions both in terms of product policy and in the field of customer relations management.*

Keywords: *Marketing research, Healthcare Services, Micro-sustainability*
JEL Classification: *I11, I12, M31.*

1. Introduction

We all must admit that in the quest for competitiveness – the key for so called micro-sustainability - one supplier needs to better understand the consumer behavior in order to shape the marketing mix and the customer relationship management. In the case of the health care services sector there is a domain specific approach because of the fact that usually customers are in a dependent relation with the performer, with an inferior power of negotiation. Nevertheless, it is important for a small company in the industry to be aware of the triggers of the consumer behavior, therefore the primary goal of our study is to capture a synthetic, yet comprehensive picture regarding the main trends in the market. We focused on several key aspects like the prophylactic patterns, perception of the quality-price in the dental care services and factors of influence regarding the decision making, trying to find some segmentation proposals.

2. Background and Context

Would like to start with the definition of a business as a competition for customers that choose some specific outputs, thus bringing value added to the company and ensuring its micro sustainability. In the care of services, and we consider that health care is an enhanced proof, the quadruple helix of a marketing deal involves the company, the employees, the customer and the society. Although the buying process consist of the classical phases, the motivation of the customer is based on highly sensitive components.

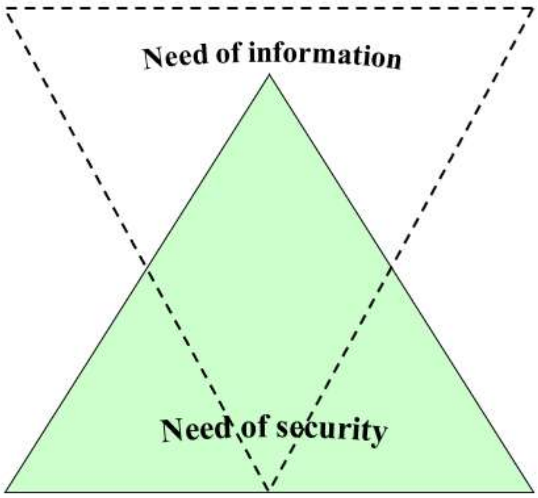

Figure 2.1 The key triggers in an adapted Maslow model for health care services

As we presented in the model above, there are two key triggers of the consumer behavior that performers in health care services should be very aware: on one hand is the need for security because of the risks and on the other hand is the need for information regarding the procedures, treatments, etc.

We assume that marketing strategy in the context of healthcare services must be oriented on competitors as on consumers. First refers to businesses which build their products and services based on competitors' know-how and second on customers' needs. Usually, when businesses' strategies are more oriented to customers this can ensure a better performance of the company (Al-Surmi, Cao and Duan, 2020). To build a customers oriented organization is crucial to understand in detail the market for medical services and, in particular, the factors that are likely to lead to higher levels of customer satisfaction (Lowe and Gllligan, 2016). In this case, a survey applied to customers could be powerful tool for businesses. Asking customers how they fill and what they want to get from your business activities can ensure that you sell right products and services to right people. Identifying and asking something to potential customers means to start a marketing research.

The costs of health care services increase as prices of other goods increase affected by inflation rate and other reasons, therefor consumers will examine the comparative value provided by a healthcare organization, just as they do for most major purchases (Numerof and Abrams, 2016). This is the reason to involve marketing strategies to highlight added value of services provided and the competitive advantage of health care organization. Nowadays, patients are more interested in the cost of medical treatments, and the value received for each expense. In the digital age, customers can access any information about their health with or without a healthcare professional, therefor is crucial to ensure customers with right information, this is another reason to apply a marketing strategy (Haimowitz, 2013).

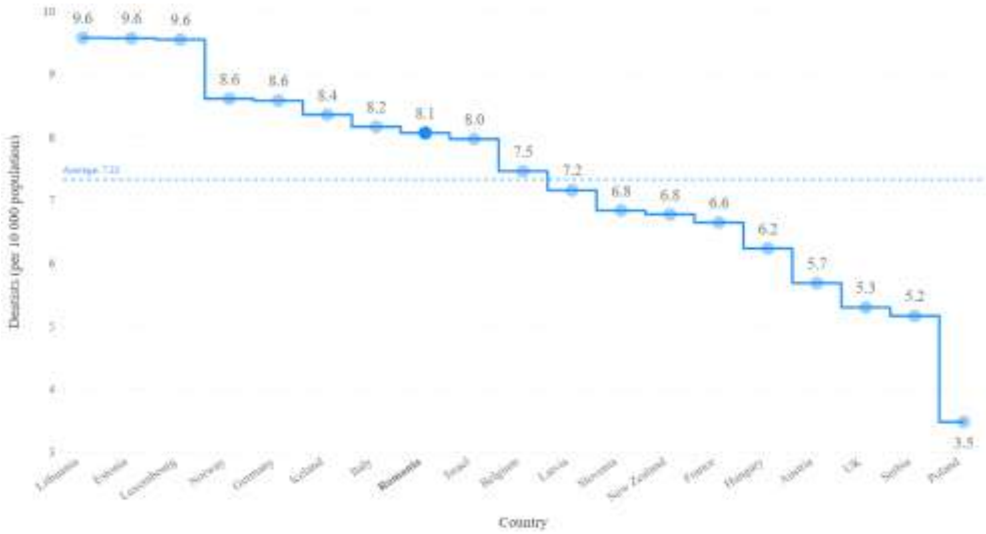

Figure 2.2. Dentists per 10000 inhabitants by Country

Source: WHO, 2020. accessed 1st April 2020

In our study we refer to dental services market so, we must mention that as population of Romania decrease in past 10 years, the total number of dentists increased, in 2016 in Romania worked 15965 dentists and reached 8 dentists per 10000 inhabitants (WHO, 2020). This means that competition in the sector also increased. From data available for year 2016 couple of countries was selected to identify position of Romania regarding competition in the field of dentists' services. In the Figure 2.2 we can see that Romania is situated above the average which confirm existing of competition in this domain. In this context dentists must ensure a continuous flow of clients and keep them by quality of the services or pricing strategies. As we mentioned above, in both cases they must apply a marketing research to know the market and apply other strategies. Next section reflects our study by a survey applied to different categories of clients.

In any marketing research, businesses must follow several steps to reach the goals which was fixed at the beginning of implementation of marketing plan. Steps in the Marketing Research Process are (Kotler and Lee, 2007):

- Determine Purpose – *to what businesses` needs response marketing research*?
- Identify Informational Objectives – *what are specific questions we want to find an answer?*
- Determine Audience – *they are current customers, potential customers o other stakeholders?*
- Select Research Technique – *depends on the type of relation with targeted group, what are the channels and methods through you will get the information/answers?*
- Develop Sample Plan – *how many people you will involve?*
- Pre-test Draft Instruments – *involve well known people to test your method (clients and stakeholders which wasn`t involved in the development of the method)*
- Field the Research – *who is responsible for marketing research process?*
- Analyse Data – *who will analyse the data collected and how will be analysed it?*

- Write a Report and Present Recommendations – *findings of research, are they enough to respond to questions? Did you find more than you were searching for? What is the best way to represent the results?*

3. Methodology, findings and results

The research that we've conducted was focused on key questions regarding teeth health among the population from central Transylvania.

The main *objectives* of the study are related with the following aspects:

- Evaluate the teeth health of the respondent's;
- Analyze the respondent's extent of dental prophylaxis elements usage;
- Identifying the main characteristics of dental health behavior (if they are going regularly to the dentist, how often, for what reason, if they go to the same dentist or to a different one);
- Highlighting the main factors which influence choosing the dentist;
- Evaluate the respondent's perception regarding dentist's prices and special offers;
- The respondent's structure by socio-demographic variables.

To meet these objectives, we built a questionnaire that included both closed and open types of questions. The closed ones include questions with one or multiple options, the Likert scale, the importance scale, the appreciation scale or the purchase intention scale.

The sample was chosen randomly, being based on the respondent's free will to participate in the survey, but the goal to cover all socio-demographic categories included in the questionnaire is reached. The data was collected both in printed and electronic format, using Google Forms during early spring 2020. The collected data was then centralized in a SPSS database, where a series of analyzes were performed, and in the end the charts were generated using Excel.

Considering that the data was collected until very recently, this paper will present only a horizontal analysis of the data, and in the future, we will extend it to the analysis of correlations, hypothesis testing and maybe, extrapolation of the results to other areas of Romania.

The sample included a number of 486 respondents from the central Transylvanian region, only 422 answers being valid, and it was analyzed based on relevant items according to the decision tested among a group of dentists. These variables are gender, age, occupation and the average monthly income. According to these variables the sample structure is as follows:

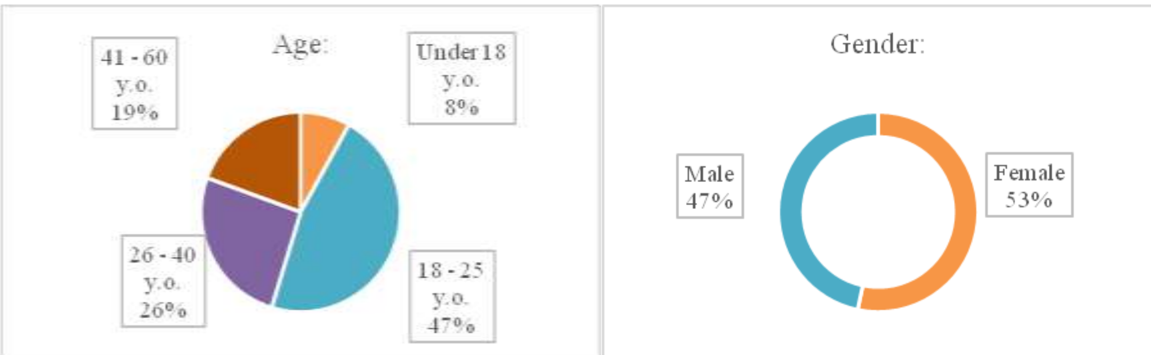

Figure 3.1. The respondent's age and gender

Most of the respondents (about 73%) were between 18 and 40 years old, while the structure of the sample by gender is almost equal, i.e. 53% female and 47% male.

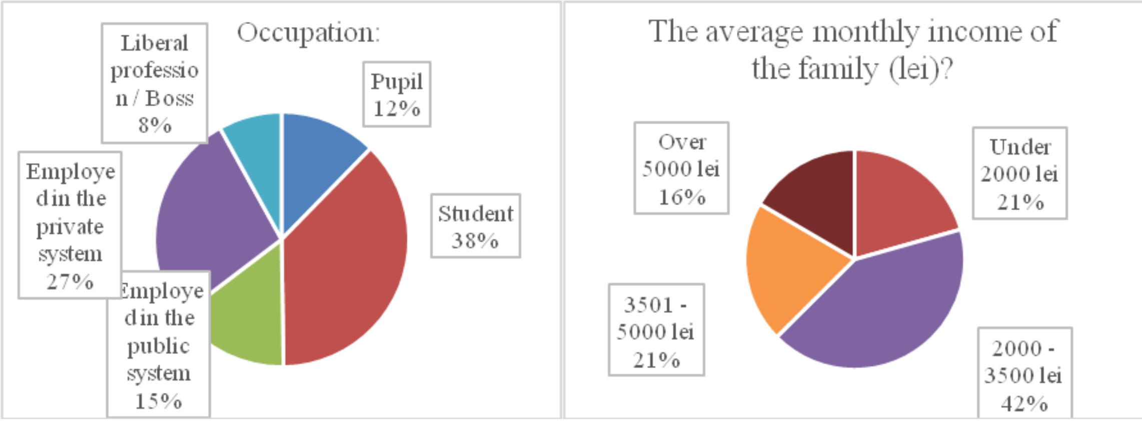

Figure 3.2. The respondent's occupation and monthly income

Regarding the occupation, students and those employed in the private system were best represented in the sample, with 38%, respectively 27% of the respondents. If we look at the income situation, we can see that 42% of the respondents earn monthly between 2.000 and 3.500 lei, while 16 % of them earn over 5.000 lei per month. The rest (42%) is equally shared between those who earn under 2.000 lei per month, respectively between 3.501 and 5.000 lei.

4. Results of the study

Our study began with a self-evaluation of the teeth's health, on a scale from 1 to 10, the respondents being asked to rate the level at which they consider it.

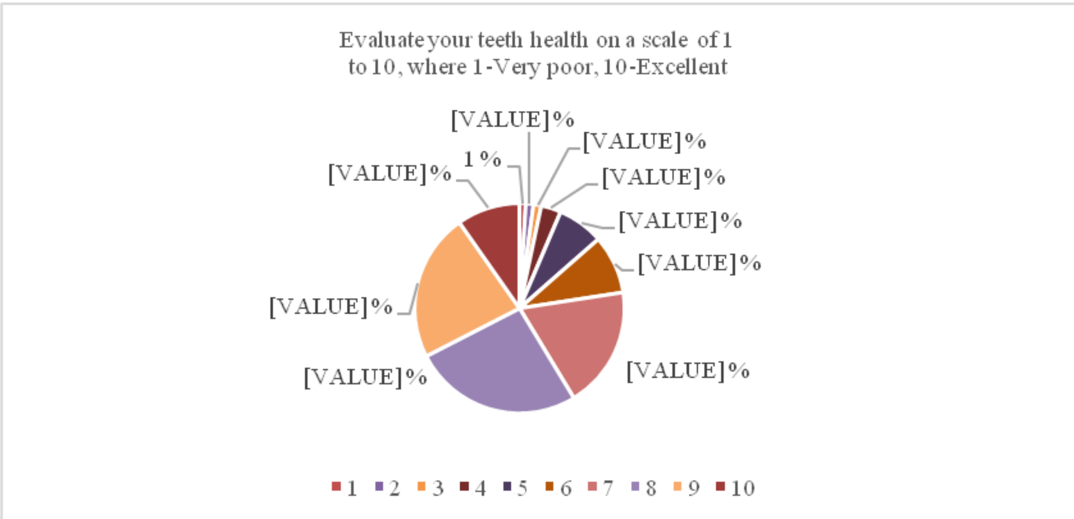

Figure 3.3. The respondent's teeth health

Over 93% of the respondents believe that the health of their teeth deserves a grade higher than 5, most of them (67,7%) choosing values between 7 and 9.

When it comes to respondent's dental health maintenance habits, the situation looks like the representation in the figure 3.4.

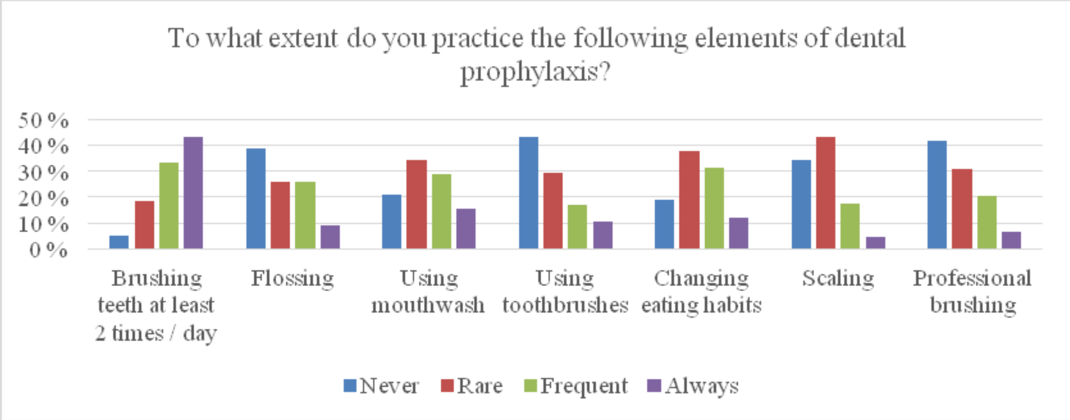

Figure 3.4. Dental prophylaxis

As we can see in the figure above, 43.2% respectively 33.4% always or frequently brush their teeth at least 2 times/day, 15,6% respectively 28,7% always or frequently uses mouthwash and 43% are changing eating habits. On the other hand, 43,4% of the respondents never use toothbrushes, 41,6% never resort to professional brushing and 38,9% are never using dental floss.

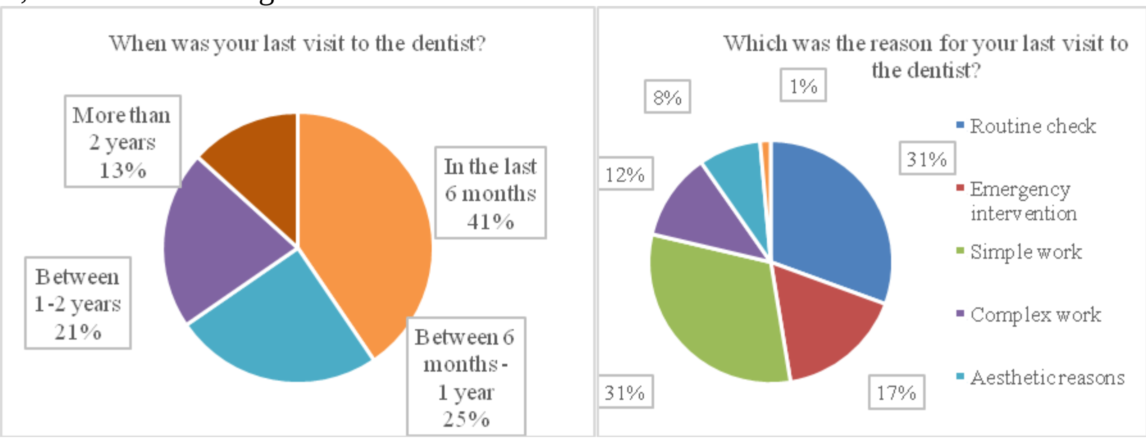

Figure 3.5. Time and reason for last dental check-up

Regarding the last visit at the dentist, things are looking very good, and that's because more than 65% of the respondents went in the last year to a dentist for routine check (31%), simple work (31%), or for aesthetic reasons (17%).

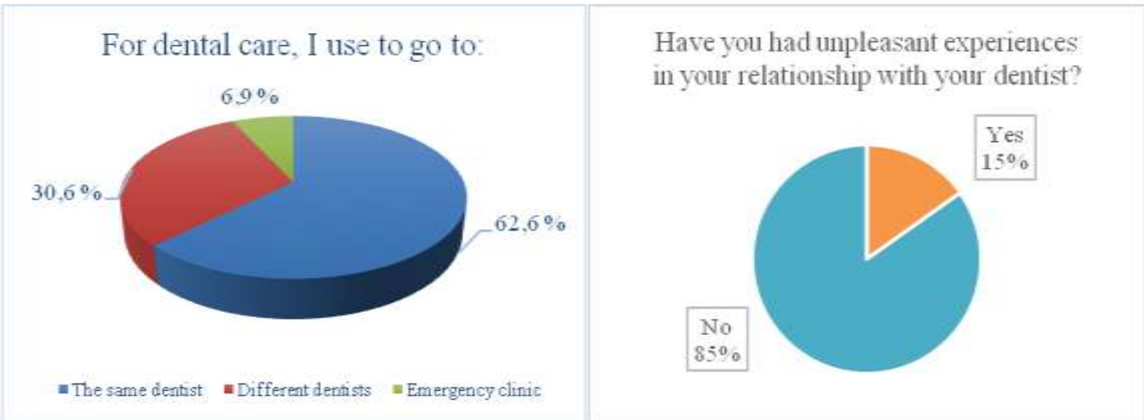

Figure 3.6. Respondent's experience with dentists

An important aspect of our study was identifying the main behavior characteristics of the respondent's dental health. Therefore, we wanted to see if they go at the same dentist or to a different one each time, and if this behavior is influenced by the relationship they've had. The results are showing that 62,6% of the respondents choose to go to the same dentist each time and only 30,6% to a different dentist. This behavior is sustained also by the fact that they've didn't had unpleasant experiences in the relationship with their dentist (85%). If we think about the people's general fear of going to the dentist, this could be an encouraging aspect, which could lead us being more preoccupated about the health of our teeth.

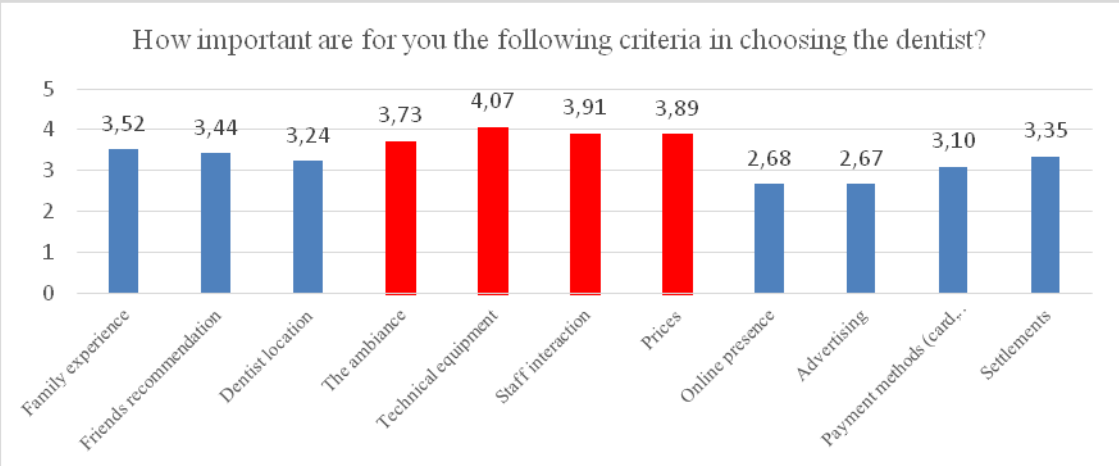

Figure 3.7. Criteria in choosing the dentist

The above criteria were analyzed on a scale of 1 to 5, where 1 means not at all important and 5 very important. Among the most important criteria mentioned by the respondents are technical equipment (with an average score of 4,07), staff interaction (with an average score of 3,91), prices (with an average score of 3,89) and the ambiance (with an average score of 3,73). The least important criteria were the advertising and the online presence.

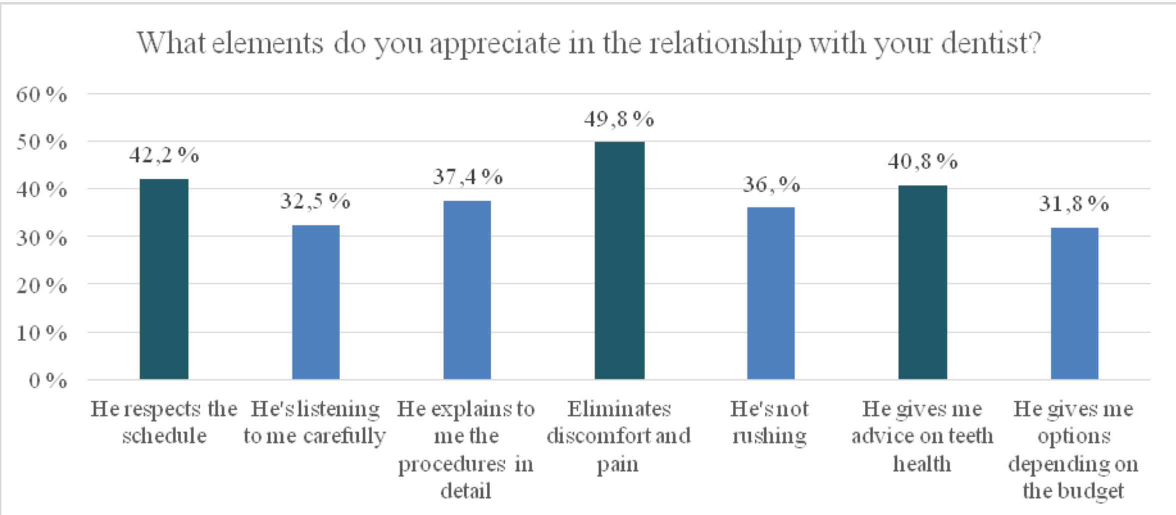

Figure 3.8. Appreciated aspects by the respondents

In figure 8, we show the most appreciated elements in the client-dentist relationship, and as we can observe, for most of the respondents (49,8%) eliminating discomfort and pain is the most important aspect, followed by respecting the appointment schedule and then giving advice on teeth health.

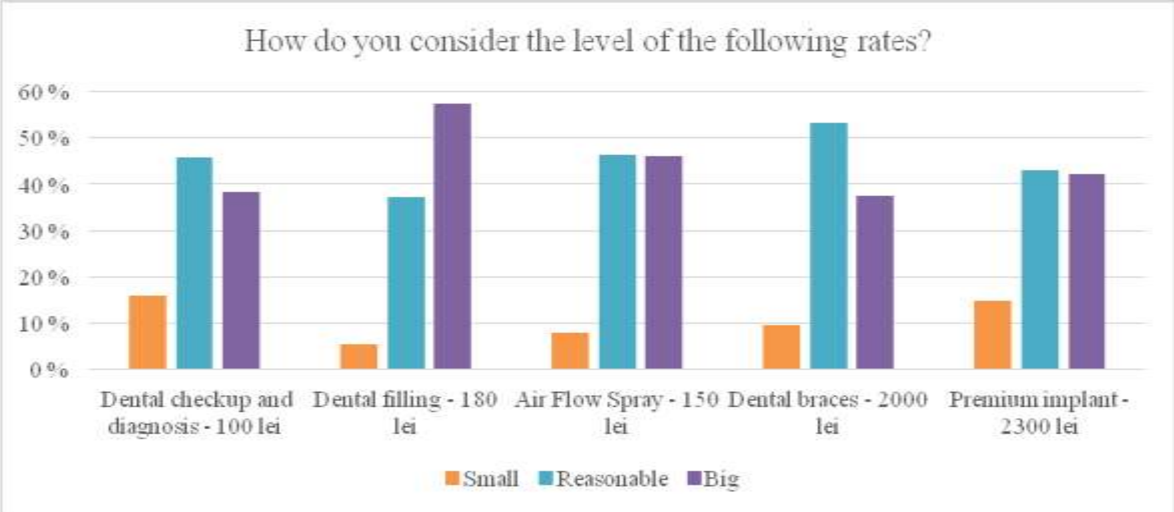

Figure 3.9. Respondent's perception towards prices

The last aspect considered in this study is related to the respondent's perception regarding dentist's prices and special offers. 100 lei for dental checkup and diagnosis is considered a reasonable price by most of the respondents, and the same goes for 2.000 lei for a dental brace. The prices for dental filling (180 lei) are perceived as being expensive for 57,3% of the respondents.

Regarding respondent's intentions for dentist's special offers, free extended diagnosis and discounts were mostly appreciated, while subscriptions and family packages raised less interest.

5. Conclusions

This paper is a part of a broader study regarding the dental health care service, where we try to provide a mapping of factors affecting the specific business environment.

Even though in the health care services the physician dominates the negotiation with consumer we could identify in Romania pretty intensive competition among dentist and dental clinics. The needs of information and security seem to be the most important aspects that the motivation of the patient is driven. The marketing strategies of a dental clinic should be focused on the communication in order to improve the knowledge and understanding of the customer in a world of contradictory information.

The main findings of our survey lead us several important statements: more than two third of our sample rated their level of teeth health as good and very good; one third of the respondents don't visit the dentist at least once a year; the majority of the sample prefers the same dentist. When touching the topic of choice, the order of the main criteria is the following: technical assets, staff interaction, prices, the ambiance of the facilities. The most appreciated features of a dentist seem to be: eliminates discomfort and pain, respect the schedule and advices provided about teeth health. Most of the respondents are prone to accept the prices of specific procedures and treatments.

We consider that, from the customer relationship management perspective, transforming the service providing in a long-term relation based on communication and support is a significant aspect, and a constant screening of the client's profile is critical to the sustainable marketing policy of a company.

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CREATIVE ACCOUNTING IMPACT ON THE ECONOMIC ENTITY'S PATRIMONIAL AND FINANCIAL SITUATION. CASE STUDY

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***Abstract**: This paper empirically addresses the issue of creative accounting in financial reporting, focusing on how it influences the quality of financial statements prepared and reported by economic entities. Creative accounting cannot be automatically classified as legal or illegal, in the absence of an in-depth analysis, but is negatively correlated with the approach of managers or professional accountants to manipulate accounting data to achieve certain objectives or meet certain financial indicators relevant to third parties. The data were collected from open sources, from databases available to the general public, for the study being selected an economic entity based on certain representative criteria, such as economic size, business segment or history. The study revealed that, based on the analysis of the financial statements prepared by the economic entity for a period of two consecutive years, were highlighted elements that suggest a use of imaginative accounting, being likely to mislead stakeholders about the performances registered.*

***Keywords**: Creative accounting, corporate governance, result management, ethics.*
***JEL Classifications**: M40, M41, M48.*

1. Introduction

The handling of accounting data is located on the thin line that delimits a legal approach, favorable to the economic entity, to the spectrum of fraud, unfavorable to the state or other stakeholders. Abundant case studies in the field of creative accounting, especially addressed in times of economic crisis, have strengthened the negative perception of the public, in the sense that economic entities are tempted to resort to the subjective interpretation of accounting data and circumvent the rules and regulations in force. especially of the control mechanisms.

By determining the professional accountant to present certain financial statements, the manager of the economic entity causes the interpretation of accounting regulations according to his subjective interests, causing a change in external perception of the performance of the economic entity, and thus induces inappropriate, misleading behavior.

The benefits obtained by managers and / or professional accountants, determine them to exploit certain accounting uncertainties to present the summary documents of the economic entity in a more favorable light or to legitimize discretionary managerial decisions (Colasse, 1991). Thus, the methods of accounting representation largely depend on the purpose assigned to the accounting information and the point of view adopted.

Accounting is governed by regulations and principles that should guarantee ethics, the transparent transmission of financial information and the fair accounting representation of the economic entity (Genesse, 1995).

The real image of the financial situation of the economic entity is essential, the appreciation of the right application of the accounting principles in the elaboration of the accounting documents being relevant for the external actors of the economic entity.

This study aims to establish the extent to which creative accounting allows the manager to manipulate the financial information of the managed economic entity and to influence the perception of it by stakeholders. To answer these questions, the first part of the paper presents the basics of creative accounting and explains its interest in the current context.

The second part illustrates the theoretical framework applied to a concrete case, analyzing the extent to which elements specific to creative accounting can be highlighted and, if any, how their application could affect the economic entity.

2. What is creative accounting?

The notion of creative accounting, developed by the Rochester school in the current of accounting positivism, is defined by Watts and Zimmerman (1986) as "the set of accounting techniques used by the manager to change his accounts in a way favorable to his expectations."

Gosh (2010) considers creative accounting as a change in accounting figures in what managers and professional accountants want by exploiting gaps in existing rules and / or ignoring some of them.

According to Stolowy, H. and Breton, G (2004), managers of economic entities in difficulty choose for the implementation of an accounting policy in a preferential manner, with the aim of managing published results. Thus, creative accounting methods can be taken to the extreme and the intentional use of these techniques, outside the legal regulations, can reach the limit of abuse or fraud.

In a difficult economic context, the manager has the interest to exploit all the possibilities offered to him to meet the expectations of the various economic actors. In order to deal with a crisis affecting the sector in which an economic entity operates, its manager may decide to change its choices regarding the accounting policy applied.

Therefore, if the communication of financial information remains a legal obligation, it is increasingly part of a voluntary and control process for managers, used for the purpose of embellishing the results prepared by the economic entity.

Improving the company's image by selecting and presenting advantageous information is one of the possible manipulation options, being speculated especially some gaps in accounting regarding the presentation of accounting and financial indicators, by applying creative accounting techniques, mainly for communication purposes and avoidance of fiscal obligations.

Strategies consolidated as a result of the globalization of the economy and rapid changes in the economic, technological and social environment, determine economic entities to react quickly and adapt their behavior. To cope with this unstable environment, the manager must constantly integrate new information and may, in some cases, use creative accounting techniques to meet stakeholder expectations (Beneish, 1999).

Creative accounting techniques allow the manager and the professional accountant to adapt their strategy to the economic changes that have taken place, but they are likely to affect external financial communication.

An important motivating factor for the use of creative accounting techniques and methods is the reflection of an improvement in the financial performance of the economic entity in order to access financing from credit institutions.

Pursuing this goal, the management of the economic entity is tempted to resort to a series of manipulative techniques in the field of creative accounting, which can be found in the legal area and in legal regulations, but we cannot neglect the possibility of exceeding legal limits to achieve the goal.

3. Some creative accounting techniques

- ***Incorrect recognition of income***

In the course of current activity, sales agreements may be subject to changes made legitimately, the right to return or exchange offered to buyers not being blamed, to the extent that revenue is recognized in the relevant accounting period.

However, the terms and conditions of the sale may be subject to change or the sale may be revoked outside the recognized sales process or the usual reporting methods and may affect the recognition of revenue. Usual changes may include extended payment terms, refunds or exchanges.

- ***Registration of a sale outside the contractual provisions or legal regulations***

A transaction involving the issuance of an invoice for the sale of a product without its actual delivery to the buyer may take place when the product has been reserved but the delivery, respectively the transfer of ownership, did not take place on the date of registration of the sale.

Although the transaction may be based on a legitimate order or purchase intention, the customer may not yet be prepared or willing to accept receipt of the product on the date of the sale recorded by the seller.

- ***Artificial increase of the stock value***

Stock valuations can be adjusted in several ways, including by moving stock between locations owned by the economic entity, with the aim of artificially increasing the amount of stock, hiding low-moving stocks or misappropriating of stocks.

Economic entities may increase the stock of goods by falsifying journal entries, proven by unfinished purchase orders or by doubling the registration of purchases. One of the reasons why economic entities use such means of manipulation is to reduce the cost of sales relative to turnover, in percentage terms.

- ***Inadequate asset valuation***

Casuistry demonstrated the existence of a direct relationship between the overvaluation of assets and the increase of income. The concealment or incorrect recording of items in the balance sheet, which should normally be recorded in the income statement, are creative accounting techniques. Asset overvaluation is often seen as a preferred way for professional accountants to directly manage reported earnings.

- ***Inadequate capitalization of expenses***

Capital expenditures should be amortized over the life of the asset, which are costs that the economic entity incurs over several accounting periods. Thus, in order to avoid the recognition of all expenditure in the current period, economic entities may improperly speculate on certain expenses that can be capitalized in various asset accounts and may include costs of interest, personnel, inventory, etc.

- ***Estimation adjustments***

Changing the accounting estimate, which directly affects the debt or equity of the economic entity, is a common practice throughout the accounting process and can be manipulated to have an impact on income, expenses or assets and liabilities.

In this context, the management of the economic entity is in a position to influence the estimates, depending on certain interests, the creative accounting methods and techniques used involving the reduction of accumulations or reserves to increase gains in the current period.

4. Results and discussions

The analysis of the performance of the economic entity has a central role in determining the extent to which management has resorted to the application of creative accounting techniques, the literature showing that such behavior increases in intensity during periods of economic and financial crises.

The analysis was based on data from the balance sheet of the economic entity SC LEZEM NIF SRL, active in the food industry, integrating in the analysis a system of relevant indicators, through which relevant conclusions can be found that can highlight the motivation that determined managers and / or professionals accountants to resort to the manipulation of accounting data, respectively conclusions can be drawn regarding future developments.

In our study we have approached a representative suite of financial indicators that would allow the issuance of relevant conclusions regarding the presence of manipulative elements in the patrimonial and financial statements prepared by the economic entity under analysis.

For this, we performed a comparative analysis of the balance sheet elements and financial indicators by reporting the situations related to 2019 to those prepared by the economic entity in 2018.

In the following we have made a presentation of the balance sheet elements, mentioning those changes identified from one period to another that have an uncertain character in terms of reality.

The structure of the assets in the patrimony of the analyzed economic entity can be summarized below (the values are expressed in lei).

Asset structure of SC LEZEM NIF SRL

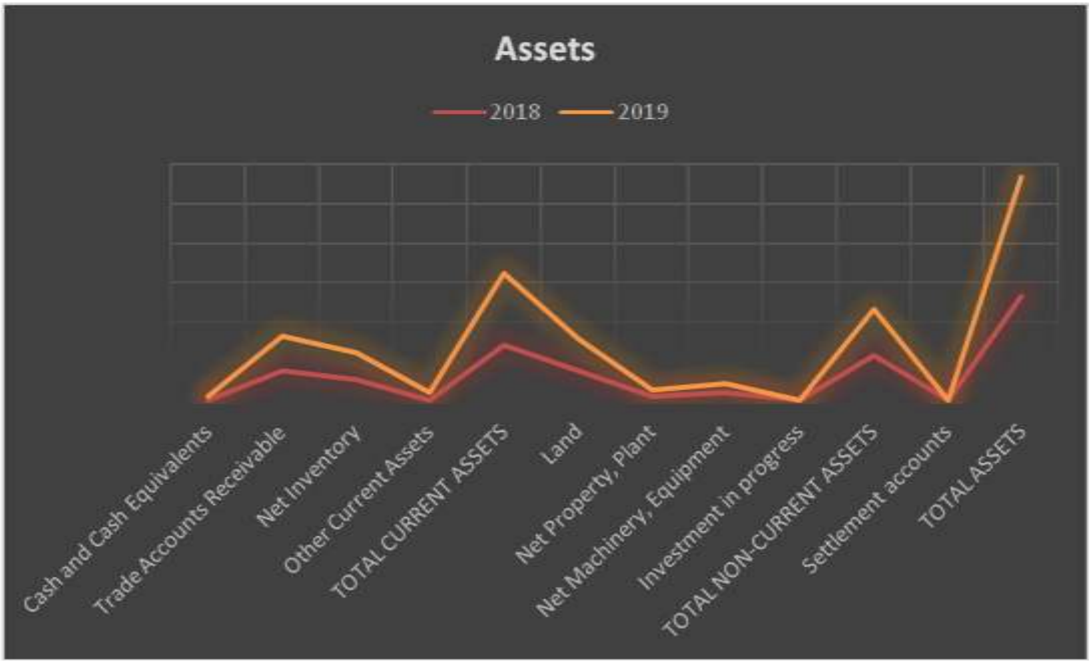
Table no. 1

BALANCE SHEET	2018	2019	2019 vs. 2018
Cash and Cash Equivalents	309.000	1.085.216	251%
Trade Accounts Receivable	7.711.831	8.992.156	17%
Net Inventory	5.661.568	6.681.915	18%
Other Current Assets	699.121	1.456.486	108%
TOTAL CURRENT ASSETS	**14.381.520**	**18.215.773**	27%
Land	7.903.551	7.903.551	0%
Net Property, Plant	1.199.146	1.596.846	33%
Net Machinery, Equipment	2.410.516	2.149.319	-11%
Investment in progress	98.619	4.516	-95%
TOTAL NON-CURRENT ASSETS	**11.611.832**	**11.654.232**	0%
Settlement accounts	655.616	315.946	-52%
TOTAL ASSETS	**26.648.968**	**30.185.951**	13%

Source: elaborated by the authors

Graphic representation of the evolution of the assets of SC LEZEM NIF SRL

Figure no. 1



Source: elaborated by the authors

Based on the patrimonial elements previously presented, we determined the specific rates for each component of the company's assets, as presented below.

- ***Fixed assets ratio***

The indicator reflects the share of the patrimonial elements permanently in the patrimony of the economic entity and measures the degree of immobilization of the capital elements.

Fixed assets ratio (2018) = (Fixed assets) / (Total assets) x 100 = 43.57%

Fixed assets ratio (2019) = (Fixed assets) / (Total assets) x 100 = 38.61%

It is thus observed that fixed assets hold a significant share of the total assets of the economic entity, being highlighted a percentage decrease from one period to another, although the dynamics is positive, and this against the background of accelerated increase in current assets, especially receivables and inventories compared to fixed assets.

- ***Current assets rate***

This type of assets has a major significance in the activity of an economic entity, based on the balance sheet data of the analyzed economic entity being obtained a series of indicators. The current assets ratio is given by the relation:

Current assets rate (2018) = (Current assets) / (Total assets) x 100 = 53.97%

Current assets rate (2019) = (Current assets) / (Total assets) x 100 = 60.35%

As mentioned above, the current assets ratio is at a reasonable level compared to the fixed assets held by the entity. However, in addition to the percentage increase in current assets in total assets from one period to another, there is a significant increase in current assets, by 27% in 2019 compared to 2018.

Of these, we took into account the share of stocks and trade receivables in the analyzed economic entity. Those rates are calculated from the relationships below

Inventory rate (2018) = Stocks / (Total assets) x 100 = 21.24%

Inventory rate (2019) = Stocks / (Total assets) x 100 = 22.14%

Customer receivables rate (2018) = (Customers and similar accounts) / (Total assets) x 100 = 28.94%

Customer receivables rate (2019) = (Customers and similar accounts) / (Total assets) x 100 = 29.79%

The changes in the share of current assets from one period to another (6.38%), corroborated with the increase identified in both the customer receivables account (17%) and the inventory account (18%), involve certain suspicions regarding concerns of veracity of the input data used in the preparation of the financial statements.

Similarly, using the data from the balance sheet of the economic entity, we calculated the relevant indicators regarding the liability accounts. The main balance sheet liabilities related to the financial years 2018 - 2019 are summarized in the chart below, being made on the basis of absolute and relative data on the liabilities included in the balance sheet of the economic entity. The structure of the liabilities of the analyzed economic entity can be summarized in the table below, respectively in the chart below.

Liability structure of SC LEZEM NIF SRL

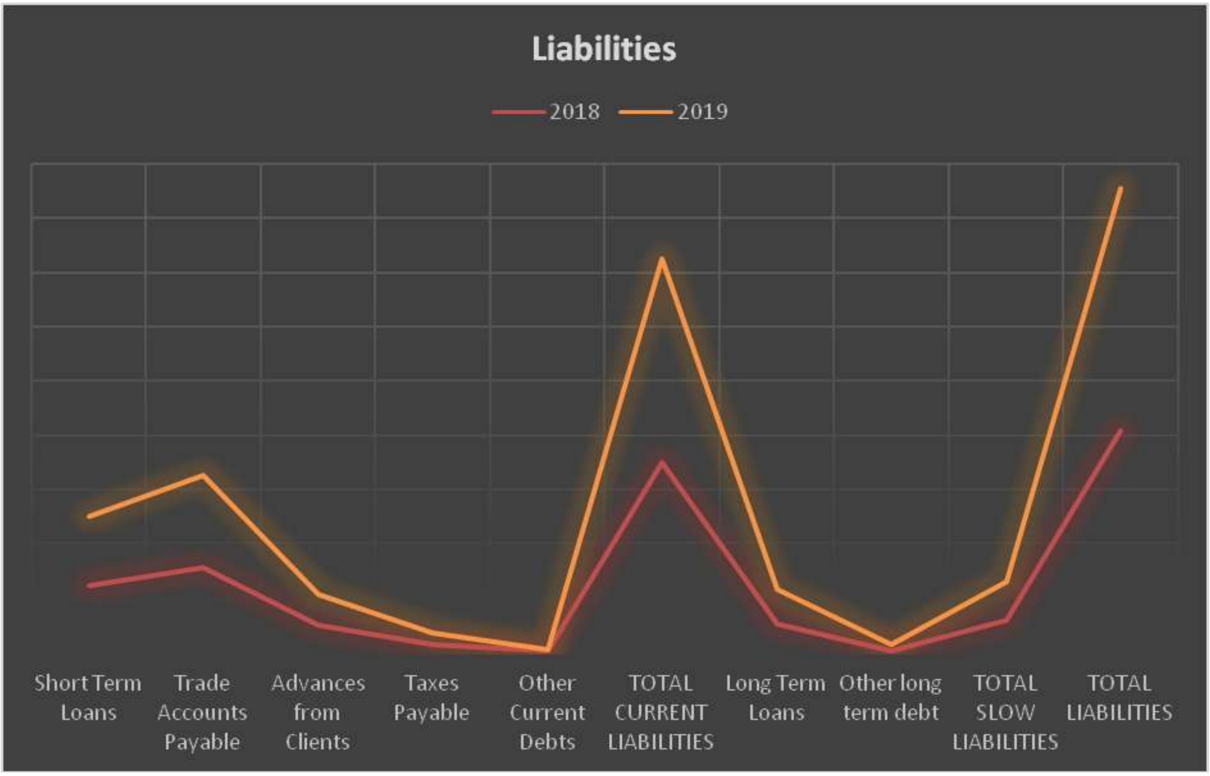
Table no. 1

	2018	2019	2019 vs. 2018
Short Term Loans	6.205.469	6.334.696	2%
Trade Accounts Payable	7.861.496	8.496.496	8%
Advances from Clients	2.510.618	2.864.869	14%
Taxes Payable	799.469	999.187	24,98%
Other Current Debts	121.516	89.463	-26%
TOTAL CURRENT LIABILITIES	**17.498.568**	**18.784.711**	7%
Long Term Loans	2.694.568	3.116.497	16%
Other long-term debt	285.468	421.649	48%
TOTAL SLOW LIABILITIES	**2.980.036**	**3.538.146**	19%
TOTAL LIABILITIES	**20.478.604**	**22.322.857**	9%

Source: elaborated by the authors

Graphic representation of the evolution of liabilities at SC LEZEM NIF SRL

Figure no. 2



Source: elaborated by the authors

The analysis performed, based on the calculated data, reveals that the debts with a repayment term of up to one year have a significant share (85.45% in 2018, respectively 84.15% in 2019) in the total liabilities of the economic entity.

This indicator reflects the share of debts due within 1 year in the total liabilities of the economic entity, and is given by the following relation:

Share of short-term debts in total liabilities (2018) = (TS debts) / (Total liabilities) x 100 = 85.45%

Share of short-term debts in total liabilities (2019) = (TS debts) / (Total liabilities) x 100 = 84.15%

Regarding the debts due within a period of up to 1 year, there is a slight increase from one period to another, with advances from customers knowing the largest advance (24.98%). The structure of short-term debt is calculated according to the relationships below.

Share of loans in debt on TS (2018) = (TS loan) / (TS debts) x 100 = 35.46%

Share of loans in debt on TS (2019) = (TS loan) / (TS debts) x 100 = 33.72%

Share of suppliers in debts on TS (2018) = Suppliers / (TS debts) x 100 = 44.93%

Share of suppliers in debts on TS (2019) = Suppliers / (TS debts) x 100 = 45.23%

The variations registered in the short-term accounts have known an evolution that does not suggest subjective interventions likely to manipulate the result published by the analyzed entity.

However, in order to assess the reliability of the data, a detailed analysis is required, the limitations of this study being obvious as the analysis is based exclusively on the situations presented by the economic entity, and no possible omissions can be assessed.

Analyzing the main elements of the profit and loss account could be highlighted a series of developments that we will treat individually, analyzing the degree to which evidence of manipulative behavior can be identified.

The structure of the profit and loss account can be summarized in the table and the chart below, respectively:

The structure of the profit and loss account of SC LEZEM NIF SRL

Table no. 3

	2018	2019	Variation (%)
TURNOVER/SALES	63.636.098	77.463.058	21,73%
- Cost of Goods Sold	57.991.608	70.715.989	21,94%
GROSS OPERATING PROFIT	5.644.490	6.747.069	19,53%
+ Other Operating Incomes	864.968	764.587	-11,61%
- Salary Expense	2.391.886	2.654.915	11,00%
- General /Selling/ Admin. Expenses	1.468.498	1.214.652	-17,29%
- Depreciation Expense	699.818	589.169	-15,81%
NET OPERATING PROFIT	1.949.256	3.052.920	56,62%
- Interest Expense	1.256.159	1.416.940	12,80%
+/- Gains/Losses on FX	5.618	54.548	870,95%
PROFIT BEFORE TAXES	698.715	1.690.528	141,95%
Less: Income Taxes	156.499	164.968	5,41%
NET PROFIT AFTER TAXES	542.216	1.525.560	181,36%

Source: elaborated by the authors

Graphic representation of the profit and loss account of SC LEZEM NIF SRL

Figure no. 3

Source: elaborated by the authors

Analyzing the variations registered from one period to another, there is a positive evolution of turnover, increasing by 21.73%, broadly in correspondence with the evolution of the cost of goods sold (21.94%). Although apparently the correlation between the two elements would not raise suspicions, the significant increase in turnover may be the result of marking some income in advance, outside the contractual provisions.

The hypothesis is supported by the significant improvement of the profit margin (by 56.62%), a trend that is not within the specific margins of the activity segment, characterized as being extremely competitive.

At the same time, certain unjustifiable decreases in depreciation expenses could be observed, which are not necessarily in line with asset dynamics, thus generating indications regarding the application of extensive depreciation policies.

Creative accounting, using as a method the extension of the amortization period, to spread the expenses over several periods, can be used to determine the incorrect capitalization of costs, thus being able to induce a wrong view of the financial statements.

The use of an aggressive stance regarding the selection of the life and residual value of property, plant and equipment is distorted to lead to irregularities in financial reporting.

Analyzing the financial structure of the capital of the economic entity, several conclusions could be drawn. In the following we will address the main financial indicators relevant for assessing the financial performance of the analyzed entity.

- ***Financial stability rate***

This indicator reflects the share of financing sources that remain at the disposal of the economic entity for a period longer than one year compared to the total financing sources of the economic activity. In this sense, we calculated the financial stability rate, using the relation:

Financial stability rate (2018) = (Permanent capital) / (Total liabilities) x 100 = (Equity + medium and long-term debts) / (Total liabilities) x 100 = 34.34%

Financial stability rate (2019) = (Permanent capital) / (Total liabilities) x 100 = (Equity + medium and long-term debt) / (Total liabilities) x 100 = 37.77%

- ***Global autonomy rate***

The indicator reflects the share of own sources in the total sources used to finance the activity of the economic entity. In practice, it is recommended that the share of own sources of financing be at least 33% of the total sources of financing used by the economic entity. The indicator is calculated based on the relation:

Global autonomy rate (2018) = (Equity) / (Total liabilities) x 100 = 30.13%

Global autonomy rate (2018) = (Equity) / (Total liabilities) x 100 = 35.22%

Starting from the optimal reference value of this indicator, the improvement of the indicator from one year to another by 5 percentage points, up to this threshold, in the case of the analyzed entity, raises a doubt about the possibility of manipulating the financial statements.

- ***Current ratio***

The indicator measures the ability of the economic entity to pay short-term debts by capitalizing current assets.

Current ratio (2018) = (Current assets) / (Current liabilities) x 100 = 0.82

Current ratio (2019) = (Current assets) / (Current liabilities) x 100 = 0.97

The literature indicates as optimal the reference range 1.5-2 to indicate the ability of an economic entity to honor its short-term obligations. Being below this range means that the economic entity will have to access loans or capitalize fixed assets.

In the case of the analyzed entity, an improvement of the indicator can be observed, an additional argument for the hypothesis of using creative techniques to improve the image of the financial performance registered by the entity concerned.

Assessing the turnover rate of customers, stocks or suppliers allows the determination of possible problems (slow-moving stocks, bad paying or late paying customers, respectively highlighting difficulties in paying debts to suppliers), a low value of the indicator (calculated in days) being desirable, at the opposite pole being an increasing dynamic of these rates. In the case of the analyzed entity, the indicators show some positive fluctuations.

- ***Days Receivable***

Days receivable (2018) = (Customer receivables) / (Turnover) x 365 = 44 days

Days receivable (2019) = (Customer receivables) / (Turnover) x 365 = 42 days

- ***Days Inventory***

Days inventory (2018) = Inventories / (Cost of goods sold) x 365 = 35 days

Days inventory (2019) = Stocks / (Cost of goods sold) x 365 = 34 days

- ***Days Payable***

Days payable (2018) = (Suppliers + Crediting customers) / (Cost of goods sold) x 365 = 64 days

Days payable (2019) = (Suppliers + Creditor customers) / (Cost of goods sold) x 365 = 58 days

The rates determined for the analyzed economic entity show an improvement of the rotation terms from one period to another, which suggests a detailed analysis carried out by the management regarding these accounts, the decisions adopted being effective, provided that they were not formal, respectively to be the result of a manipulative intervention on those slow-moving accounts.

- ***Debt to equity***

The indicator aims at assessing the economic entity's capacity to cover the debts due in the event of a business crisis. The indicator is an important variable used in corporate finance, measuring the degree to which an economic entity can finance its current activity through attracted debts compared to the funds held.

Debt to equity (2018) = (Total debts) / (Total equity) = 3.32

Debt to equity (2019) = (Total debts) / (Total equity) = 2.84

- ***EBITDA***

The term is defined as the profit obtained before interest, taxes, depreciation and amortization and reflects the financial performance of an economic entity. The indicator contributes to the substantiation of investors' decisions or to the decision of credit institutions to grant financing, being an indicator used mainly due to the limited possibility to suffer manipulations using creative accounting techniques.

EBITDA = Gross result + Other income – Salary expenses salaries – General expenses – Provisions expense

EBITDA 2018 = 2,649,074 lei

EBITDA 2019 = 3,642,089 lei

Along with the dynamics of turnover, profitability or assets and liabilities, the last two indicators, namely the degree of indebtedness and EBITDA are essential in the analysis carried out by credit institutions when assessing the opportunity to provide financing to an economic entity.

In the case of the analyzed economic entity, the dynamics registered from one period to another of the degree of indebtedness and EBITDA, although the manipulation of the last variable raises some challenges for the accounting professionals, present variations that lead to the hypothesis of a subjective intervention in the financial statements. with the obvious aim of presenting an improved image, superior to the real one.

Graphic representation of the variation of the main financial indicators

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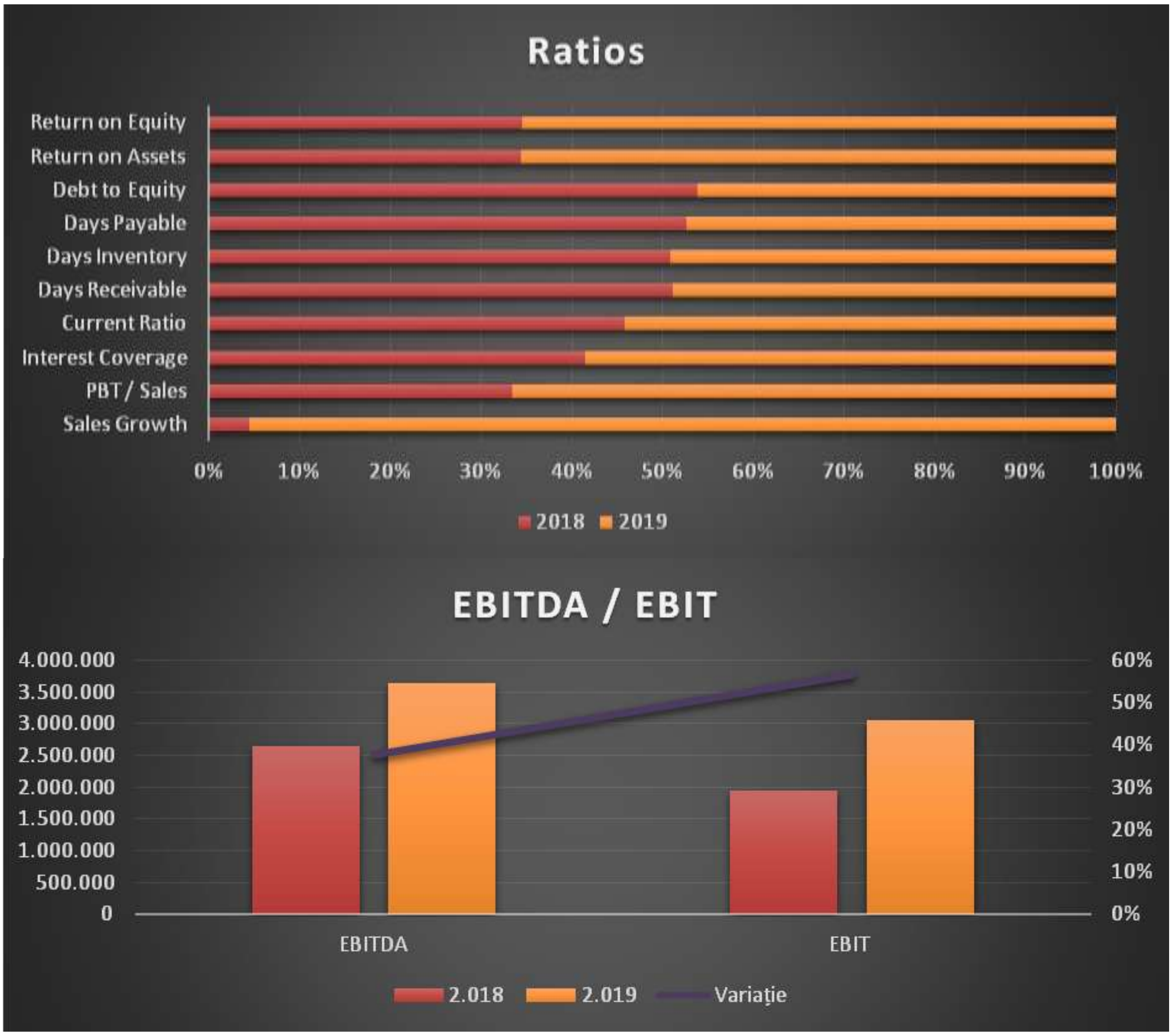
Figure no. 4



Source: elaborated by the authors

Based on the analysis of the financial statements prepared by the economic entity, conclusions could be deduced that suggest a use of imaginative accounting techniques and methods, the results obtained being likely to mislead stakeholders about the performance of the entity, supporting the first hypothesis, namely "*the manipulation of financial statements is likely to mislead stakeholders*".

Also, the results of the study found that the creativity and innovation of the manager and / or professional accountant, in applying accounting regulations, led to a significant improvement in performance of the economic entity in 2019 compared to 2018. The results of the analysis also shows that creative techniques can have a significant impact on the financial results published by the analyzed economic entity, thus confirming the second hypothesis of the paper.

In an attempt to contextualize the positive developments recorded by the economic entity from one period to another, in economic-financial terms, the alleged approach of management to manipulate accounting data may be closely correlated with the attempt to disseminate to financial institutions a consolidated position for ensure access to finance.

On the other hand, a possible interest associated with the conclusion of a transaction aimed at selling the economic entity to an investment fund or attracting an investor should not be neglected, aspects that could be highlighted, to a certain extent, in case of an audit of financial statements, performed by an independent entity.

5. Conclusions

Creative accounting is in itself a phenomenon that can have significantly negative consequences on the economic environment and the economy in general. Also called imaginative accounting, by the simple fact that it is the cumulative result of the experience and imagination of the professional accountant, it not only presents altered, unreal data to shareholders or investors, but affects the credibility of statistics on certain fields of activity, or simply changes perception formed upon the development of a state's economy.

In addition to the unrealistic image provided by the statistics, the existence of a close relationship between the accounting result and the tax system is another dimension that requires attention, given that creative accounting can directly affect the collections made to the state budget, with unpredictable effects on the state's ability to effectively allocate resources to the economy.

Another undesirable effect of creative accounting is to induce a state of uncertainty in business relationships between economic actors, calling into question the decision of an economic entity to engage in economic relations with new partners, regardless they are customers or suppliers.

The manifestation of creative accounting cannot be questioned, so it is necessary to fully understand the factors that motivates a manager or professional accountant to abandon ethical rigors and / or exceed legal regulations and anticipate possible circumstances that could encourage creative practices, the ultimate goal being to limit or prevent their incidence.

No matter how cumbersome the literature on the subject of creative accounting may be, a reliable and undeniable way to fully prevent the manipulation of accounting data has not been identified, or is not generally valid.

International practice has shown that when managerial interests converge with those of shareholders, detecting, or early detection of accounting manipulations is a difficult task. Moreover, economic entities that are ultimately found to resort to such practices are those that resort to excessively aggressive manipulative techniques, with flagrant overcoming of legal norms.

Achieving a high level of expertise in the field of creative accounting techniques and methods, creating an easy-to-apply and comprehensive regulatory framework, reducing taxation, creating a predictable legal framework, and in-depth examination of other determinants are elements that can be solutions for discouraging, limiting, or simply eliminating the need to resort to accounting manipulation.

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RESEARCH ON THE EVOLUTION OF THE IMMIGRATION PHENOMENON IN ROMANIA

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Abstract: *It is obvious that international migration is a phenomenon affecting all the countries and regions of the world, and Romania is no exception. Romania is not only a country of origin, but also a country of transit and destination. The purpose of this research is to study the phenomenon of immigration in Romania. The statistical analysis of immigration data provided by the United Nations, Eurostat, the National Statistical Institute of Romania, the International Organization for Migration, the International Organization for Migration, the Office for Romania was chosen for statistical analysis. The evolution of the international migration stock highlights the increase in the number of migrants from one year to the next. Thus, if in 1990 Romania had a level of 135,825 migrants, in 2019 the value amounted to 462,552 migrants, the highest level in the period 1990-2019. However, immigrants are not frequently interested in Romania. Rather, Romania is a transit state to developed countries.*

Key words: *international migration, immigration, Romania.*
JEL Classification*: F22, O15, R23.*

1. Introduction

The United Nations uses the term "international migration" to refer to people living in a country or region other than the one in which they were born or whose nationality they belong to (United Nations, 2019a).

According to the Statistical Yearbook of Romania (National Institute of Statistics, 2019a), "international migration represents the change of habitual residence in another country and, respectively, from another country in Romania". Emigrants are those who previously had their habitual residence in Romania and who cease to have their habitual residence in its territory for a period of at least 12 months. Immigrants are those persons who establish their habitual residence on the territory of Romania for a period of at least 12 months after having previously had their habitual residence in another country. Also, international migration is considered to have two forms (National Institute of Statistics, 2019a): permanent international migration, determined by the change of permanent residence from and in Romania, and long-term temporary international migration, determined by the change of habitual residence from and in Romania, for a period of at least 12 months. The balance of international migration is determined, for each year separately, as the difference between the flow of immigrants (number of immigrants, Romanian citizens, foreigners or stateless persons, who previously had their habitual residence in another country and established their habitual residence on the territory Romania, for a period of at least 12 months, in the reference year) and the flow of emigrants (the number of emigrants who previously had their habitual residence in Romania and established their habitual residence in another country for a period of at least 12 months , in the reference year).

Romania is not only a country of origin, but also a transit and destination country. It is true that the research of the emigration phenomenon has shown a special interest in the specialized literature, because, in the last years, over 3 million Romanian citizens have chosen to obtain residence in another country. Thus, the authors Constantin, Nicolescu and Goschin (2008) approached the issue of Romania's external migration from a European perspective, accompanied by that of asylum, in the study "European Perspectives on Approaching Asylum and Migration". The paper addresses the legislation, policies and institutions in the field of migration in the European Union and Romania, including a statistical (quantitative) analysis of emigration and immigration flows of Romania, focusing on labour migration (Constantin, Nicolescu and Goschin, 2008, p. 3). Based on quantitative and qualitative analyzes, the paper includes a series of considerations regarding the predictable evolutions of the migration phenomenon. The authors Roman and Voicu (2018) analyzed the flows and labor migration trends and their impact on economic and social life in Romania. The economic consequences concern the financial aspects, the quality of life, the volume of money transfers. The most severe problem is the temporary abandonment of minors by migrant parents and the fact that the authorities are thus forced to formulate policies to monitor the situation, which would involve additional costs (Roman and Voicu, 2010, p.64).

In the literature there are also studies that have analyzed immigration in Romania. Thus, the authors Toader, Smirna, Jurca and Cernat (2010) conducted a research to identify the needs of immigrant workers on the Romanian territory, as well as to record and analyze the views of other actors involved in the phenomenon of immigration for work purposes (union representatives, managers, Romanian workers), with reference to the solutions to improve this process, to increase the adaptability of workers and companies on the labour market (Toader, Smirna, Jurca and Cernat, 2010, p.13).

Alexe and Păunescu (2011) conducted and published a complex study on legal immigration and integration of foreigners in Romania. The aim of the paper was to improve the degree of knowledge of the immigration phenomenon and the importance of integrating foreign citizens in our country. This study includes four major research components: documentary research on immigration, research on the perception of the Romanian population on RTT (third country nationals), qualitative research among RTT on the path of integration into Romanian society, qualitative research on identifying methods and information channels regarding RTT issues (Alexe and Păunescu, 2011, pp.8-9).

2. The immigration phenomenon in Romania

The purpose of this research is to study the immigration phenomenon in Romania, and less the emigration phenomenon. Therefore, the statistical analysis of data on international migration and immigration provided by the United Nations, through the Department of Economic and Social Affairs, Eurostat (the European Commission department responsible for publishing comparable statistics for Member States), the National Institute of Statistics of Romania, by the International Organization for Migration (Migration Data Portal, Center for Data Analysis on International Migration), by the International Organization for Migration, Office for Romania.

The evolution of the international migration stock highlights the increase in the number of migrants from one year to another (United Nations, 2019b). Thus, if in 1990, Romania registered a level of 135,825 migrants, in 2019 the value amounted to 462,552 migrants (Figure 1), the highest level in the period 1990-2019. The year 2015, considered to be the peak year of the migration crisis, was characterized by a significant increase in international migration, with 103,837 people compared to 2010, respectively by 59%.

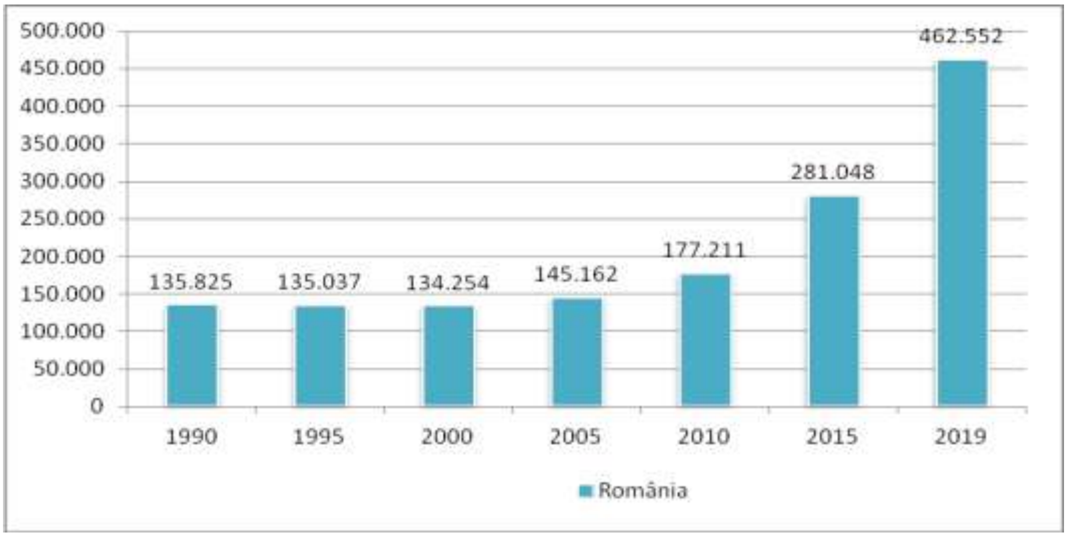

Figure 1. The evolution of international migration in Romania

Source: United Nations, 2019b. *International Migrant Stock 2019.* United Nations: Department of Economic and Social Affairs. Population Division. [online] Available at: <https://www.un.org/en/development/desa/population/migration/data/estimates2/estimates17.asp> [Accessed 3 January 2020].

As a share in the total population of Romania, the stock of international migration represents, in 2019, 2.4%, four times higher than the share value held in 1990 (0.6%) (Figure 2). The increase in this share was continuous, from 0.6% in 1990, 1995 and 2000, to 0.7% in 2005, 0.9% in 2010, 1.4% in 2015, and 2.4, in 2019. For comparability, the share of international migration in the total population in 2019 was 11% in Europe and 3.5% worldwide (United Nations, 2019b).

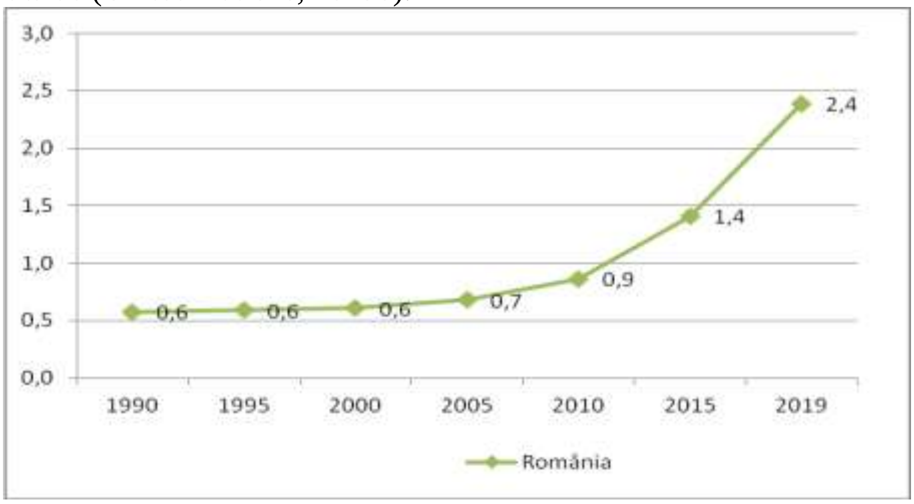

Figure 2. The share of international migratory stocks in the total population of Romania

Source: United Nations, 2019b. *International Migrant Stock 2019.* United Nations: Department of Economic and Social Affairs. Population Division. [online] Available at: <https://www.un.org/en/development/desa/population/migration/data/estimates2/estimates17.asp> [Accessed 3 January 2020].

The analysis of the international migration stock, according to gender, highlights the preponderance of the male population, in 2015 and 2019. In the previous period (1990, 1995, 2000, 2005 and 2010), women had a higher share comparing to men (Figure 3). For comparison, in Europe and worldwide, in 2019, migrant women had higher shares. In

Europe, the share of the female migrant population was 51.4%, and worldwide, 47.9% (United Nations, 2019b).

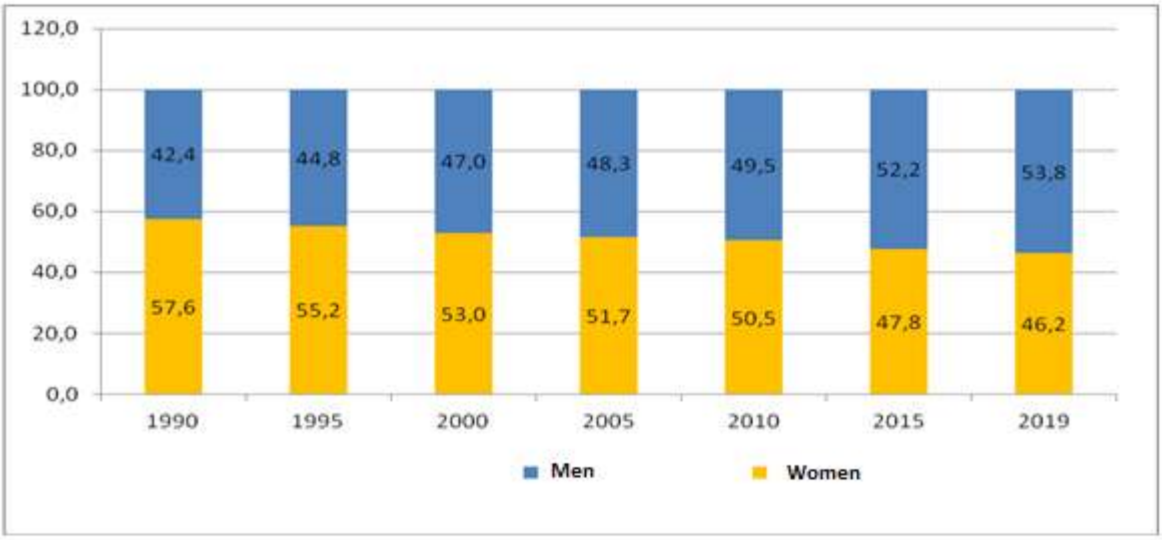

Figure 3. The share of the international migration stock in the total population of Romania

Source: United Nations, 2019b. *International Migrant Stock 2019.* United Nations: Department of Economic and Social Affairs. Population Division. [online] Available at: <https://www.un.org/en/development/desa/population/migration/data/estimates2/estimates17.asp> [Accessed 3 January 2020].

According to the National Institute of Statistics of Romania, the permanent international migration registered the same increasing trend, in the period 1991-2017 (National Institute of Statistics, 2019). Thus, Chart 1 highlights the evolution of the permanent international migration phenomenon in the last almost 30 years.

Chart 1. Permanent international migration (determined by address change)

Year	Permanent immigrants	Permanent emigrants	The balance of international migration with address change
1991	1,602	44,160	-42,558
1995	4,458	25,675	-21,217
2000	11,024	14,753	-3,729
2005	3,704	10,938	-7,234
2010	7,059	7,906	-847
2015	23,093	15,235	7,858
2016	27,863	22,807	5,056
2017	50,199	23,156	27,043

Source: National Institute of Statistics, 2019. *Statistical Yearbook of Romania 2018 - time series.* [online] Available at: <http://www.insse.ro/cms/ro/tags/anuarul-statistic-al-romaniei> [Accessed 4 January 2020].

If in 1991 a number of 1,602 permanent immigrants was reported, in the following years it reached 11,024 permanent immigrants, in 2000, and 50,199 permanent immigrants, in 2017. In the case of permanent emigrants, the highest value was recorded in 1991, when 44,160 Romanians emigrated permanently. Gradually, in 1995, 2000 and 2005, the number of permanent emigrants decreased, and the trend will change after 2003, in order to increase the number of permanent emigrants.

Analyzing the balance of permanent international migration (Figure 4), it is observed that it was negative in the period 1991-2010, the number of permanent emigrants exceeding that of permanent immigrants. The balance becomes positive after 2012, when the flow of immigrants exceeds that of emigrants. In 2017, a fairly important balance was registered, of 27,043 people (50,199 permanent immigrants and 23,156 permanent emigrants).

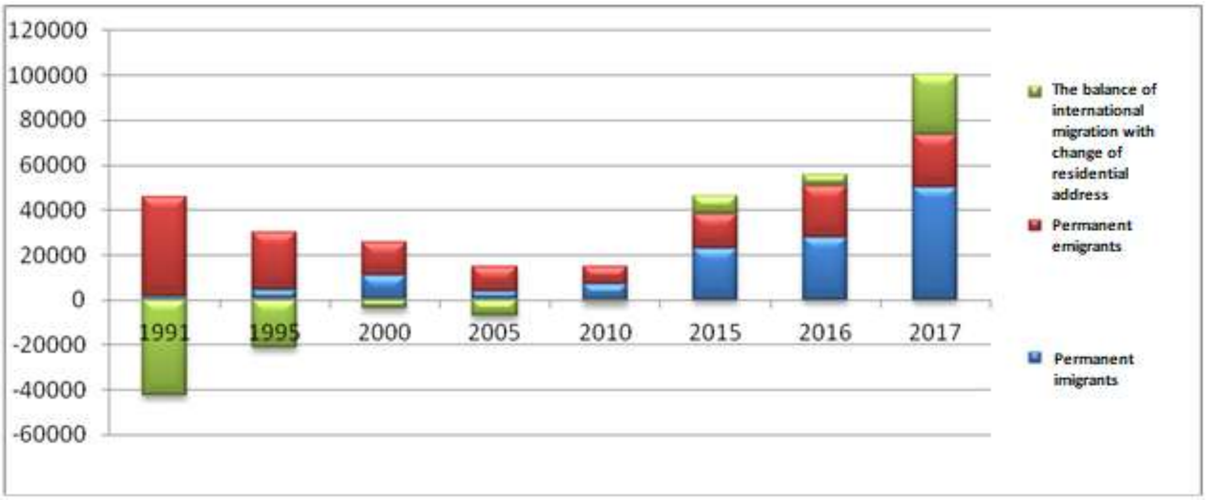

Figure 4. The balance of permanent international migration

Source: National Institute of Statistics, 2019. *Statistical Yearbook of Romania 2018 - time series.* [online] Available at: <http://www.insse.ro/cms/ro/tags/anuarul-statistic-al-romaniei> [Accessed 4 January 2020].

Regarding the long-term temporary migration, determined by the residence change (Chart 2), it is found that in the period 2008-2018, the flow of immigrants registered a linear, insignificant increase. The years 2017 and 2018 are highlighted by an increase in the number of immigrants, which reached, in 2018, the value of 181,344 people. The number of emigrants, on the other hand, fluctuated quite a lot. The year 2008 represents the peak year for the analyzed period, when the number of emigrants exceeded 300,000 people.

In the period 2008-2013, the trend was to reduce the number of emigrants. Starting with 2014, the number of emigrants started to increase continuously, reaching the number of 238,926 people, in 2018 (Chart 2).

Chart 2. Long-term temporary international migration

Year	Immigrants	Emigrants	The balance of international migration
2008	138,929	302,796	-163,867
2009	135,844	246,626	-110,782
2010	149,885	197,985	-48,100
2011	147,685	195,551	-47,866
2012	167,266	170,186	-2,920
2013	153,646	161,755	-8,109
2014	136,035	172,871	-36,836
2015	132,795	194,718	-61,923
2016	137,455	207,578	-70,123
2017	165,946	219,327	-53,381
2018	181,344	238,926	-57,582

Source: National Institute of Statistics, 2019. *Statistical Yearbook of Romania 2018 - time series.* [online] Available at: <http://www.insse.ro/cms/ro/tags/anuarul-statistic-al-romaniei> [Accessed 4 January 2020].

Figure 5 shows the balance of long-term temporary international migration. For the analyzed period, it was, in each case, negative, because the flow of long-term temporary emigrants exceeded the flow of long-term temporary immigrants. It is observed that the net migration increased from 2008 to 2012. After this year, the balance decreased again, to the value of -57,582 people, in 2018.

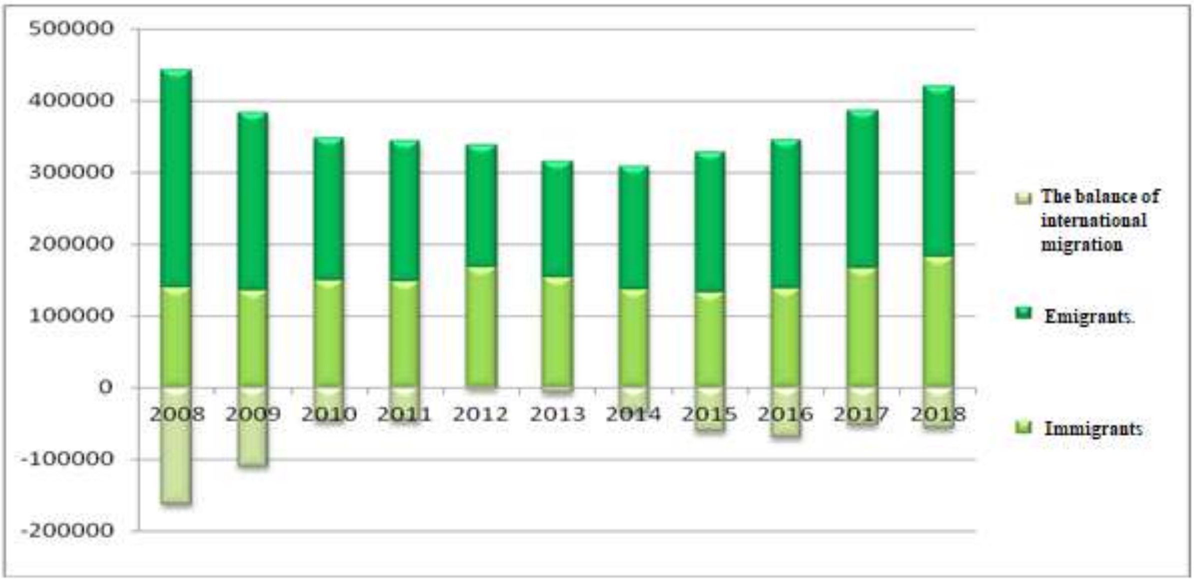

Figure 5. Balance of long-term temporary international migration

Source: National Institute of Statistics, 2019. *Statistical Yearbook of Romania 2018 - time series.* [online] Available at: <http://www.insse.ro/cms/ro/tags/anuarul-statistic-al-romaniei> [Accessed 4 January 2020].

Analyzing the international migration by age groups, it is found that, during the period 1990-2019, the migrant population became rather young. If, in 1990, the migrant population aged between 20 and 64 years represented 50.4%, and the population over 65 years had a share of 48.1%, in 2015 and 2019, the situation changed significantly in an interesting way. The migrant population under the age of 19 represented, in 2019, 46.1% of the total migrant population, people aged 20-64 accounted for 44% of the total migrant population, and the population over the age of 65 had a weight of 9.9% (Figure 6).

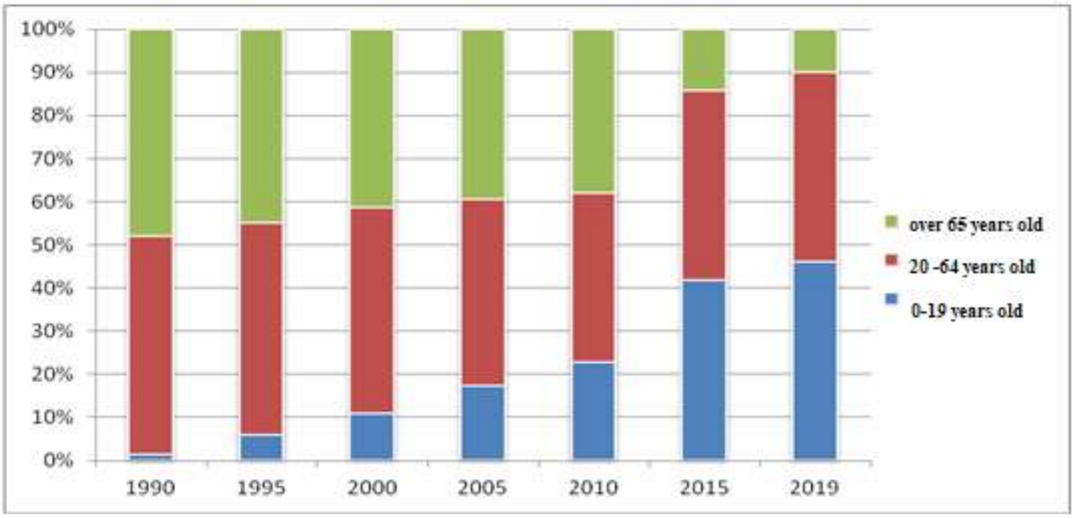

Figure 6. The structure by age groups of international migration, in the years 1990-2019

Source: United Nations, 2019b. *International Migrant Stock 2019.* United Nations: Department of Economic and Social Affairs. Population Division. [online] Available at: <https://www.un.org/en/development/desa/population/migration/data/estimates2/estimates17.asp> [Accessed 3 January 2020].

In this context, the calculation of the average age of international migrants shows its reduction, from 64.3 years old (in 1990) to 50.9 years old (in 2010), 25.5 years old (in 2015) and 22.8 years old, in 2019 (Figure 7).

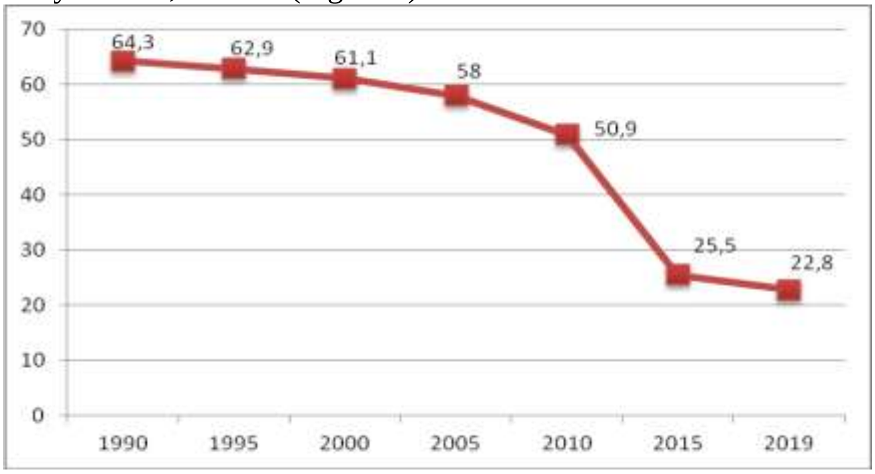

Figure 7. Average age of international migrants, in the period 1990-2019

Source: United Nations, 2019b. *International Migrant Stock 2019.* United Nations: Department of Economic and Social Affairs. Population Division. [online] Available at: <https://www.un.org/en/development/desa/population/migration/data/estimates2/estimates17.asp> [Accessed 3 January 2020].

Analyzing the structure of permanent immigrants, by country of origin, in 2017 (National Institute of Statistics, 2019), it is observed that most of them come from the Republic of Moldova (61% that is 30,543 people) (Figure 8). In the second place is Ukraine, with a share of 10% (11,404 people). It is followed by Italy and Spain, with 1% each, and Germany and the United States of America, with 1% of the total number of permanent immigrants in Romania. The category "Other countries" included Austria, Canada, France, Israel, Syria, Turkey, Hungary, etc. Analyzing the situation in Turkey, it is found that in the period 2006-2012, it was among the top five countries considering the origin of foreign citizens (permanent immigrants) in Romania (National Institute of Statistics, 2019).

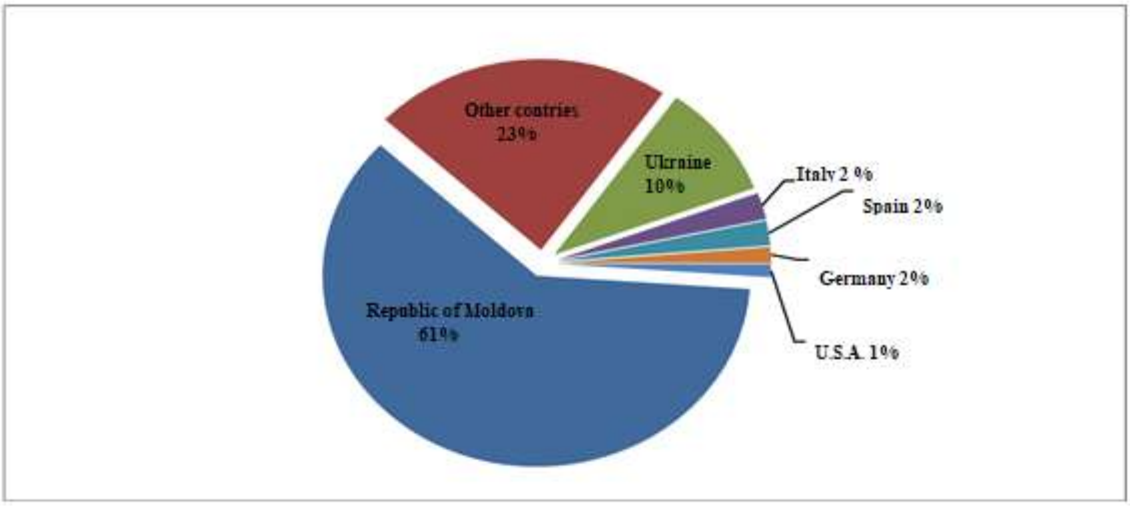

Figure 8. The structure of permanent immigrants, by country of origin

Source: National Institute of Statistics, 2019. *Statistical Yearbook of Romania 2018 - time series.* [online] Available at: <http://www.insse.ro/cms/ro/tags/anuarul-statistic-al-romaniei> [Accessed 4 January 2020].

The analysis of immigrants by citizenship, at the level of 2017 (Eurostat, 2019), highlights the fact that, out of a total of 177,700 immigrants, a share of 82.5% were nationals, 15.1% non-nationals and 2.4% with unknown citizenship (Figure 9).

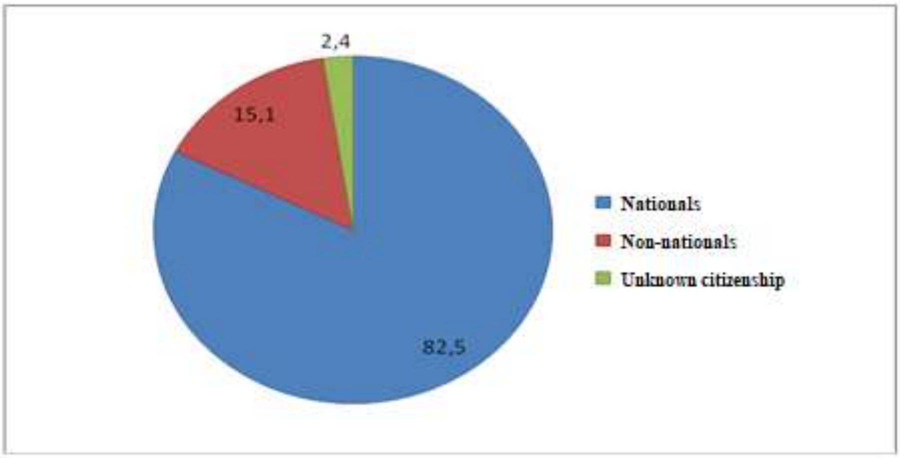

Figure 9. Classification of immigrants by citizenship category

Source: Eurostat, 2019. *Statistics on migration and the migrant population*. [online] Available at: <https://ec.europa.eu/eurostat/statistics-explained/index.php/Migration_and_migrant_population_statistics/ro#Fluxuri_migratorii:_Num.C4.83rul_imigran.C8.9Bilor_din_.C8.9B.C4.83ri_ter.C8.9Be_c.C4.83tre_UE_a_fost_de_2.2C4_milioane_.C3.AEn_2017> [Accessed 15 November 2019].

Thus, Romania occupies the first position in the ranking of Member States, according to this criterion, with the highest share of national citizens in total immigrants (citizens born in Romania, with habitual residence abroad: 95,200 people, 53.7%, or immigrants born in abroad: 78,400 people, 44.2%).

Among the non-national immigrants from Romania, estimated at 111,411 people (0.6% of the total population of Romania), in 2017, 56,750 people held the citizenship of another Member State of the European Union (0.3% of the total population) and 54,352 people were citizens of non-EU states (0.3% of the total population).

Romania is considered a friendly country, with a 5th level naturalization rate, calculated on the basis of the total number of citizens granted and the number of foreign residents (Eurostat, 2019). At the level of 2017, 6,800 people obtained Romanian citizenship. Out of these, 6,500 people came from non-EU countries (94.9%) and 300 people were classified with unknown citizenship (4.7%) (Figure 10).

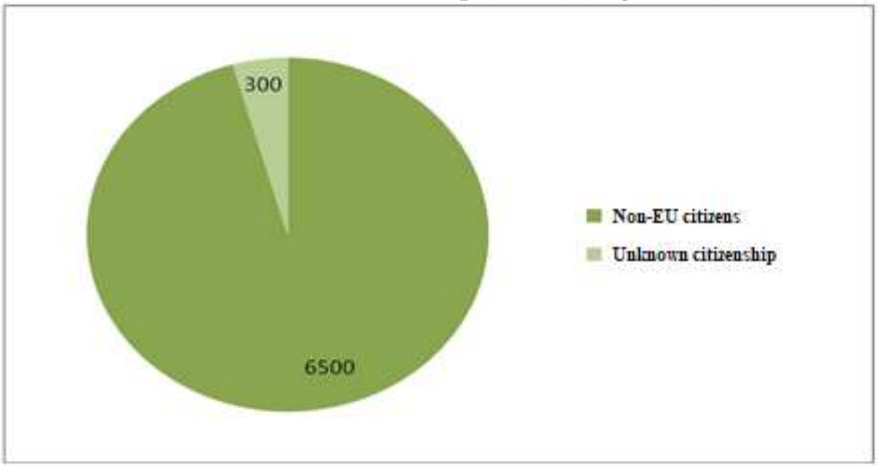

Figure 10. Classification of immigrants who acquired Romanian citizenship, 2017

Source: Eurostat, 2019. *Statistics on migration and the migrant population*. [online] Available at: <https://ec.europa.eu/eurostat/statistics-explained/index.php/Migration_and_migrant_population_statistics/ro#Fluxuri_migratorii:_Num.C4.83rul_imigran.C8.9Bilor_din_.C8.9B.C4.83ri_ter.C8.9Be_c.C4.83tre_UE_a_fost_de_2.2C4_milioane_.C3.AEn_2017> [Accessed 15 November 2019].

Romania offers the possibility to immigrants from outside the European Union to study, research or work, with the obtaining of the residence permit, the right to social security and family reunification. Third-country nationals legally residing in Romania may obtain the right to family reunification for the spouse, minor children and the spouse's children, if they meet certain specific conditions (for example, the obligation to have adequate housing and sufficient financial resources). Upon entering Romania, family members receive a residence permit and the right to access education, the labour market, vocational training and equal treatment in relation to other third-country nationals (European Commission, 2014).

In some cases, immigrants need international protection because they face the risk of major prejudices if they return to their country of origin. The vast majority of refugees and asylum seekers are hosted by developing countries, often neighbouring countries. Romania's duty is to protect those in this difficult situation.

At the level of Romania, the refugee stock, including asylum seekers, registered an obvious evolution in the period 1990-2019. Thus, in 1990, 651 refugees were reported; in 2005, the number of refugees amounted to 2,320, and in 2019 it reached 5,370 refugees (Figure 11).

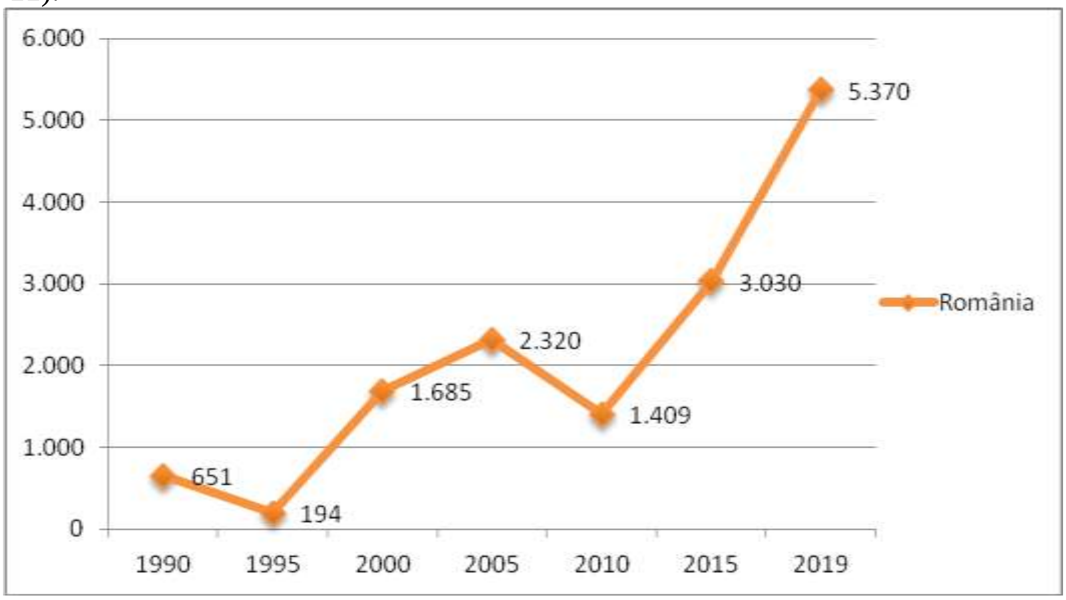

Figure 11. Number of refugees, including asylum seekers, registered in Romania

Sursa: United Nations, 2019b. *International Migrant Stock 2019.* United Nations: Department of Economic and Social Affairs. Population Division. [online] Available at: <https://www.un.org/en/development/desa/population/migration/data/estimates2/estimates17.asp> [Accessed 3 January 2020].

Regarding the number of beneficiaries of international protection living in Romania, the data of the General Inspectorate for Immigration show that their number increased from 2,905 people in 2016 to 2,830 people in 2017 and 4,056 people in the first half of 2018 (Cojocariu, 2018, p.20).

Also, the General Inspectorate for Immigration informs that, in the first six months of 2019, a number of 792 people requested the granting of international protection from

Romania (General Inspectorate for Immigration, 2019a), 11% less than in the first semester of 2018. Out of these, 464 applications are applications for international protection in the administrative stage. Most asylum seekers come from countries such as Iraq, Syria and Bangladesh, and most applications have been submitted to centres in Timisoara and Bucharest.

For 240 cases, refugee status was granted or subsidiary protection was granted (91 people received refugee status and 149 people received subsidiary protection). There were 94 applications for access to a new asylum procedure, compared to 125 in the similar period of the year 2018.

Within the Regional Centers for Procedures and Accommodation of Asylum Seekers, located in Bucharest, Giurgiu, Timişoara, Galaţi, Rădăuţi and Maramureş, territorial structures specialized in asylum issues, the procedures for receiving, registering and resolving asylum applications are carried out, providing assistance to asylum seekers during the procedure and integration assistance (social counselling and material assistance, problem-solving support, information and education, access to social activities, psychological or legal counselling, labour market access and participation and relations with local authorities). 760 asylum seekers were accommodated in the six specialized centres, 947 people received counselling and approximately 700 cultural orientation sessions.

Regarding the cities / counties of residence, most beneficiaries of protection live in Bucharest (56%), Galați (20%), Timiș (8%), Maramureș (6%), Giurgiu (5%), Suceava (5%), (Cojocariu, 2018, p.21).

In the first six months of 2019, 523 people, benefiting from a form of international protection, followed the integration program: 221 were from Syria, 111 from Iraq, 33 from Iran and 158 from other countries. The General Inspectorate for Immigration reported, in the first six months of 2019, the resettlement operation for 109 refugees of Syrian origin, who are temporarily in Turkey and Jordan.

Immigrant access to the labour market is the first step towards integration. According to the General Inspectorate for Immigration (General Inspectorate for Immigration, 2019b), in the first five months of 2019, 8,749 employment notices were issued, out of the 10,497 applications received. Thus, a percentage of 43.7% of the quota approved for 2019 was used.

Most permits were issued by the immigration structures in Bucharest (2,667) and the counties of Constanța (999), Ilfov (912), Brașov (505) and Timiș (355). Out of these, 7,649 were issued for permanent workers, 695 for detached workers, 234 for ICT, 116 for highly qualified. Most foreigners are from Vietnam, Moldova, Turkey, Nepal and have chosen to work in construction, restaurants, trade, shipbuilding and floating structures in Bucharest and the counties of Constanța, Ilfov, Brașov and Timiș (General Inspectorate for Immigration, 2019b). A number of 332 job applications were rejected and 1,426 applications were under analysis procedure.

Romania also becomes interesting for highly qualified people from third countries, holders of the European Union Blue Card (temporary residence permit that aims to encourage the immigration of highly qualified specialists from third countries to meet the demand for skilled workers in the European Union) (Inspectorate General for Immigration, 2019b).

Some immigrants may try to enter the EU territory (by land, water or air) either illegally or using false documents. Most of the time, they have the support of criminal organizations and sometimes continue to depend on them even after they arrive in the EU. However, the majority of illegal immigrants entered the EU legally with a temporary residence visa and did not leave after its expiration. In order for the European immigration policies to remain sustainable and credible, Member States must work together to tackle illegal immigration (European Commission, 2014, p.6).

The Support Program for Voluntary Humanitarian Assisted Repatriation and Reintegration (RVAR), implemented by the International Organization for Migration, Office for Romania, in 2017-2020, aims to contribute to strengthening migration management in Romania through safe, sustainable repatriation and socio-economic reintegration of 80 migrants per year by 2020.

Thus, in 2018, over 3,000 immigrants entered Romania illegally either through the land border, from Serbia and Bulgaria, or through the Black Sea, an unusual route, unexpected and very rarely used in the past. Most of them have applied for international protection in Romania (International Organization for Migration, 2018).

A number of 985 migrants participated in counselling and information sessions on the voluntary repatriation program at the nationwide level. Out of these, 709 were men (72%) and 276 were women (28%) (Figure 12).

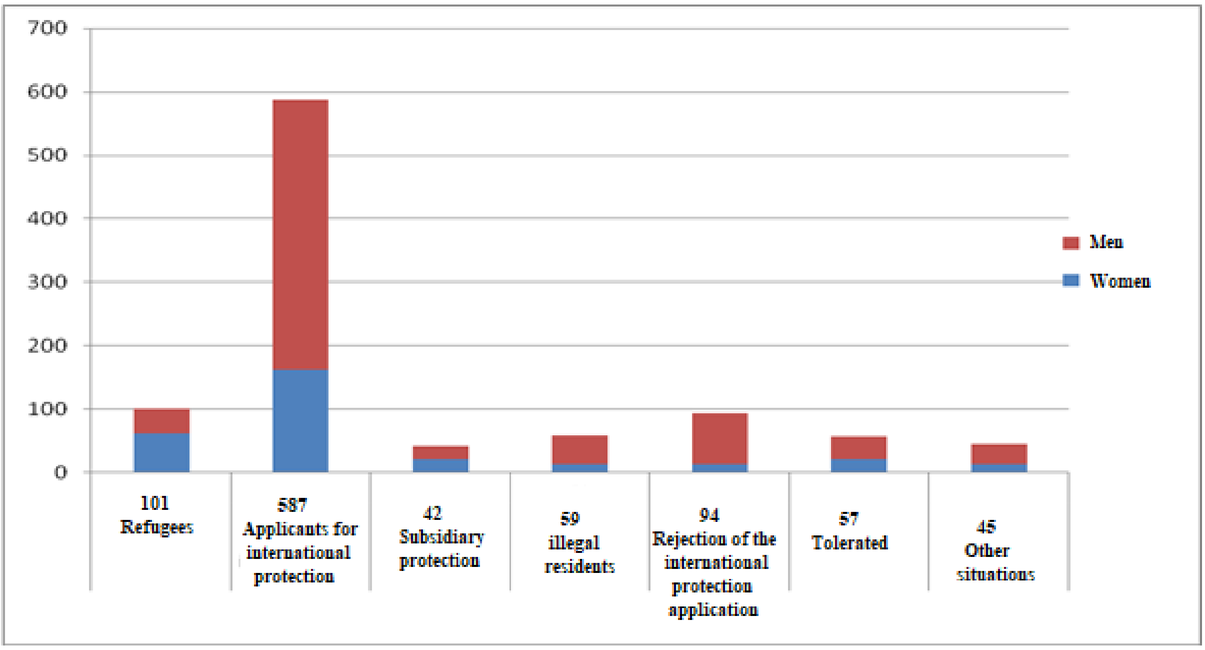

Figure 12. Number of immigrants participating in counseling and information sessions

Source: International Organization for Migration, 2018. *RVAR Stage I - Progress in implementing the program of voluntary humanitarian assisting for repatriation and reintegration in Romania (April 27th, 2017 - April 26th, 2018)*. [online] Available at: <https://oim.ro/ro/resurse/rapoarte-oim/645-rvar-etapa-i-progresul-implementarii-programului-de-repatriere-voluntara-umanitar-asistata-si-reintegrare-in-romania-27-aprilie-2017-26-aprilie-2018> [Accessed 4 January 2020].

Regarding the status of these counselled immigrants, 101 received refugee status, 587 applicants for international protection, 42 received subsidiary protection, 59 were considered illegal residents, 94 were in the situation of rejection of the application for international protection, 57 were tolerated and 59 in other situations (Figure 12).

The immigrants who were counselled in 2018 came from Iraq (945 people), Afghanistan (79 people), Pakistan (74 people), Iran (39 people), Kosovo (34 people) (Figure 13). Most were women, mostly from Iraq (50.4%).

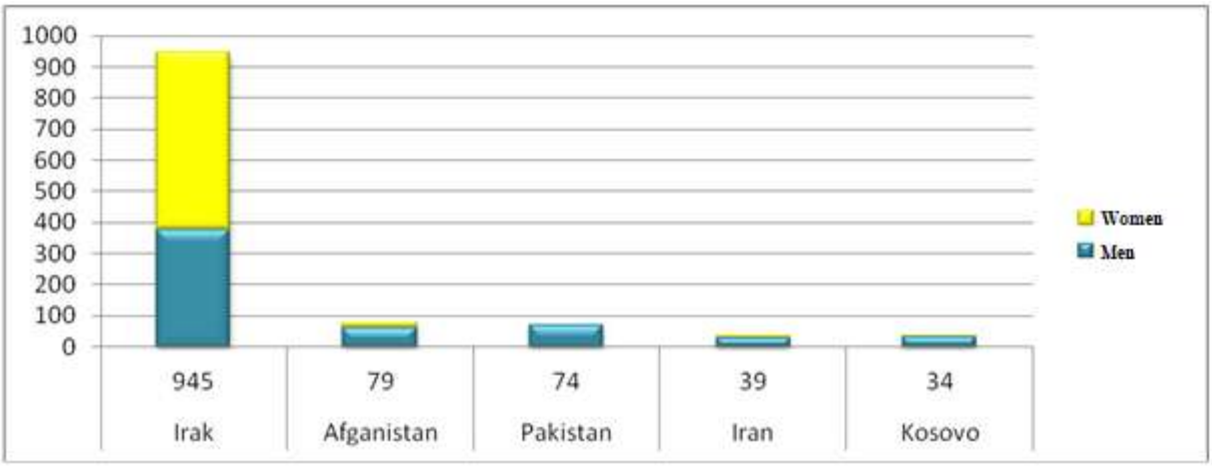

Figure 13. Number of immigrants participating in counselling and information sessions

Source: International Organization for Migration, 2018. *RVAR Stage I - Progress in implementing the program of voluntary humanitarian assisting for repatriation and reintegration in Romania (April 27th, 2017 - April 26th, 2018)* [online] Available at: <https://oim.ro/ro/resurse/rapoarte-oim/645-rvar-etapa-i-progresul-implementarii-programului-de-repatriere-voluntara-umanitar-asistata-si-reintegrare-in-romania-27-aprilie-2017-26-aprilie-2018> [Accessed 4 January 2020].

A total of 102 migrants from over twenty countries of origin (30 women and 72 men) benefited from the voluntary repatriation procedure. A number of 25 migrants from nine countries of origin received personal development courses, and thirty people received reintegration assistance.

Regarding the status of repatriated migrants, the largest share was held by applicants for international protection (49 people). 25 immigrants had illegal residence, 2 were refugees, 18 applied for international protection, 2 were tolerated and 6 were in another situation (Figure 14).

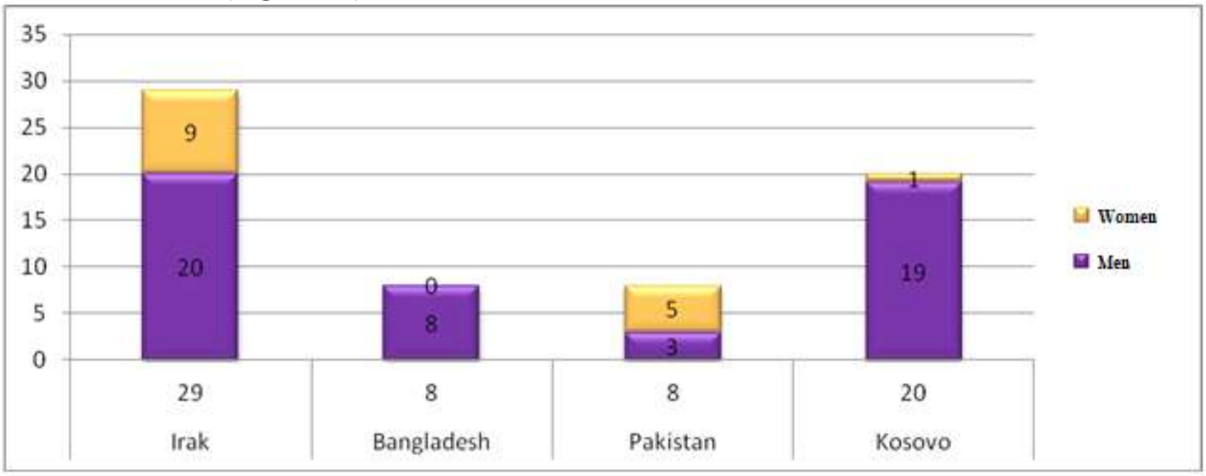

Figure 14. Number of voluntarily repatriated immigrants

Source: International Organization for Migration, 2018. *RVAR Stage I - Progress in implementing the program of voluntary humanitarian assisting for repatriation and reintegration in Romania (April 27th, 2017 - April 26th, 2018).* [online] Available at: <https://oim.ro/ro/resurse/rapoarte-oim/645-rvar-etapa-i-progresul-implementarii-programului-de-repatriere-voluntara-umanitar-asistata-si-reintegrare-in-romania-27-aprilie-2017-26-aprilie-2018> [Accessed 4 January 2020].

Some of the migrants who have chosen to return home have also received financial support for reintegration which can be used, upon arrival in the origin country, to open a small business, to rent a house / apartment or to buy various necessary goods (International Organization for Migration, 2018).

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SELECTING KEY PERFORMANCE INDICATORS (KPIS) IN ENVIRONMENTAL SUSTAINABLE STRATEGIES FOR BUSINESSES

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Abstract: *A growing number of businesses seek to become more environmentally-friendly and to employ effective and efficient strategies that include objectives such as decreasing their carbon footprint, reducing their waste and increasing their energy efficiency. In order to make their efforts measurable and to evaluate the implementation of the strategy, environmental key performance indicators (KPIs) are increasing in popularity for the companies' strategy. However, the number of KPIs used in business strategies is rapidly increasing. Therefore, more and more companies and researchers are presented with the dilemma of selecting the most relevant, useful and important environmental KPIs. In this paper, we analyse the literature concerning environmental KPIs, discuss different criteria used in the selection of such KPIs, and make proposals regarding this criteria.*

Keywords*: environmental key performance indicators, environmental strategy, sustainable strategy, sustainability environmental key performance indicators, KPI.*
JEL Classification: *Q01, M19.*

1. The importance of using KPIs in sustainable business strategies

The interest in sustainable business strategies has been steadily growing in the last decades; within this trend, another important one is included: the interest in environmentally friendly strategies. This has happened in the context of climate change, growing pollution, and increasing consumer concern and pressure on companies to radically change their business processes. Therefore, simple environmental campaigns or tactics on the behalf od businesses are not enough; in order to bring substantial change in business processes, there is an urgent need to include environmental indicators in the business' strategies.

2. Popular KPIs and KPI categories used in sustainable business strategies

Hristov and Chirico (2019) have researched sustainable KPIs and put them into three main categories: related to environmental goals, to social goals and to economic goals. Five most popular environmental KPIs were identified, for which we also mention the related strategic goal and the used measurement.

The most common environmental KPI identified by Hristov and Chirico (2019) is the renewable resource rate, related to the strategic goal of improving the use of renewable resources, and measured with the quantity of renewable sources. The second most used environmental KPI is the efficiency resource use rate, related to the goal of reducing not necessary resources consumption, and measured either with energy used per 1000 production units, or consumption of different resources per 1000 production units. The third most used environmental KPI is total emissions of greenhouse gasses by weight, measured with CO2/1000 production units. Moreover, other common environmental KPIs are waste reduction rate (measured as the percentage of waste generated per 1000 production units) and the rate of reusable or recycled material (the percentage of reusable or recycled material).

3. The criteria and process for the selection of environmental KPIs

Kibira et al. (2017) and Kibira and Feng (2017) have discussed the selection of sustainable KPIs in the context of manufacturing and have identified a series of six criteria that stakeholders can use in order to select environmental KPIs: (1) cost effectiveness (the relation between the cost and the benefit of implementing the indicator); (2) quantifiability (how much of the indicator can be precisely expressed numerically); (3) calculability (how correct and complete is the calculation necessary for computing the KPI's value); (4) management support (how willing is the management to implement and support the KPI); (5) comparability (to what degree is the historic data available); (6) understanding (to what degree is the KPI comprehensible by the team). Using these criteria, business stakeholders can include or exclude environmental KPIs, but also rank the ones included in the business strategy by their importance.

Alwaer et al. (2010) consider that, in order to implement an efficient selection for environmental KPIs, it is necessary to include four categories in which indicators should be separated: mandatory indicators, desired indicators, inspired indicators and non-active indicators.

Angelakoglou et al. (2019) have a slightly different approach: they consider that enviromentally-friendly strategies should be measured using six different types of KPIs: technical performance, environmental performance, social performance, social performance, ICT performance and legal performance.

4. Performance strategies

Development and implementation of strategies

Strategies are complex decision-making processes that take place at the level of the organization and are oriented towards achieving the fundamental objectives that the organization has proposed. To this end, strategies must meet two essential conditions:

• using resources, capabilities and skills efficiently and creatively

• achieving sustainable competitive advantages in the external competitive environment.

The elaboration of some strategies is always done in conditions of uncertainty generated both by the incompleteness of the data and by the dynamics of the external forces. Therefore, a successful strategy contains sufficient reserves of flexibility and adaptation over time to changes in the external environment, especially in the competitive one. When developing a strategy, one must also anticipate how to implement it, knowing that good ideas often end badly.

The implementation of a strategy is done in time, and the results can be immediate or lasting. There are always time constants between implementation and results, which must be known and taken into account. Also, there are always a number of resistances that arise when implementing a strategy. Knowing these resistances is crucial to overcoming them, without consuming too much energy and time. For example, one of the strongest resistances to the implementation of a strategy that contains a large amount of novelty or that imposes important changes is the mentality. Ignoring the existence and role of mentality in any process of change will encounter real difficulties in implementing a strategy. This situation is characteristic especially for us, Romanians, who were not educated in the spirit of change and taking the risk of uncertainty. Therefore, real attention is required to identify and assess possible resistance to the implementation of a strategy.

The evaluation of a strategy is based on a metric and a reference system, known and accepted since the strategy development phase. The evaluation must take into account the implementation process and the time constants required to obtain the results. Evaluation is an absolutely necessary process and it is part of a distributed, throughout the implementation of the strategy, so that if necessary to intervene to correct and adapt it to the new conditions and requirements of the external competitive environment. Evaluation allows a strategy to be considered a success or a failure. It is important that even in case of a failure, its magnitude should be as small as possible, and the associated losses should not jeopardize the existence of the organization. Thus, a high-impact, unsuccessful strategy can lead to the bankruptcy of the organization.

A very important aspect in developing a strategy is its opportunity. In other words, it must be analyzed with a lot of realism to what extent the considered strategy corresponds to the requirements of the beneficiaries and is not premature or morally outdated. The elaboration of strategies is based on the analysis of the external environment and, respectively, the analysis of the internal environment. Based on these analyzes, the favorable and unfavorable conditions for launching or continuing a strategy are established and it is decided on the opportunity or its adaptation.

SWOT analysis The name is given by the initials of the English words Strengths, Weaknesses, Opportunities and Threats. Given the popularity of the phrase SWOT in the literature and in management consulting we will keep it as such in the following.

Strengths are translated in this context by the strong or strong elements of the organization, respectively by those that give it strength or power compared to other organizations in the external competitive environment. The concrete way of manifesting these strong elements varies from one organization to another, but they generally refer to the fundamental competencies, which are based on the resources and capabilities of the organization.

Weaknesses are translated in this context by weak elements, respectively elements that generate disadvantages compared to other organizations in the external competitive environment. The analysis of the internal environment ultimately leads to the identification of the poles of strength and weakness for each organization, but in comparison with the other competing organizations. In other words, these evaluations on the SW axis have a relative significance and depend on the realism and courage of managers to know their weaknesses.

Opportunities means opportunities in the external environment for the possible strategies of the organization. These opportunities exist, but they must be identified and deciphered as appropriate as possible, taking into account the associated uncertainties. At the same time, it is important to evaluate a certain dynamic of these opportunities in order to make the most of them.

Threats means potential threats to the organization in the external competitive environment. These threats may result directly from competing organizations or as a result of the dynamics of the external environment. We also emphasize here the relative nature of the evaluation on the OT axis. What is an opportunity for one organization can be a threat to another organization, depending on their behavior and their relationship to the external competitive environment. For example, the advent of personal computers has been a threat to companies like IBM, but a great opportunity for new companies like Apple or Compaq.

To obtain a better overall picture, the axis of internal factors SW can be associated with the OX axis of a diagram, and the axis of external factors OT can be associated with the OY axis of the same diagram. Combining internal factors with external factors can generate four categories of strategies. These are generic strategies because they acquire content in the concrete conditions of each organization.

• SO strategies. These are max-max strategies, in the sense that they combine the most favorable elements to build a strategy. OS strategies use the strong or powerful elements of the organization to take advantage of existing opportunities in the external environment. These strategies are aggressive and aim to create a net competitive advantage over other competing organizations.

• WO strategies. These are min-max strategies, in the sense that they combine the elements of weakness existing in the organization with the existing opportunities in the external environment.

Basically, they try to use the opportunities to eliminate weaknesses or turn them into strengths for the organization.

• ST strategies. These are max-min strategies, in the sense that they use the strong elements of the organization to avoid or reduce existing threats in the external environment. They are defense strategies, but they can turn into attack strategies if the ratio of internal forces to external ones is correctly evaluated.

• WT strategies. These are min-min strategies and aim to minimize weaknesses, while avoiding threats from the external environment. They are defensive strategies and they are used especially when the organization is in decline, to avoid its bankruptcy.

Performance can be defined according to the chosen metrics and parameters. For the following we will refer only to four global indicators: efficiency, quality, innovation and sensitivity to consumer demand. Performance strategies aim to obtain the highest possible values for each of these global indicators, in the reference system specific to the organization and for the metrics attached to each indicator. These are also called strategies at the functional level of the organization and aim to achieve competitive advantages by improving core operations, such as production, materials management, marketing, research and development, as well as by better use of human resources of the organization. Although these strategies can focus on one or more functions, they encompass the entire life of the organization and generate synergistic effects.

Efficiency strategies

Any organization can be considered in the abstract as a system that turns inputs into outputs. Inputs are represented by the main factors of production: land, capital, labor, production infrastructure, production technologies, etc. Outputs are products and services. The measure of efficiency is given synthetically by the amount of inputs required to produce a unit of outputs. In other words, efficiency is the ratio of outputs to inputs, expressed in the same units of measurement. The higher the value of this ratio, the greater the efficiency.

A well-known strategy in increasing efficiency is to increase production volume, while keeping fixed costs at the same level. This can be achieved through a better division of labor and, respectively, a greater specialization of the labor force. The classic example is Ford's introduction of mass production and the belt assembly process for the T model car. Ford thus managed to produce the most popular and cheapest car of the time. As a result of the increase in production volume, the cost of a Ford car dropped from $ 3,000 to only $ 900.

Increasing efficiency can also be achieved by capitalizing on learning processes. The effects of learning are seen especially in the realization of new and very complex processes and products. For example, the reduction of costs due to learning effects, by repeating the same activities, is much more obvious in the case of a process that involves 1000 sequences of different activities, than in the case of a process that involves only 100 sequences. Another correlation that the researchers highlighted is that of reducing unit costs with increasing experience in making a product and integrating it into the knowledge curve.

An important increase in efficiency can be obtained by making the production lines more flexible, respectively by switching from rigid assembly lines in the case of mass production, to flexible production cell lines. Each flexible production cell groups 4-6 machines capable of performing a variety of operations in order to produce a family of components of complex equipment or even simpler equipment.

A strategy that has been developed in recent years in materials management is called JIT (Just-In-Time) and contributes significantly to increasing efficiency. This strategy is simple, but requires a computerized materials management system and a reliable and efficient supply system. The basic idea is to reduce the stocks of materials needed for production and to schedule them to arrive from suppliers just in time for their introduction into the production process. The disadvantage of the strategy is that any delay in receiving materials from suppliers causes delays in the production process and therefore unjustified increases in costs. Therefore, the JIT strategy must be combined with the creation of buffer stocks, much smaller than the classic material stocks.

Labor productivity is an important factor in increasing efficiency and reducing production costs. However, labor productivity is linked to the performance and motivation of human resources. Three strategies can be used to increase labor productivity:

- training staff to increase their qualifications,

the creation of self - management work teams and

- financial recognition of performances.

Research to highlight the work efficiency of Japanese people compared to that of Americans has shown the importance of continuing education for a company's employees. For example, of the approximately 30,000 employees of the Japanese company Sanyo, approximately 10,000 employees go through the training programs of the Sanyo Corporate Educational Training Center each year.

The creation of flexible production cells led to the idea of forming work teams to serve them and to have almost total autonomy. This means building teams of 5-15 employees who can make a whole product or group of products and who enjoy managerial autonomy, respectively to have selfmanagement. This reduces decision-making time and therefore helps to increase efficiency.

People work for money and so it is easy to accept the idea that everyone should be paid according to the quantity and quality of work. This would be an important factor in increasing motivation. However, the strategy of motivation through salary increases is not so easy to implement, and sometimes the barrier of mentality is even difficult to overcome. Perhaps an interesting example of this is the fact that until recently a university professor received the same salary, regardless of what he did and the university in which he worked. With the change of the financing mechanism of the universities, the problem of the differentiated salary of the professors was raised, both from one university to another and within the same university. Due to the egalitarian mentality, the implementation of this strategy encounters serious difficulties. As such, work efficiency is also low because performance is not recognized as such and is therefore not encouraged by the system.

Quality strategies

Quality management occupies an important place in strategic management. It has spread to all types of organizations, including non-profit and public administration.

The TQM (Total Quality Management) strategy is the one that has started to be accepted more and more, with its success in American and Japanese companies. This strategy is based on the five ideas formulated by Deming:

• Better quality means lower costs because it recovers less, makes fewer mistakes, delays less and uses time more efficiently.

• As a result of the first step, labor productivity increases.

• Better quality means increasing the market segment and therefore the possibility of increasing prices for those products.

• This leads to increasing the profitability of the company and its sustainability in business.

• As a result of the above, the company can create new jobs.

Deming developed these ideas and formulated 14 points for quality management. These are:

• To create a constant concern for improving the quality of products and services, in order to become competitive and to stay as much as possible in business, in the given competitive external environment, creating new jobs.

• To adopt a new philosophy, being in a new economic era. Western management must learn its new responsibilities and take control of change.

• Abandon the quality assurance inspection. Eliminate the need for inspection in basic processes by implementing quality in all phases of production of products and services.

• To continuously improve the production and service system, having as final results the improvement of the quality of products and services simultaneously with the decrease of the total costs.

• Introduction of on-the-job training.

• Leadership training. Its purpose is to help people work better.

• Eliminate fear so that people work in a free atmosphere, without constraints and without fear of being penalized for every mistake.

• Eliminate barriers between departments. Employees in a company must work as members of a single family.

• Eliminate slogans and slogans that are only about appearances and not the essence of the production process. The real cause of the low level of quality is in the construction of the system and is therefore beyond the behavior of employees.

• Eliminate quantitative standards and evaluations of results and introduce leadership everywhere.

Eliminate barriers that prevent people from being proud of their work and that often make merit recognition an attribute of leadership. Most workers thus lose themselves in the anonymity of recognition.

• Introduce a vigorous training and self-improvement program.

• To make every person in a company make the necessary change. Change is for everyone, not just management.

Although many of these ideas formulated by Deming, as well as other theorizations of TQM existing in the literature, implementation is more difficult and time consuming. Recent studies by the American Quality Foundation show that only 20% of American companies regularly evaluate quality assurance programs, while this percentage is 70% for Japanese companies.

The implementation of TQM in an organization can only be done if there is a general consensus from all their employees. Otherwise, there is a risk of developing excellent quality improvement programs, but the final results will be below expectations because not all employees will participate in the implementation of these programs. For example, when Xerox launched its TQM program in 1983, the first step was to train all employees on the concepts and benefits of this quality improvement system. It started with the top of the management pyramid and then each trained group trained other groups of employees, as in a waterfall. Thus, all the almost 100,000 employees of the company were trained.

The most important thing when implementing TQM or another quality strategy is to establish a metric to evaluate the success of the implementation. In the case of companies that place products on the market, statistical evaluations are usually used, such as the number of defects per million products or components delivered. In 1987, when Motorola introduced the TQM program, the quality level was characterized by a statistic of 6000 defects for one million parts produced. In 1992, as a result of the TQM program, statistics indicated only 40 defects per million parts produced.

It is a dramatic and significant decrease for the success of TQM implementation.

The Japanese company Hitachi began implementing TQM in 1978. At that time, the company produced software with a consumer failure rate of 100 failures / 1000 computers. In 1992 this failure rate dropped to only 2 defects / 1000 computers. In 1978, Yokogawa Hewlett Packard (YHP) began implementing a TQM program. Then the defect rate was 4000 ppm (parts per million). In 1982, the defect rate was reduced to only 3 ppm. At the same time, workers' productivity increased by 91%, total costs decreased by 42, and profits increased by 177%.

Innovation strategies

From several points of view, innovation is the most important component of competitive advantage. The success of product or process innovation is a unique feature for any organization competing with other similar organizations. There are companies that have become famous precisely by adopting an innovation strategy. For example, Du Pont has made a number of innovations and inventions that have long been part of everyday life. These include cellophane, nylon, freon and telephone.

Although the innovation strategy leads to the achievement of competitive advantage, we must recognize that the failure rate of new products is relatively high. A study conducted for 16 companies in the field of chemistry and electronics suggests that only 20% of products that represent innovations and inventions manage to stay on the market and become a real success for the company. Another study conducted in one chemical company and two pharmaceutical companies shows that only 60% of research and development projects reach the technical realization phase, 30% can become commercial and only 12% achieve market success.

Specialists distinguish between:

- quantum innovation strategy: the resulting product or process is a total novelty, respectively they move away from known technologies. For example, the development of the World Wide Web on the Internet is a quantum innovation. Another quantum innovation is the first Xerox photocopier.

and

- incremental innovation strategy: refers to an extension of what already exists. For example, the Intel Pentium Pro microprocessor is an incremental innovation, as it was made in an existing series of microprocessors, but with lower performance.

The degree of uncertainty of market demand is higher for quantum innovation than for incremental innovation and therefore the failure rate associated with the quantum innovation strategy is much higher. To these is added an insufficiently developed marketing for the introduction of novelties on the market. Sometimes there is even a kind of technological myopia on the part of those who approach innovation strategies, without being prepared to introduce new products on the market and focus only on technological performance.

A classic example of technological myopia is the new computer produced by NeXT in the late 1980s. NeXT was founded by Steve Jobs, who came up with the idea for the personal computer and founded Apple. From a technological point of view, the computers produced by NeXT contained a series of high-performance technical features, superior to other computers. But technologically focused, the manufacturers did not think about the beneficiaries and did not develop equally innovative software facilities. Therefore, the computers produced by NeXT have not turned into a market success.

Innovation strategies are closely correlated with strategies to make the manufacturer aware of consumer requirements. It is not enough to know what consumers want, but to respond to these requirements as soon as possible with new products with the most diverse characteristics. In other words, the time constant to meet consumer requirements must be as small as possible. This awareness of production is an important capability for a company and directly contributes to achieving a sustainable competitive advantage.

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DETECTION OF CREATIVE ACCOUNTING PRACTICES

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Abstract: *This paper aims to describe the nature and causes of creative accounting by applying manipulative behavior to the preparation of financial statements and to explore the determinants that may encourage economic entities (EE) to mislead investors or shareholders throughout this process. A careful reading and analysis of the financial documents provided by the economic entities allows to observe and verify certain accounting data management operations. Recognition of revenue outside regulations, transfers of current expenses to future periods, overvalued assets and undervalued liabilities are the main transactions identified. By using these operations, professional accountants can modify the financial indicators of the economic entities. Measures that can be taken to combat or reduce these inappropriate practices are also analyzed.*

Keywords: *creative accounting, financial performance, entrepreneurship, policies and regulation, audit.*
JEL Classification: *M41, M42, M21.*

1. Introduction

The accounting environment has become much more complex with the advent of IFRS accounting standards, the accounting rules being more and more flexible, circumstances that allowed frequent financial manipulations with a view to presenting more advantageous financial statements.

Financial manipulation, named as "creative accounting" (CA) is not a simple practice performed by just any accountant professional. If it were, the omissions or tricks applied would be easy to detect. This is a practice that requires the application of complex methods or techniques, applied by creative professionals, with advanced knowledge of the accounting and legal regulations.

In order to satisfy the needs of users or stakeholders regarding financial information, the practice of so-called creative accounting arises to show, not what it is, but what it is wanted to be, manipulating and taking advantage of the gaps in the accounting and legal framework to achieve the aims or objectives pursued by carrying out such incorrect and undesirable practices.

Though detection techniques are increasingly gaining ground, financial manipulations remain very difficult to detect in due time, before they have produced their effects among interested parties. Financial manipulation has a major impact on the valuation of the economic entities that commits to such practices.

The paper is focused on presenting the main motives that are standing behind financial manipulation, as well as the most common techniques, and finally the measures that may be taken in order to minimize creative accounting practices.

2. The concept of creative accounting

For some authors, like Naser (1993), creative accounting is the process of manipulating accounting to take advantage of the gaps and inaccuracies of accounting standards, as well as the different approaches and presentation options contained therein, to manipulate and transform the financial statements from what they would normally show to who they want them to be. It also involves the process by which operations are adapted to obtain the desired accounting results, rather than reporting in a consistent and neutral way.

Other authors, namely Amat and Blake (1999), indicate that creative accounting consists of accounting professionals manipulating financial information using their knowledge by taking advantage of the gaps and omissions of the existing regulations, and of the optionality between different valuation practices that this offers.

Generally, the authors agree that creative accounting is the use of flexibility, subjectivity and gaps in accounting and legal regulations to manipulate and apply incorrect and, many times, negative practices, the only thing they cause is distortion in the presentation of reasonable, reliable and impartial financial information.

This is intended to show the preferred result, rather than the real and reasonable one. In this way, the financial information of economic entities changes, benefiting or fulfilling the particular objectives of managers or shareholders, pursued when applying them.

From the creativity used in the procedures applied to manipulate financial information some questions may arise, whether the techniques used are in line with legal normative or not. The answer is always related to a fine line that separates them, which is increasingly difficult to identify.

3. Causes and factors of creative accounting

Creative accounting practice, so debated and questioned, arises because of the intention of those responsible for adopting accounting practices, being free to use one or another accounting policy. The causes are related to accounting regulations, their gaps, subjectivities, and presentation options, as well as the legal framework that may be particular for each country.

The need for the economic entities to show the desired level of results to those interested, whether they are managers, professional accountants or shareholders, has made it possible to achieving the level of satisfaction through the use of negative and deceptive practices. The phenomenon has become common throughout the world, and with a view to growing more and more in today's globalized economic environment.

Main users of creative accounting are the managers, who are responsible for making decisions about accounting policies. These decisions are influenced by the results that they want to reflect to the shareholders or interested parties.

Detecting creative accounting practices raises challenges as they are hidden behind complicated accounting operations. Not being easily to uncover and react timely, the use of creative accounting is becoming an abuse of these practices and is increasing rapidly. Thus, the accounting statements published by the economic entities are losing reasonable neutrality, impartiality and reliability, aspects that interested users require for effective decision making.

Some of the reasons behind the decision to engage in manipulating financial statements, in order to achieve these objectives, are mentioned below:

- management remuneration linked to benefits and shares allocation;
- accessing financial resources from credit institutions;
- results improvement to cover a difficult period with unfavorable results;
- management results recognition and consolidation of their position within the economy entity;
- presenting an improved financial result to investors in order to gain their confidence;
- meet market expectation.

The incentives to carry out practices that may determine the management to engage in financial manipulation are determined by several factors, among them being the following, categorized as below (figure 1):

Figure 1. Factors to engage in creative accounting
Sources: elaborated by the author

Several factors, among those mentioned above, are linked to financial markets. In this context, it is useful to remember that, in traditional accounting literature, earnings smoothing improves shareholders wealth, since it reduces the uncertainty of future cash flows. The accounting smoothing of results appears to be an unreasonable behaviour. However, signal theory and agency theory offer some explanations for outcome smoothing behaviour that are not at odds with investor rationality (Chalayer, 1995).

Given the circumstances of these developments, the creative accounting may be defined as a set of procedures aimed at modifying the level of income, for the sake of optimization or minimization, or the presentation of financial statements without these objectives being mutually excluded.

The procedures implemented are based on the choices offered by the accounting regulations as well as on the possibilities opened up by the weaknesses and deficiencies of the accounting texts or even on the differences between the international rules and those of a specific country, but also on arrangements for which accounting can intervene according to two opposing schemes: determining the accounting translation of a legal-financial transaction or drawing up a legal-financial arrangement with the aim of modifying the result or the financial statements.

4. Measures to combat the use of creative accounting

Creative accounting has a strong impact on financial information and, therefore, on the decisions that interested users or stakeholders make based on it. In fact, when users use financial information, they do so to support the decision-making process.

In case the information presented by the economic entities is the result of the application of creative practices, it, without a doubt, deviate the true image of the economic entity, thus, the decisions made by stakeholders or interested users will be affected in a negative way for being based on data that is not real or reasonable.

Therefore, the use of creative practices has a negative impact on financial information, insofar as it generates a loss of the reasonable security that is required and prevents neutral transactions from being represented. At the same time, it poses a significant threat to the integrity of the annual accounts when affects the information presented to users who use such information. In addition, it prevents the true faithful image of the economic entity from being reflected, which is the one that must be put before everything.

In order to eliminate the use of creative accounting, steps must be taken to reduce it to the minimum and thus gradually eliminate it. For this, it is necessary to adopt measures that act against the factors and causes that facilitate and allow its application and use, as the various competent authorities specializing in the matter have been proposing.

Regarding the causes that facilitate creative accounting, the following ones may be highlighted:

- enhance the accounting rules, in the sense of giving a reduced level of optionality for the economic entities from which they can choose;
- establish a more detailed and concise accounting regulations, while the criteria to be applied is precisely established, hindering this the options of creativity;
- increase the requirements in terms of quality and in depthness of financial information provided by an economic entity;
- create a control mechanism to work as an obstacle in front of manipulative behavior, mechanism that may be implemented as below described (figure 2):

Figure 2. Control mechanism of creative accounting

Sources: elaborated by the author

The internal control that can be exercised within the economic entity may work as a limitation for creative accounting, since the use and application of sanctions to those who engage in it can significantly reduce its dissemination of false information and may serve as an impediment to manipulation.

The use of creative accounting may turn at some point against the economic entity, since, if the use of unethical practices is detected by external users, the economic entity would receive significant penalties from them.

Limiting creative accounting practices is a must considering its linkage to scandals due to fraud, corruption, conflicts of interest and professional malpractice, who infringes codes of ethics by deceiving partners, employees and external interested parties.

According to Cordobés and Molina (2000), in order to avoid creative accounting practices, the financial statements should compulsorily contain all those data for which reality is not reached, and provide information on each and every one of the criteria taken into account to arrive to the situation that is presented.

To reduce the possibility for creative accounting to produce its effects, accounting regulations should narrow the scope of estimates, as presented below (figure 3).

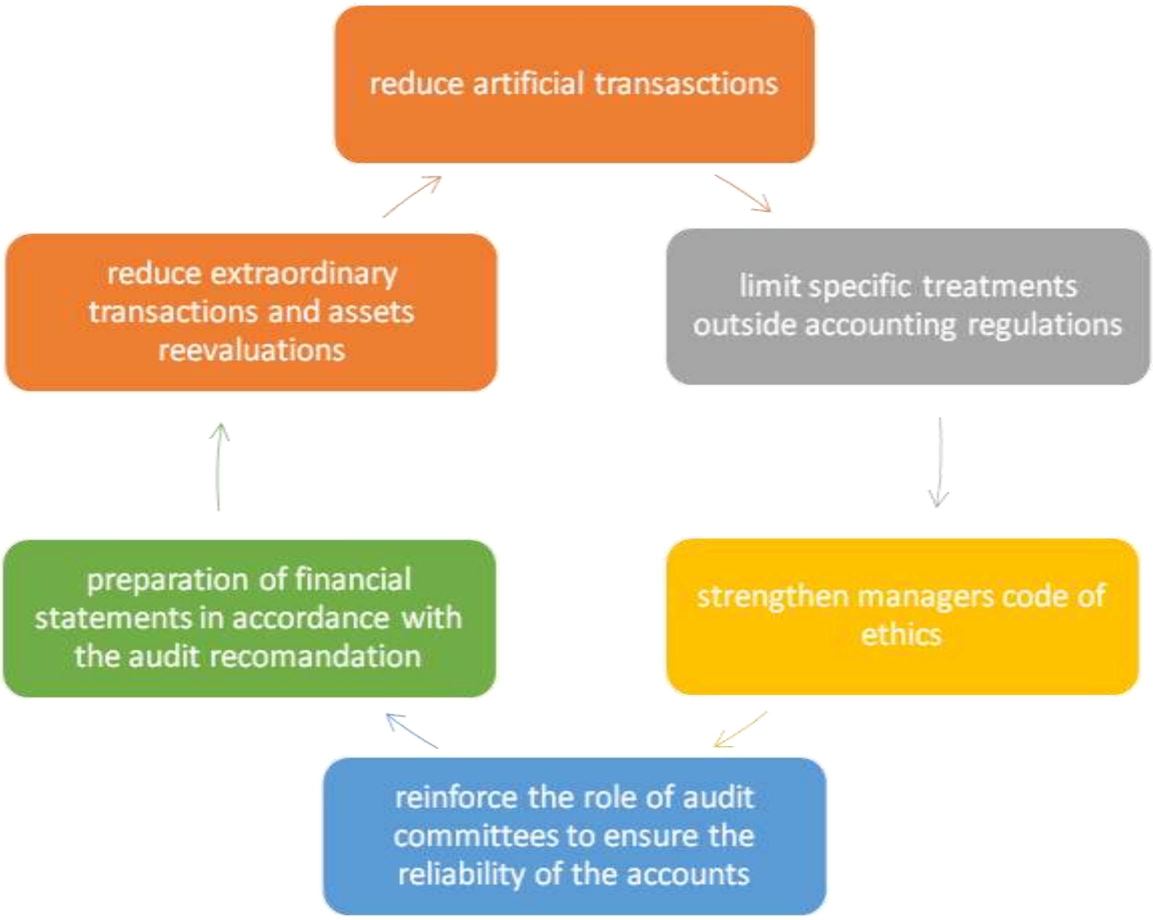

Figure 3. Regulations enhancement to avoid creative accounting

Sources: elaborated by the author

5. Conclusions

The management of accounting data leading to the publication of improved financial statements, whether it involves manipulation or fraud, is more easily hidden in a globalized economic environment. The use of creative accounting holds different opinions, but is generally agreed that the detrimental effect it has on an economic entity cannot be denied.

The strong growth of entrepreneurship initiative, the changes in accounting regulations, but also the recent negative experiences caused by the economic crisis, with moderate forecasts regarding the economic evolution for the next period, represent factors favorable to the management of accounting data within economic entities, regardless of their size.

Although creative accounting may be a solution for some challenges occurred during a business existence, it stands only as a short-term solution and it will eventually lead to harming the economic entity, as well as the managers, owners or related interested parties on the long term, including to the point of bankruptcy and liquidation.

The use of creative accounting is in fact the fault of all stakeholders, namely: users, for putting pressure on financial information; managers, for trying to achieve objectives and receive incentives: shareholders, for succumbing to manipulation in order to show users what they want to see; the auditors, for not remaining independent and falling before the benefits they would obtain from agreeing to keep creative practices hidden.

By deforming the judgment of the interested parties of financial statements, accounting manipulation undermines the efficiency of economic relations, jeopardizing the proper allocation of financial resources.

Despite the fact that some professional accountants agree on its use, underlining the positive implications, the fact that the techniques specific to creative accounting can be used at their own convenience, even outside of the law and regulations, it is self-understood that these practices need to be eradicated.

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ONLINE TRADE INTEGRATED WITH BLOCKCHAIN TECHNOLOGY MANAGEMENT IN ENTREPRENEURIAL ACTIVITY

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Abstract: *Blockchain technology is used by entrepreneurs as an inovative tool in online trade so that they can handle the problem of traceability of the product in the management of the supply chain. This research want to be a cross-border between blockchain, ecommerce all made in the entrepreneurial environement. In the end it will be a set of methods and algorithms that are developed for the information encryption and for anticounterfeiting. There will be presented algorithms and methods to show a complete and working solution, which are evaluated by applying to several typical problems and attack cases. The effectiveness, extendibility, security, implementation and governance issues of applying these algorithms,methods, solutions are also discussed. This research contributes to the theoretical and practical literatures on blockchain technology, cross-border e-commerce and supply chain management research fields.*

Keywords*: Blockchain Technology, Entrepreneurs, Online Trade, Cross-border, Effective Management, Algorithms, Strategies, Methods.*
JEL Classification*: L81.*

1. Introduction

View from the influence of globalization, the online trade have a lot of challenges and opportunities. Under the influence of the volatile and complex economic situation, online trade is the new cross-border e-commerce. It is known that is almost impossible for themain supply chain to fulfill the requirements of some developers, so it is needed for cross-border trade supply chain to do the requirements. Therefore, in order to improve the competitiveness of enterprises and realize sustainable development, the competition of cross-border e-commerce enterprises will be transformed into the competition of supply chain management, and more attention will be paid to supply chain management and the ability level of enterprise supply chain service providers.

In our days information, management, logistics and other things are not ideal, despite that in some countries the policy is "One Belt and One Road" and they are promoting chain supply application and innovation. They provide chain supply services to promote the development of the supply chain. However, to improve the supply capabilities, there are lots of encouragement policies to help entrepreneurs to keep advantages and to improve their cross-border e-commerce to be better then others policies.

2. Content

The main core of the blockchain technology used by entrepreneurs as an inovative tool in online trade is made from a combination of the cash flow, logistics, information flow and new blockchain technology (Liu, 2016). From what is known this technology have its own complexity and dynamic due to internal management, some external factors and in many aspects because of supply chain management and international policy, will bring burden to cross-border e-commerce platform, so by choice for outsourcing to reduce the burden of cooperation, to help platform to enhance competitiveness.

One of cross-border e-commerce supply chain service providers are entrusted outsourcing, revolves around cross-border e-commerce platform main business customs clearance, warehousing (overseas warehouse, bonded warehouse, etc.).

Cross-border logistics services as a platform to retain customers, give full play to their own advantage, and increase the volume. The platform can focus on the strengths, to their own interests to maximize, and profitable for both sides.

Trouble in providing services in online trade supply using blockchain technology

Trouble with overseas warehouses. The costs of the operation and establishment of overseas warehouses are expensivehigh. First, this will involve a large amount of capital to be locked down for the equipment and needed system. Second, in some contries the costs with the human capital is expensive and this will lead to biger costs.

Expansion competition of overseas warehouses. View from the globalization situation, the multilateral trade have to gain more earnings. The IED (internetional expres delivery) and IP (international postal), under the dictatorship of the global warehouse grown into a target for almost all service providers. It is critical to find more customers and to continue the relationship to have more benefits, so nobody will monopolize overseas warehouse, which can bypass the extension of brutal competition (Okholm, H.B., 2016).

Trouble with cross-border logistics

Replacement and return of cross-border logistics. If a customer ask for replace or return of the goods due to their own reasons or the goods have something wrong, the customer will get in contact with logistics company to be able to send product back, and there will be problems and expenses during the period, and all the troubles need to be solved by the customer. In some of the returning process the cost will be higer than asset value due to customs clearance, logistics costs etc. It is definitely inadmissible if the factory has to carry the result.

Cross-border logistics have a big cost and very long cycle. Management, storage, transportation and other aspects of asset in the cross-border process are complicated than those that are in origin country, so it will generate bigger costs. The cost will be controled although by service providers, there will be uncontrollable factors, such as customs tariffs, which cannot control its fluctuation. Cross-border logistics that spans from domestic to overseas, has a large space span, and also needs to face policies of different countries and regions. The process itself consumes lot of time and is complicated, so that will make the logistics time delivery very long cycle.

The small transparency of the order information in cross-border logistics. There are involved many processes in cross-border logistics and it takes a very long period of time (very log cycle). The delivery time (data time) cannot be updated by logistics company once the parcel is delayed. The customers are unable to get the status of the parcel due to low level services provid eby the logistic companyes.

Supply chain have poor information security. The information needs to be shared in the process of transaction, so this will be much safer if we are using blockchain technology for cross-border transaction. In this case the information goes from one party to another, but can not be alterated by any method because it is keeped in the blockchain. If we use blockchain thecnology the risk that the information will be stolen is smaller then the risk in a traditional system. Furthermore, the Internet by itself carry lots of security risks. Once the system is attacked the information will not be send in a traditional system in time and information recovery can be faulty, which will lead risks to the supply chain. If the information is stollen the enterprise will have boundless ramifications.

The fast development of cross-border online trade has led to a great shortage of talent in cross-border e-commerce, and its complex forms of commerce have led to the difference between the supply chain of cross-border online trade and the regular supply chain. Due to involved international trading, it is necessary to have good theoretical knowledge of blockchain, logistics, national culture, customs, good foreign language skills communication etc.

It is imperative to solve the above-mentioned problems to turn to professionals in the field, to understand professional internet companies with extensive experience. To invite third parties such as payment institutions to create an integrated payment system using blockchain technology. information that, in addition to responding to the applicant's needs, also ensures information security and payment security, thus having a responsible attitude towards consumers and society.

Now, universities and colleges help develop and strive to find talent in this new field. The theoretical knowledge in the textbooks is outdated and we can still say that they are limited. Businesses need to work with universities and colleges to give students a chance to put into practice what they are learning in theory and to reduce the discrepancy between the theoretical way of looking at blockchain technology and how to apply it.

3. Conclusions

Cross-border online trade can supply a chain service using the blockchain technology to have a safer way to protect the information of the company so that this will not lead to boundless ramifications (Kawa, A., Zdrenka, W., 2016). If we are thinking that the international trade is complicated this will make the logistics service providers to constantly develop new transaction service, cross-border overseas warehouse service , logistics services, perfect information system and so on.

To increase the level of skills, it is necessary to take advantage of talent at the same time, continually promote providing better services and quality by using the blockchain technology.

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HOW CAN ENTREPRENEURS USE LATEST TECHNOLOGY IN ORDER TO ACCELERATE HUMAN ACHIEVEMENT AT WORK AND DRIVE BUSINESS PROCESS IMPROVEMENTS?

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Abstract: *In today's highly competitive environment, entrepreneurs must consider their productivity levels, in other words they will need to refer to how well their company converts the input (such as capital, materials, machines and labor) into output or goods and services. Improving productivity remains an ongoing activity. Analyzing their space and resources, improving their plant layout and eliminating processes that add no value are critical factors to success. An effective management will always count on the utilization of the latest technology, that will consequently help improve the operations. Having the end goal of fulfilling the objectives of the organization, the entrepreneurial spirit means more than wanting to start your own business, it means holding values like innovation, creativity and passion on a higher level than predictability, profit and stability. In the present article, we are going to have a look at the latest technologies trends for 2020, such as Artificial Intelligence (AI), Machine Learning (MI), Robotic Process Automation or RPA, Cybersecurity or Blockchain. Web-based technologies enable the entrepreneur to dramatically improve the way he or she runs the business, keeping an increased focus on expanding the market share, pursue the cost reduction aggressively, especially under crisis or greater efficiency, as well as preventing customer-service problems.*

Keywords*: Entrepreneur, Effective Management, Objectives, Strategies, Automation, Process Improvement, Operational processes.*
JEL Classification: *M10.*

1. Introduction

Organizations are constantly looking into those areas where they can improve accuracy, effectiveness and/or efficiency and then redesign those business processes with the end goal to realize the required improvements. There is a permanent need to adapt and bring customer satisfaction as quickly as possible, as well as align these with the overall business strategy, due to the fact that expectations change, new technologies emerge and competition grows. A business process can often be broken down into smaller processes and one of options could be the split between Operational, Management and Support functions. Looking at the operational side, this will include core business and create the value stream, such as for example the orders placed by customers, manufacturing tasks or opening bank accounts. Management business process will include corporate governance, forecast, budget, key performance indicators tracking and employee oversight and under supporting type, processes could be such as human resources, accounting and finance or technical.

Given the highly dynamic environment, where the change becomes the rule, not the exception anymore, businesses will survive, operate and progress only if they will adapt to the changes in technology to enhance human capabilities. Rather than waiting for the changes to come, a successful entrepreneur will need to anticipate them and have enough courage to assess their implication to the business.

Technology is helping us resolve issues that human power alone cannot resolve all the time. Different types of firms require different technologies; however, it has been demonstrated that it is impossible to resolve with a single technology all integration needs. Technology is only a part of the original solution and the entrepreneur's background is really important in different sectors. Technology is good for bringing the change not forcing it. It cannot make employees more efficient. The robots can help us to be more productive, freeing us from most of the time-consuming and repetitive tasks. Computer-aided manufacturing is one of the most important areas of application of automation techniques. Financial institutions and banking have embraced automation technology in their financial transactions. But just because technology is advancing it does not mean it will replace human resources. Technology can perform an adequate job, but we still need the human piece of the puzzle. It is certain that people to people communication remains fundamental where the entrepreneur's contact in the various stages is required.

In this article, we will be discussing about the benefits of using Artificial Intelligence (AI), Machine Learning (ML), Blockchain technology, Robotic Process Automation or RPA, techniques which today are helping entrepreneurs to grow their businesses. An important aspect is that technology alone cannot build a company culture. In the end, it is people who are assigned to work on this technology and to inspire the entrepreneurs to keep their spirit alive. By creating an engaging working environment, interactive dialogues among employees, motivation to the employees, support among them and a fair rewarding system, reflects the culture shape of the company. An entrepreneur should understand what the needs of the company are, by creating a connection with all the stages of management that brings the desired output. Therefore, entrepreneurial spirit and technology should always go hand in hand. Hence, we need an evolving technology as well as intelligent humans.

2. Content

Processes are one of the most important resources in organizations. Improving processes can lead to enhance the organizational performance. Several methodologies are presented for process improvement. There are many processes in organizations that lead to increase the complex interactions between processes and high dimensionality problem (Jeong et al., 2008). In addition, there is a single view to processes in the improvement actions (Houy et al., 2011). Huang et al. (2012) stated that there is a low attention to the internal aspects of the processes. Technology is now evolving at such an increased pace that annual forecast of trends can appear out-of-date before they even go live as a published article or blog post.

Conducting a regular business process improvement activity represents an effective way to establish a systematic approach towards reaching the company's objectives, involving the business practice of identifying, analyzing and improving to optimize performance, meet best practice standards or simply improve quality and the user experience for customers and end-users. Over the time, several different names were given to process improvement such as business process improvement (BPI), business process re-engineering, business process management (BPM) or continual improvement process (CIP), to name just a few. They all pursue the same goal, regardless of the nomenclature: improve productivity, minimize errors, streamline efficiency and reduce waste.

There are mainly two types of business processes, such as formal or formal and they cover a series of company's functions. Irrespective of the process that we are trying to improve, the enhancement approach follows the same path described by the following four steps:

❖ *Identifying the opportunities for change* - this is usually the very first step that should help identify the reason behind the change required in the process. Current challenges and potential associated risks will be part of a process audit.The outcme of this phase will highlight the areas for business improvement and how each one of these areas impacts the overall organization, different stakeholders (suppliers, customers, employees, goverment, etc) and resources.

❖ *Analyzing teh existing process* - An „as-is" process analysis is usually conducted, once the first step above mentioned is completed. In order to be able to set up realistic objectives, the team will need to fully understand the procedures.There are different tools available at this phase such as surveys, cause/effect analysis or process mapping, to be used with the end goal of identifying any roadblocks, delays, waste, product / service quality issues.

❖ The next step involves *obtaining commitment and support from senior management*, in other words getting their „buy-in". No matter what is the project type or size, the success of its implementation depends entirely on the senior manager support.The need for change will have to be clearly stated and presented, as well as the way that particular project will impact the organization on the short, medium or long term.

❖ The fourth step refers to *creating the strategy for improvement* – Following the process analysis phase, we will need to have a strategy in place that will include at least the reason why and how certain broken steps in the process should be improved, any financial or other resource type implication. A key aspect here would be related to the fact that SMART („specfic", „measurable", „attainable", „relevant" and „time-bound") objectives will need to be set up and they should align the overall strategic goals.

Looking at the several methodologies that are designed to help the organization identify the bottlenecks in the process, fix those issues and analyze / monitor the success of those changes implemented, we could name some below, considering that each methodology suits a different need. Some methodologies will help mapping out the process flows, some other will focus in particular on the techniques of lean process improvement and another category may be more concerned with changing the company culture, which is the secret sauce in each successful transformation project.

Kaizen methodology is mainly focused on increasing the productivity, efficiency and service / products quality by applying lean and agile practices. 5S model is part of Lean and Kaizen methodologies and refers to the following steps: sort, strengthen, shine, standardize and sustain. PDCA is also part of the Kaizen methodology and stands for plan, do, check and act. Once the process that needs improvement is identified, this technique helps the organizations be more efficient.

Six Sigma is a popular process improvement methodology, which provides a rigorous and structured approach to both help manage and improve performance and to support the transformation of an organization. It helps us use the right tools, in the right place and in the right way, not only in improvement, but also in our day-to-day management of activities (Burghall et al., 2014). Six Sigma involves two ways to break down process improvement through specific steps. These steps include on one side define, measure, analyze, improve and control (DMAIC) and define, measure, analyze, design and verify (DMADV).

Establishing a continuous improvement organizational structure remains key to business success and above all the methodologies available, process automation plays a significant role. Eliminating the manual tasks, reducing human error, enhancing the control are just few benefits to be considered.

Top New Technology Trends

➢ *Artificial Intelligence (AI)* - AI refers to computer systems built to mimic human intelligence and perform different tasks such as decision making, speech or patterns, recognition of images. AI can do these tasks a lot faster and more accurately than humans.AI services are used on a daily basis in different forms, including navigation applications, smartphone assistants or any other smart home devices, in partical in the United States of America.

- *Machine Learning (ML)* is a subset of AI, powers web search results, real-time ads, and network intrusion detection, to name only a few of the many tasks it can do. With Machine Learning, computers are programmed to learn to do something they are not programmed to do: they learn by discovering patterns and insights from data.
- *Robotic Process Automation or RPA* - The role of RPA is to automate repetitive tasks that have previously been managed by humans. The software is programmed to perform repetitive tasks in applications and systems. Software is actually a multi-step workflow and interactions with various applications.The journey through RPA implementation has mainly the following steps:
    - Deciding the strategy – whether do it yourself (DIY) or contract from the outside.
    - Select and train a group of people – not only Information Technology (IT) department. Representatives from several fields will want to be part of RPA implementation planning, from business to IT.
    - Identifying the structure of processes in the organization - Process discovery - The goal of projects is, of course, automation - allowing software robots to handle at least some of the work done by humans. This is a noble goal, and for that to happen we will initially have to do a careful study of what those people do on their computers. This type of study will help us to find out which of the many desktop processes are best suited for automation.
    - Select candidates for RPA - To benefit from fast Return on Investment (ROI), we may need to chose processes that have undergone a transformation initiative using the Lean Six Sigma methodology. Very Repetitive Manual Processes, Processes with Standard Inputs that can be read, high volume and frequency processes are most recomended.
    - Map the processes from “As Is” (current) to “To Be” (future). Blockages, inefficiencies and productivity gaps are clear. So are best practices. You can more easily and objectively identify who are the top performers who need help to increase your work speed.
    - Implementation of robots
    - Assess the financial impact of RPA solution implementation
- *Cybersecurity* - might not seem like emerging technology, given the fact that it has been around for a while, but it is evolving just as other technologies are. It will permanently evolve, as long as hackers are illegally trying to break even the toughest security measures.It has been proved that the numbers of the jobs for cybersecurity professionals is increasing three times quicker than other jobs in technical domain.

- *Blockchain* – In this fast growing industry, blockchain offers security as it could be described in simple terms as data you can only add to, not take away from or even change. Not being able to change the previous block of data is actually what makes it so secure and an important benefit is that we do not need any third party to validate business transactions.

3. Conclusions

The primary contributing factor for a successful transformation will be the capability of the entrepreneur to simultaneously deal with customers, suppliers, product development and technology (van Gelderen et al., 2008).

The main advantage of integrating Lean Six Sigma and Robotic Process Automation – is that we will get to have automated or non-automated processes, but optimized, under the control of our team.

Automation is definitely a wave and the companies would better catch it. The financial impact can be impressive if a Robotic Solution is being developed. There are multiple advantages that a company may obtain through the utilization of an RPA project, among which: the cost of errors will decrease, Business practices will change, and Customers will notice and want more.

Some process improvements that are automated with RPA includes online order processing, categorizing help desk tickets, automated email responses, payroll management and transferring data between systems. This not only helps create more efficiency around business process, but it also helps free up workers to focus on more complex tasks that automation cannot handle. Digital transformation is an option at hand for all firms and this would definitely Reduce the complexity of personnel management.

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