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THE PROFITS OF THE ROMANIAN BANKS, AFTER THE FINANCIAL CRISIS

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Abstract: *Romanian banks' profits were not constant after the Romanian economy faced the financial crisis that started in 2008. Thus, if at the beginning of the analysed period - the last decade - the years with profitable financial exercises alternated with the years in which the Romanian banks recorded losses, followed by years (from the middle of the study period) with losses, and in recent years, profitability is the main feature of the management of Romanian banks. The main cause of the losses in the banking system was the risky operations made by the Romanian banks before the crisis and during the crisis and the diminishing of bank revenues after the crisis. Periods of loss and profitability have been a feature not only of banks but of the whole economy. Thus, when banks have had high profits, all enterprises have had high profits, and banks are in line with the general trend. Also, the banks' profits represent a relatively small value from the results obtained by all enterprises in Romania. Equally true is the fact that the increase in the profitability of the banks in recent years is also explained by the restructuring carried out by their management in the last years, especially at the level of the network of the counters, the staff and partly the operations with the clients.*

Keywords: *banks, profit, income, expenses.*

JEL Classification: *G21.*

1. Introduction

The financial crisis, which has made its debut in Romania since the end of 2009, made the profitability of all enterprises deteriorate in two years after the crisis, 2009 and 2010; Romanian enterprises recorded a negative net result at the level of the entire economy. Banks have also recorded losses in some years due to the crisis. Visible to the public were just the banks' losses, not the fact that the whole Romanian economy reported a net loss. Subsequently, the Romanian economy resumed its growth, with the cumulative value of profits exceeding, for example, 100 billion in 2017, and the profitable banks contributed to the above-mentioned amount by 5 billion. Again the public saw only the profits of the banks, not the profits of all the enterprises.

The present paper aims to analyse how large the profits, but also losses, of Romanian banks are, where the banks' profits come from, with what income and expenses they are obtained, which of these latter have an important impact on the profitability of the bank, and what other measures have been taken to increase profitability.

Analyses of bank profits, their source, the crisis/expansion-bank profit dynamic are quite common in literature and the most recent of them hone in on the variability of bank profitability, the dependence of profitability on the economic cycle moment and on private factors of influence.

In a recent study (2018) by the Committee on the Global Financial System, on structural changes in the banking system after the recession in 2008, it is noted that banks' return on equity has fallen from historically high rates previously registered before the crisis, and that many banks in advanced economies, especially in Europe, are facing slow incomes, and costs resistant to cuts.

Paul-Olivier Klein and Laurent Weill (2018), in a study on bank profits and economic growth, conclude that a high level of bank profitability contributes positively to economic growth, but it is short-lived. At the same time, the level of banking profitability in the medium and long term exerts a negative influence on economic growth. Rather, increasing profitability allows banks to increase their capital and offers more incentives to monitor loans and borrowers.

Leo de Haan and Jan Kakes (2018) note that the losses incurred by banks after the 2007-2008 recession first affected the large banks that were oriented towards the global financial market and less so the small banks oriented towards retail, but in following years, this reversed, with retail-oriented banks being the most affected, and suffering losses, as state aid and systemic risk-mitigation measures mainly targeted large banks.

The European department of International Monetary Fund, in a study (2018) on the evolution of European bank profits over the last financial cycle, notes that banks that have been successful in protecting profits were those who have seen a less pronounced deterioration in credit quality and an improvement in cost efficiency. These banks have aggressively reduced their assets, especially during the crisis, and have reduced their dependence on wholesale funding after the crisis. The study also notes that banks' high returns were associated with interest margins that remained generally stable throughout the financial cycle, including during the post-crisis period, but found no clear arguments for the existence of commissions and high fees charged to customers being associated with a better return after the crisis.

Finally, in another study on banking market trends and strategic options of European banks, the ZEB financial advisory firm (2018) notes that the improvement in bank returns recorded over the past few years cannot be replicated, because if this growth was recorded on the basis of non-litigious operations and the reduction of extraordinary costs, but the present and future is that of non-bank financial intermediaries ("shadow banks" and financial institutions), pension insurance companies. The study concludes that a decade after the financial crisis, the banking industry urgently needs product specialization, participation in financial platforms and mergers and acquisitions.

2. Analyses on the size of Romanian banks' profits

Although Romanian banks did not experience the problems their Western European or US equivalents did (bankruptcies, public bank rescue plans, takeover of banks with losses etc.), the recession and the financial crisis of 2007-2008 were not without consequences. Thus, the main consequence was that, from 2009 to 2014, i.e. for six years, the bank's financial years ended in losses (to this we added the years 2009 and 2013, as well, when profits were low and insignificant, respectively), which have accumulated over 8 billion lei. Profits were recorded in 2008 and beginning with 2015, when credit institutions began to develop their operations and totalled 26 billion lei, which meant a net positive value of 18 billion lei, i.e. an average of 1.6 billion lei for the 11 years analysed. The profit-loss cycle recorded in the banking system was of a high magnitude. For example, in 2012, banks recording losses had a market share of 60%, and in 2017 there were still banks recording losses (it is true with a minor share in the system).

The magnitude of the process, the magnitude of the losses and the long duration of the loss period prove that this was a systemic problem, and the economic growth or the resumption of this process after 2014 obviously made the banks profitable. In fact, credit is a cyclical product and so are its returns.

Correlation of profits with assets and equity shows modest values. Thus, the financial return (calculated on the basis of equity) shows, for the period when banks were profitable, values between 10 and 15%, except for the first year of the crisis when the indicator was close to 18%. Values are higher than the European average, which is about 6-7%. However, if we calculate the average of the analysed period, a value of approx. 4% results. Economic profitability (calculated on bank assets) oscillated in years with a profit of between 0.01% and 1.59%, with an average of 0.4%, as European banks record an average of 0.8% .

Table no. 1. Dynamics of bank profits

Year	Net profit/loss (billions lei)	Market share of banks with losses (%)	ROA (%)	ROE (%)	Operating Income/Operating Expenses-%
2008	4.40	9,9	1.56	17.04	186.9
2009	0.82	21,0	0.25	2.89	181.6
2010	-0.52	21,9	-0.16	-1.73	188.6
2011	-0.78	44,7	-0.23	-2.56	171.3
2012	-2.30	59,8	-0,64	-5.92	180.2
2013	0.05	28,9	0.01	0.13	176.9
2014	-4.70	39,2	-1.32	-12.45	170.3
2015	4.50	14,3	1.24	11.77	147.5
2016	4.20	7,7	1.08	10.42	154.2
2017	5.30	3,1	1.30	12.51	156.5
2018	7.17	***	1.59	14.85	179.6
Total profit	26.44	-	-	-	-
Total loss	8.30	-	-	-	-
Net values	18.14	-	-	-	-
Average	1.6	-	0.4	4.3	-

Source: BNR, Reports on Financial Stability 2008-2018, sec. Statistics / Data sets; calculations by the author

Comparing banks' operating income with their operating expenses shows us their stability in the period when banks suffered losses and a decline in the indicator at a time when banks started to make profit, with Romanian banks trying to mitigate losses by fixing the prices of products sold so as to cover their estimated expenses and losses, subsequently lowering prices, in the context of lower costs or reduced losses.

Table no. 2. Profitability of the economy-profitability of banks correlation – billions lei

Year	Profit for companies with net profit	Loss for companies with net loss	Net result	Net bank profit	% profit or loss of banks		% bank profit in net result	
					in total net profit	in total net loss	positive	negative
2008	53.32	-42.21	11.11	4.40	8.3	-	39.6	-
2009	40.28	-48.05	-7.77	0.82	2.0	-	10.6	-
2010	42.18	-43.53	-1.35	-0.52	-	1.2	-	38.5
2011	49.89	-45.30	4.59	-0.78	-	1.7	-	-17.0
2012	51.48	-45.81	5.67	-2.30	-	5.0	-	-40.6
2013	57.74	-42.02	15.72	0.05	0.1	-	0.3	-
2014	62.94	-42.08	20.86	-4.70	-	11.2	-	-22.5
2015	73.56	-36.70	36.86	4.50	6.1	-	12.2	-
2016	84.32	-33.03	51.29	4.20	5.0	-	8.2	-
2017	101.69	-31.39	70.30	5.30	5.2	-	7.5	-

Source: NBR, Financial Stability Reports 2008-2018, sec. Statistics/Data sets; calculations by the author

Periodically, the subject of bank losses or the size of banks' profits appears in day-to-day discourse. It should be said that there are profitable enterprises, but also loss-making enterprises, in any economy, generally, there are many companies that record profits in periods of economic expansion, and enterprises recording losses multiply in times of crisis or recession. It is normal for this to happen in the Romanian economy, as well, and in times of financial crisis, for banks to have more problems than the rest of the economy.

If we analyse the Romanian economy as a whole, we will see that in the first two years after the start of the 2008 crisis, at economy level, (2009 and 2010) losses were much higher than profits, and the next two (2011 and 2012), losses were slightly lower than profits, only resulting in a net result of 5 billion lei (recorded by all enterprises in our

country, i.e. about 700 thousand entities). But even after the recovery of economic growth in Romania, with values well above the European average, companies with losses did not become a rarity and their losses of 30-35 billion lei, annually, represent between 30% and 50% of the positive result generated by the enterprises profitable.

There is, therefore, no justification for considering a bank recording losses or high profits one year as something abnormal, especially since in the banking world not all institutions can have profit or loss (only in this case should we think it is abnormal).

In particular, if we compare the profits or losses of banks with the same result recorded in the national economy, we will find that it was below 10%, only in 2014, the banks' losses were 11% of the total loss in the economy. Therefore, no share has an alarming value, which means that the results of the banks have been in line with the general trend.

Table no. 3. Formation of bank profit - millions lei

Indicator	dec.15		dec.16			dec.17			sept.2018		
	values	margin	value	margin	Indicator-%	values	margin	Indicator-%	values	margin	Indicator-%
Net interest income	10.620	10.620	10.903	10.903	103	11.280	11.280	103	10.155	10.155	90
Net commission income	3.808	14.428	3.834	14.737	101	3.912	11.280	102	3.077	13.232	79
Earnings or losses *)	833	15.261	2.207	16.944	265	1.470	15.191	67	174	13.406	12
Income from trading	626	15.887	642	17.586	103	353	16.661	55	268	13.674	76
Exchange rate differences	1.603	17.490	1.517	19.103	95	1.901	17.014	125	1.617	15.291	85
Other incomes	879	18.370	260	19.363	30	276	18.916	106	381	15.672	138
Staff costs	4.882	13.488	4.788	14.575	98	5.004	14.187	105	3.989	11.684	80
Administrative costs	4.856	8.632	4.660	9.915	96	4.737	9.450	102	3.662	8.022	77
Other expenses	836	7.796	819	9.096	98	825	8.625	101	671	7.350	81
Operational profit	-	7.796	-	9.096	117	-	8.625	95	-	7.282	84
Expenses with impairment of financial assets	3.943	3.853	4.067	5.029	103	1.839	6.786	45	455	6.826	25
Other	1.025	4.878	771	4.258	75	1.451	5.336	188	1.084	5.743	75
Profit/Loss	-	4.878	-	4.259	87	-	5.336	125	-	5.743	108

*) Earnings (+) or losses (-) from derecognition of financial assets and liabilities that are not measured at fair value through profit or loss

Source: BNR, Financial Stability Reports 2008-2018, sec. Statistics / Data sets; calculations by the author

If we compare, the banking profit with the net result from the national economy, we notice that:

- Banking profits accounted for between 0.3 and 12.2% of the net result of the economy, i.e. normal values. An exception is the first year of the crisis when bank profits were 40% of the total result generated by the Romanian economy. This is a great value, but it is justified by the entry of the economy into recession, the fact that many businesses began to experience losses or declining profits, and many of the banking products (see, for example, credits), although generating revenue at present, originate in the past;

- Banks' losses, as a share of the total net result, recorded higher values, but they occurred at a time when the entire economy had negative outcomes or national profits were modest;

- Let us also note that in recent years, 2015, 2016, 2017, even as bank profits were mentioned to have very high values, they represented a decreasing share in the total profits generated by the economy (6 and 5%) or 12%, 8%, 7% in the total net positive result of the economy, which means that the profits from other sectors of the economy were growing faster than the ones in the banking sector.

Analysis of bank profits in the last four years (the period when their profits were considered exaggerated) by levels of training, depending on the banks' incomes and their expenses indicate the following:

- there is remarkable stability of net interest, commission and exchange rate difference incomes (the premiums of about 11 billion lei and, probably, slightly higher in 2018, 4 billion in the second category and about 2 billion in the third category). But as in this period the volume of operations of banks was increasing, means that their relative value, per operation was decreasing;

- a series of earnings, such as from trading or earnings/losses on derecognizing financial assets and liabilities that are not measured at fair value or the other income category, had significant fluctuations, but they do not have large annual values;

- staff spending in the four years has fluctuated around 5 billion, even as bank personnel numbers are in decline;

- administrative spending in the four years has fluctuated around 4.7-4.8 billion, but as a trend a slight decrease is observed, probably explained by the reshaping of the territorial network of banks;

- operating profit fluctuated around 8-9 billion, fluctuations being generated as previously reported by some of the income (from trading or earnings/losses on derecognition of financial assets and liabilities not measured at fair value or other incomes);

- the increase in annual profit reported by banks was due to the depreciation of financial assets, which declined over the four years under review. Thus, if in 2015 and 2016 they represented 4 billion lei, in 2017 they were reduced to 2 billion lei and, in 2018, they probably did not exceed one billion lei.

Table no. 4. Bank personnel, the territorial network, labour productivity in banks

	Bank personnel thousands ppl.	Banking units	Central employees / Total employees	Banking assets billion lei	Private sector credit billions lei	W1 (bank assets/bank personnel - million lei)	W2 credits/bank personnel million lei	Resident population	No. residents/agency thousands ppl.
2008	71,62	7305	28,83	339,5	198,1	4,7	2,8	20,64	2,82
2009	67,90	7144	30,04	364,5	199,9	5,4	2,9	20,44	2,86
2010	66,75	6894	31,01	385,2	209,3	5,8	3,1	20,29	2,94
2011	65,77	6777	31,68	392,8	223,0	6,0	3,4	20,20	2,98
2012	61,77	6458	32,66	404,9	225,8	6,6	3,7	20,10	3,11
2013	58,61	6213	33,67	408,7	218,5	7,0	3,7	20,02	3,22
2014	57,73	6022	35,26	405,3	211,1	7,0	3,7	19,95	3,31
2015	55,93	5669	35,67	417,1	217,4	7,5	3,9	19,88	3,51
2016	54,93	5501	36,64	429,0	220,1	7,8	4,0	19,76	3,59

Source: BNR, Financial Stability Reports 2008-2018, sec. Statistics / Data sets; calculations by the author

In other words, big profits now and big losses from previous years are explained by the exuberance of the credit process, they originate in the provision accounting methods, but are legal and binding in the European Union and, therefore, in Romania. Only those who do not know the law and the customs of the matter can raise such issues.

Some of the larger bank profits recorded in recent years are also explained by restructuring processes within credit institutions. Thus, statistical information available until 2016 indicates that the territorial network of banks has narrowed by about a third between 2008 and 2016 and the process has certainly continued beyond 2016, with the number of banking units probably currently ranging between 4-4.5 thousands. Obviously, this led to the growth of population served by a physical unit (agency/branch), from 2.8 thousand to 3.6 thousand people per physical banking unit. But these figures can be misleading because, on the one hand, demographic information is not sufficiently accurate in Romania, since emigration is not fully encompassed in these statistics, and on the other hand a large part of the population, in particular the declining rural, lacks access to banks.

Banking staff decreased by a quarter, from 72,000 employees to less than 55,000 and, at present, is likely currently around 45-50 thousand people.

The reduction of the physical network and employees was determined by the intense promotion by banks of alternative channels, long-distance banking (mobile banking, internet banking), automatic bank counters and the commissioning of some of the traditional services (collection of invoices, commissioning of withdrawals cash at the counter, etc.).

The reduction in bank staff also led to an increase in labour productivity, with bank-per-employee assets doubling between 2008 and 2016, and credit per employee increasing by 50% over the same period, arguments in favour of wage stability, even as the volume of operations (assets, loans, etc.) has increased.

3. Conclusions

Starting with 2009 and until 2014, for six years, banks' financial years ended with losses that have accumulated more than 8 billion lei. Profits were recorded in 2008 and starting in 2005, when credit institutions started to develop their operations and totalled 26 billion lei, which meant a net positive value of 18 billion lei, i.e. an average of 1.6 billion lei for the 11 years analysed. The profit-loss cycle recorded in the banking system was of a high magnitude. For example, in 2012, banks recording losses had a market share of 60%, and in 2017 there were still banks recording losses (it is true, with a minor share in the system).

The magnitude of the process, the magnitude of the losses and the long duration of the loss period prove that this was a systemic problem, and the economic growth or the resumption of this process after 2014 obviously made the banks profitable.

Banking profits accounted for between 0.3% and 12.2% of the net result of the economy, i.e. normal values. Banks' losses, as a share of the total net result, recorded higher values but they occurred when the entire economy had negative outcomes or national profits were modest. In the last years, 2015, 2016, 2017, even as bank profits were mentioned to have very high values, they represented a decreasing share in the total profits generated by the economy. The increase in annual profit reported by banks was due to the depreciation of financial assets, which decreased over the four years under review. Thus, if in 2015 and 2016 they represented 4 billion lei, they were reduced to 2 billion lei in 2017 and, in 2018, probably did not exceed one billion lei.

Some of the banks' higher profits recorded in recent years are also explained by the restructuring processes within credit institutions: bank personnel has fallen by a quarter, the territorial network of banks has narrowed by about a third, all of which has generated a labour productivity growth, bank-per-employee assets doubled in value, and credit per employee increased by 50%.

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FINANCING THE BUDGET DEFICIT OF ROMANIA IN 2017

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Abstract: *The recent economic crisis has revealed the failure of some cognitive and operational models to relaunch the economic activity. The most persuasive example is the thesis that price stability is equivalent to financial stability, with the full use of resources. Nowadays, we hear more and more often of the idea that the budget deficit becomes a means of relaunching the economic activity, given the fact that it does not already have an inflationary character. It is possible to act upon the demand for public goods and services through the use of short-term funds, thus achieving a flexible budget policy. Within this framework, public spending can be resized in relation to the size of these funds. If no changes are made to tax regulation, fiscal revenues may constitute conjunctural adjustment tools. The idea that budget deficit would be a particularly important economic problem is partly true, because it must, nevertheless, exist. Through it, the redistribution of income between generations, the fiscal relaxation in the case of the variation of the income subject to taxation etc. are ensured.*

Keywords: *deficit, budget, public administration, economic crisis, financing, investment.*

JEL Classification: *H62.*

1. Introduction

In the current period, the idea that the budget deficit becomes a means of relaunching the economic activity, given the fact that it is not already inflationary, is becoming increasingly popular (Cioponea, 2007). It is possible to act on the demand for public goods and services through the use of short-term funds, thus achieving a flexible budget policy, whereby public spending can be resized in relation to the size of these funds. In the absence of changes in tax regulation, tax revenues may be instruments of short-term regulation.

In this respect, a process of crucial importance is the efficiency of public spending. The desired objectives can be achieved more efficiently, sometimes faster and with lower costs, without reducing the quantity or quality of the services provided. It is enough to eliminate the excessive staff in the central and local government to see a decrease in the cost of providing certain public services (Kolodko, 2015).

Moreover, it is considered that the government is the only economic actor that can maintain the level of demand in the economy, spending more than it wins, by registering a budget deficit (Chang, 2014).

In turn, the economic crisis of recent years has revealed the failure of cognitive and operational models. Some authors consider that the most telling example is the thesis that price stability equates to financial stability, with full use of resources (Dăianu, 2015).

The idea that the budget deficits would be a particularly important problem for the economy is partly true, as it must to appear, through the provision of redistribution of income between generations, tax relief in the case of variation in taxable income etc.

2. Romania's Budgetary Deficit in 2017

2.1. Economic Situation and Synthetic Budget Indicators

In 2017, Romania recorded an economic growth of 5.2%, being the seventh consecutive year of positive developments (1.1% in 2011, 0.6% in 2012, 3.5% in 2013, 3.1% in 2014, 3.9% in 2015 and 4.8% in 2016), which places us among the first countries, from this point of view, in the EU28. The following aspects contributed to this growth: internal demand, in the conditions of an improved balance between final consumption and gross investment (gross fixed capital formation); the growth rate of gross fixed capital formation, which was

projected at 7.2%; expenditure on final consumption of the population, which was projected to have an annual dynamics of 7.2% (MPF, 2017).

The economic growth was driven by a positive contribution of the internal demand, both for consumption and investment, of 7.7 percent, given that the net export had a negative contribution of -0.8 percent.

The data show that 2017 was a very good year in terms of investment. Net investment in the national economy (which represent a part of the gross fixed capital formation because they are only the ones made by the budget sector and the commercial companies) increased by 6.4% in 2017 compared to 2016. In 2016, net investment decreased by 3.3%. Thus, in 2017, gross investment in the economy (gross fixed capital formation) increased by 4.7% compared to 2016, when they decreased by 2%.

Inflation recorded a modest annual growth of 1.34% in 2017, while annual inflation at the end of the year stood at 3.32%. In the first part of the year, the favorable inflation evolution was influenced by the VAT rate cut from 20% to 19%, starting with the 1st of January, then by the removal of the euro-excise for fuel and by the decrease of the specific taxes in electricity distribution. The sharp rise in inflation at the end of 2017 was mainly due to price increases in the second part of the year, being based on external causes such as the oil barrel price rise on international markets, the rising of the prices for some food supplies (eggs and butter) or the depreciation of the national currency in relation to the European one. To these causes, the excise-advance measure on fuels is added in two stages, on September 15 and October 1, 2017, as well as the increase of electricity tariffs in July, September and October.

For the year 2017, the general public administration deficit was calculated on the basis of the data provided by the public institutions and on the basis of the temporary ones of the state-owned companies classified in public administration. According to ESA 2010, the resulting deficit (semifinal data) was 2.9% of GDP.

Compared to 2016, the deficit calculated in accordance with the ESA 2010 methodology declined by 0.1 pp in 2017 from 3.0% of GDP in 2016 to 2.9% of GDP in 2017.

The budgetary deficit calculated according to the European methodology was below the reference level of the Stability and Growth Pact, registering a level of 2.9% of GDP in 2017. The budgetary deficit for 2017 was situated above the budgetary deficit average for the euro area of 0.9% of GDP and for EU28 of 1.0% of GDP.

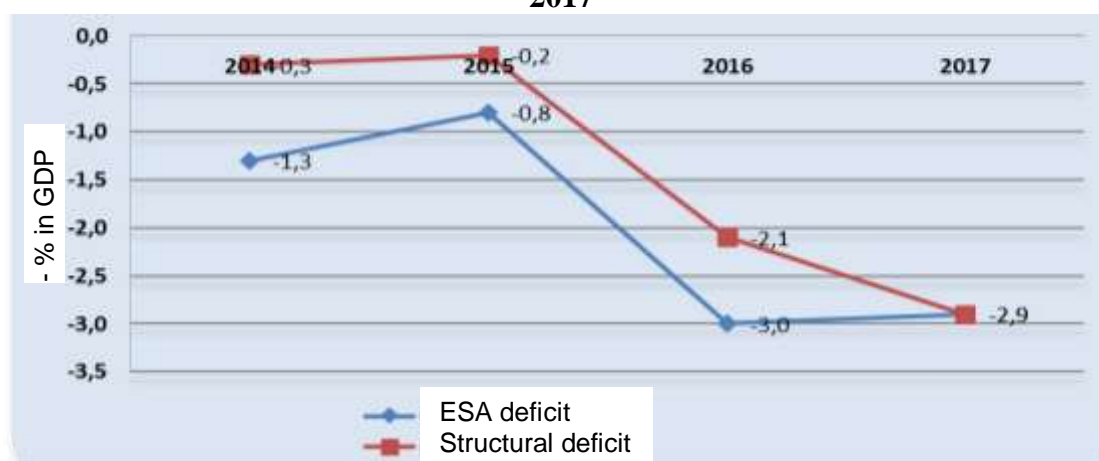
Romania's structural deficit increased to 2.9% of GDP in 2017, with a general budgetary deficit consolidated in decline compared to the one in 2016, respectively of 2.9% compared to 3.0%. The GDP gap compared to the output gap closed in 2017, from a negative value in 2016, leading to a cyclical component of the 0% of GDP budgetary deficit (Ministry of Public Finance, 2017).

Table no. 1. The Structural Deficit in Romania

	2014	2015	2016	2017
Structural Deficit	-0,3	-0,2	-2,1	-2,9

Source: Ministry of Public Finance, 2017.

Figure no. 1. The ESA Deficit and the Structural Deficit in Romania in 2014-2017



Source: Ministry of Public Finance, 2017.

In the reports issued by the National Bank of Romania no severe systemic risks are identified, but three high systemic risks are presented at a high level: (i) the risk regarding the deterioration of the investors' trust in emerging economies; (ii) the risk associated with the uncertainty regarding economic evolutions in the European Union, in particular those related to the sovereign debt situation in the euro area and to the UK exit from the EU process, and (iii) the risk of non-repayment of loans contracted by the non-government sector. The risk regarding the straining of the macroeconomic balances is assessed as having a moderate intensity and the risk from the real estate market is at a low level (NBR, 2018).

2.2. The Analysis of State Budget Revenues and Expenses in 2017

According to the final data, the execution of the general consolidated budget, during the period January 1 - December 31, 2017, ended with a cash deficit of 24.29 billion lei, respectively 2.83% of GDP, under the fixed target, respectively an estimated annual deficit of 24, 97 billion lei.

Compared to the previous year, the general budgetary deficit consolidated in 2017 increased, on a cash basis, as a percentage of GDP, by 0.43 percentage points from 2.40% in 2016 to 2.83%.

Table no. 2. Romania's cash budgetary deficit

	2016	2017	Differences 2017 - 2016
Deficit			
mil. lei	-18.304,3	-24.294,7	-5.990,4
- % in GDP	-2,40	-2,83	-0,43

Source: Ministry of Public Finance, 2017.

• **The revenues of the general consolidated budget**, in the year 2017, amounted to 251.9 billion lei, representing 29.3% of GDP and an achievement degree compared to the 98.0% annual estimates (Ministry of Public Finance, 2017).

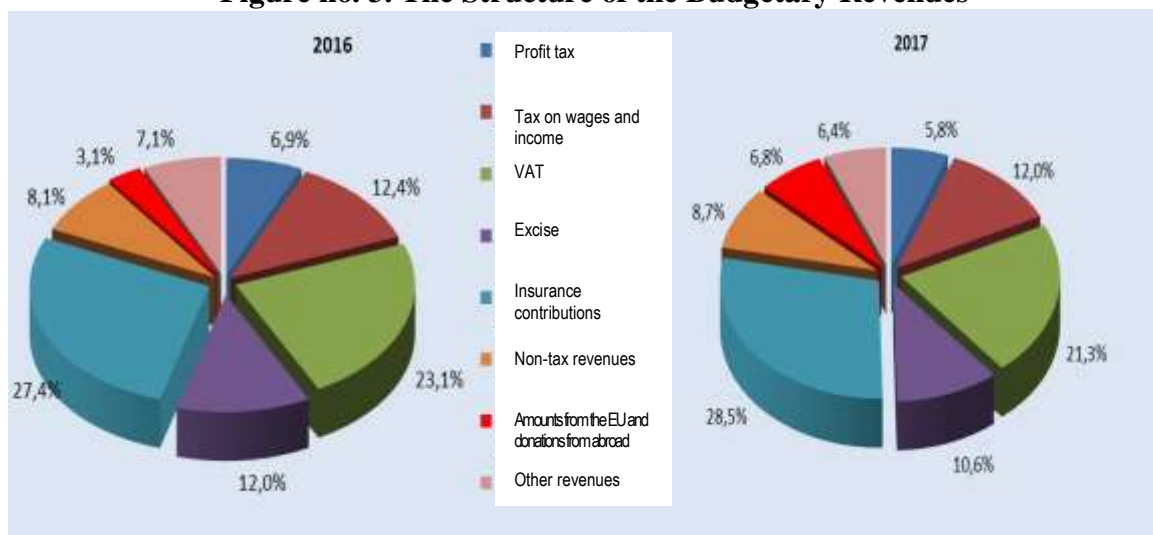
Figure no. 2. The Consolidated General Budget Revenues' Degree of Realisation in 2017



Source: Ministry of Public Finance, 2017.

The budget revenues were influenced by both the economic developments and the adopted tax policy decisions such as: raising the minimum wage, reducing the standard VAT rate, increasing the salaries for some categories of employees in the budgetary sector, increasing the retirement point, increasing of the non-taxable monthly limit on pension earnings from 1,000 lei to 2,000 lei and the retired people exemption from the payment of social health insurance contributions, as well as the modification of the excise quantum.

Figure no. 3. The Structure of the Budgetary Revenues



Source: Ministry of Public Finance, 2017.

Compared to the previous year, the consolidated general budget revenue in the year 2017 increased by 12.5% and as a percentage in GDP they decreased by 0.1 percentage points from 29.4% in 2016 to 29.3% in 2017.

The sums received from the European Union in the payments made account (including donations) in the year 2017 amounted to 17.2 billion Lei, 247.6% above the level recorded in 2016. Also, as a ratio in GDP, they registered a growth of 1.1 percentage points from 0.9% in 2016 to 2.0% in 2017.

• **The expenses of the general consolidated budget** amounted to 276.2 billion Lei in 2017, which represents 32.2% of GDP and a degree of achievement compared to the projected level of 98.0% (Ministry of Public Finance, 2017).

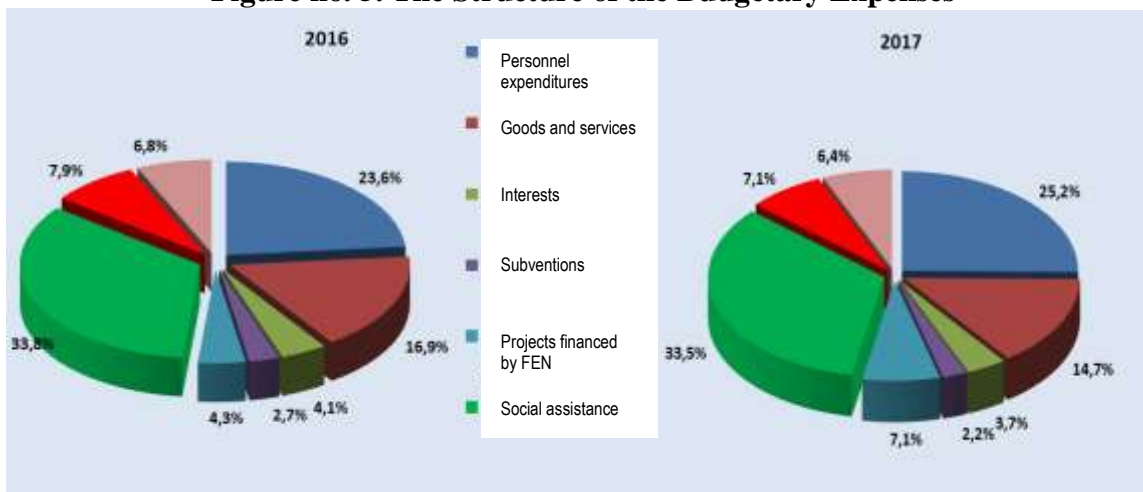
Figure no. 4. The Consolidated General Budget Revenues' Degree of Realisation in 2017



Source: Ministry of Public Finance, 2017.

From the point of view of the achievement degree of the annual program, the main categories of budgetary expenses registered the following evolutions: 100% staff expenses, 103.1% goods and services expenses, 97.7% interest expenses, 89.8% subvention expenses, social assistance expenses 99.1%, capital expenses 104%.

Figure no. 5. The Structure of the Budgetary Expenses



Source: Ministry of Public Finance, 2017.

Compared to the previous year, the consolidated general budget expenses increased by 14% and as a percentage of GDP by 0.4 percentage points from 31.8%, as it was in 2016, to 32.2% in 2017.

2.3. Sources of Financing the Budgetary Deficit in 2017

According to the EU methodology, the governmental debt was at 35.0% of GDP on 31 December 2017, decreasing from 37.4% of GDP as it was at the end of 2016, below the level of 40% of GDP set by Law no. 5/2017 to approve the levels of some indicators specified in the fiscal-budgetary framework for 2017. Out of the governmental debt, on the 31st of December 2017, internal debt represented 18.0% of GDP and external debt represented 17.0% of GDP.

In 2017, financing the budgetary deficit was mainly accomplished through internal sources through issues of state titles launched on the internal market and in addition from external sources. The sources needed to refinance the governmental public debt were provided by the markets on which these debts were issued and by the financial backup currency available to the MPF, which at the end of 2017 covered 3.8 months of the necessary gross financing.

The debt instruments used in 2017 to finance the budgetary deficit and to refinance public debt were (Ministry of Public Finance, Budget Implementation Report 2017):

- The state title issues denominated in lei, on the internal market, amounting to 39.8 billion Lei. Thus, treasury certificates with a due date of up to 1 year in the amount of 10.9 billion Lei and state obligations of the type benchmark 28.9 billion Lei, according to the announced calendar.

- State title issues denominated in euro on the internal market, amounting for EUR 340 million.

- Issues of Euro-obligation launched on the foreign capital markets. In 2017, MFP attracted EUR 2.75 billion from foreign markets. Thus, on the 19th of April 2017, MFP attracted EUR 1.75 billion through a Euro-obligation issue in euro in two tranches, of which EUR 1 billion through a new issue of a 10-year maturity, a 2,375% coupon and 750 EUR million by reopening the issue launched in October 2015, with the initial maturity of 20 years, a 3.875% coupon. On the 10th of October 2017, the 10-year maturity euro-obligation issue launched in April 2017 with a coupon of 2,375% was reopened for EUR 1 billion.

3. Perspectives on the State Budget Deficit

If we address to the EU member states, the economic recovery has manifested itself in all Member States, but it has been slow, being supported by factors such as the falling in the oil prices, flexible monetary policy and the relatively low external value of the euro. It is estimated that the economic growth pace in Europe will remain moderate, the factors favoring the growth being the decrease of unemployment and the increase of private consumption, but, in contrast, there are some obstacles or even the loosening of other favorable factors is anticipated.

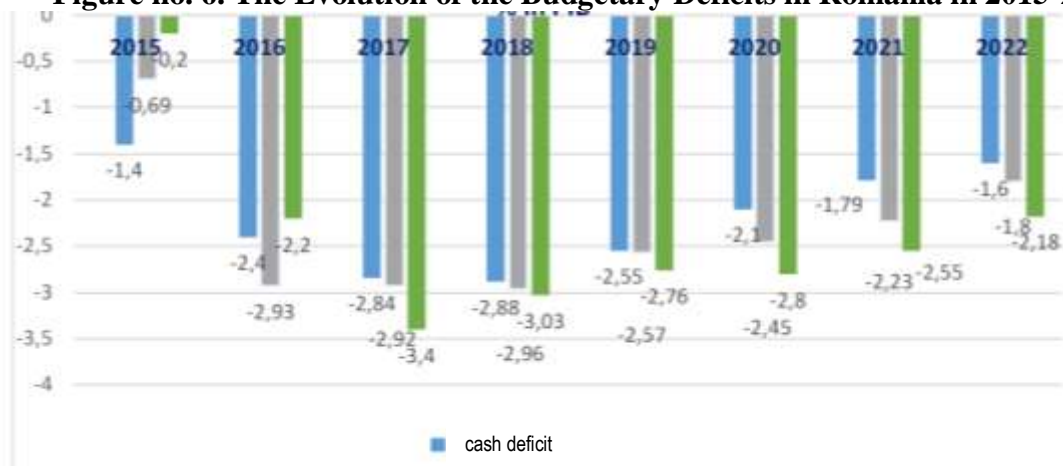
Considering the evolution of the economic growth potential for the period 2019-2021, it is estimated that the Romanian economy will continue the sustained growth, and a growth of 5.4% annually of the internal gross product being possible, in average (Ministry of Public Finance, 2019b).

The budgetary planning for the years 2019 -2021 was based on the fiscal relaxation measures started in the period 2015-2016 in order to stimulate the economic growth (the new fiscal code and salary increases and some social assistance rights) and they were continued by the normative acts adopted in the year 2017 which regulated measures in the field of salaries of the staff in the budgetary sector, the legislation in the field of social rights, the legislation in the retirement field, with additional impact on staff and social assistance expenses implemented in 2018, but the fiscal budgetary measures also taken

during the year 2018, which will influence the macroeconomic framework and the budgetary indicators on the horizon 2019-2021.

Under these circumstances, the budget revenues projected for 2019 represent 33.51% of GDP, 32.23% in 2020, and in the year 2021 it will represent 31.97% of GDP, a development determined by the macroeconomic indicators on the reference horizon, as well as the normative acts adopted so far, and the budget expenses projected for 2019 represent 36.28% of GDP, reaching 33.98% in 2021, decreasing in the reference horizon as a share of GDP.

Figure no. 6. The Evolution of the Budgetary Deficits in Romania in 2015-2022



Source: Ministry of Public Finance, 2019a.

The budgetary planning for 2019 and the estimations for 2020-2021 set the ESA budgetary deficit in 2019 at 2.78% of GDP, an adjustment of 0.18 percentage points as compared to 2018, which will continue on the 2020-2021 horizon, reaching 2.45% of GDP in 2021, respectively an adjustment of 0.33 percentage points compared to 2019 (MPF, *The Fiscal-budgetary strategy for 2019-2021*).

On the 2019-2021 horizon, the budgetary deficit policy continues to directly support the economic growth, staying within the margin allowed by the Stability and Growth Pact, respectively an ESA budgetary deficit of 3% of GDP.

In structural terms, it is estimated that the significant deviation registered in Romania in 2016 from the OTM set for Romania (1% of GDP) will be adjusted starting with 2021.

The deflection from OTM would occur under conditions of maintaining, over the entire planning horizon, a sustainable public debt level below 40% of GDP, with Romania registering, in 2017, a percentage of the public debt of 35.2%, decreasing compared to 2016 with 2.1 percentage points.

The moderate growth perspective of the governmental debt on medium-term and the perspective of maintaining it at a relatively stable and sustainable level is due to sustained economic growth and to some calculated budgetary deficits according to the EU methodology of up to 3.0% of GDP over the period 2019-2021.

The estimation of the structural budget balance, despite the fact that it reflects the fiscal position of an economy better, presents an uncertainty associated with its projection. Thus, the value of the structural balance is dependent on the output gap level, which is dependent on the potential GDP, an unobservable size that is often subject to more or less significant revisions depending on the revision of the statistical data and the methodology used.

4. Conclusions

The main effects of public expenses can be assimilated to the “crowding out” effect, which, in this case, refers to the diversion of the market resources phenomenon from those sectors that the market sees as profitable to areas considered by the state to be of interest. Also, a hidden cost of the budgetary deficit and public debt is represented by their influence on country rating, an indicative indicator for investors looking for business opportunities.

Taking into account the current conditions, when Romania tries to define its role and place in the world, when the identification and encouragement of those branches and sub-branches of the national economy that can be developed within the world economy is desired, it is necessary to use fiscal levers in concordance with the requirements of the European Union and the other macroeconomic policies that can be adopted to overcome the current economic situation should be taken into account. Thus, there is famous theory stating that, during the crisis period, it is preferable to ensure an increase in the budgetary expenses, with the fixed objective of contributing to the revival of economic activity, the effects being reflected in the increase of the workforce and the reduction of the unemployment.

The economic growth model needs to be reviewed in the light of the experience of the past years in which the economic growth in our country was based on consumption, a situation that did not allow a sustainable economic development. For this reason, another orientation based on investment in the sectors with high added value is needed.

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MATERIALITY IN A MISSION TO REVIEW THE HISTORICAL FINANCIAL STATEMENTS

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Abstract: *Accounting is a branch of the economy that is part of the social sciences. In this sense, it comes to support the society, aiming to offer the best services for the good development of society. Financial audit also is a part of this branch of social sciences, accompanying in various forms the field of accounting over time, with the initial aim of verifying the veracity of the work carried out by the persons involved in accounting, and then, in time, the purpose of the financial audit has changed, providing today to the participants in economic activities a high degree of confidence about the information provided by the financial statements. In the financial audit, auditors can carry out several types of missions, providing two types of insurance, either reasonable or limited, or even no type of insurance. In this case, a mission to review historical financial statements by an auditor may provide only limited assurance to users. The materiality calculated in this assignment provides a value through which it may reduce the risk that information in the financial statements will contain material misstatements.*

Key words: *audit, review mission, materiality, historical financial statements.*

JEL Classification: *M42.*

1. Introduction

The audit increases the confidence of participants in economic activities in the information provided by entities through financial statements. In the case of statutory audit, it is implemented following a legal obligation, respectively by all public interest entities and by the entities that have this obligation following the fulfillment of the criteria set out by the Order of the Minister of Public Finance no. 1802/2014, with subsequent amendments and completions. In the financial audit there is the possibility of auditing the financial statements also by the entities that do not meet the criteria set out above, and in order to increase the confidence of final users of the information provided by their financial statements, they have the opportunity to audit the historical financial statements, which can offer only limited assurance to users, and not a reasonable one, as in the case of statutory audit.

Auditing is a large-scale investigation of processes, systems, information, products, etc. existing within the organization or disseminated by it. The result of the activity is established naturally in a range of qualified points of view, formulated by specialists from different fields of activity, so that a general rating can be established (Domnişoru, 2011, p. 14).

Under the conceptual framework, there are two kinds of assurance missions that can be performed by a practitioner: a reasonable assurance engagement and a limited assurance assignment. The objective of a reasonable assurance engagement is to reduce the risk of the assurance engagement to an acceptably low level under the terms of a mission as a basis for the practitioner to express his conclusions in a positive form. The purpose of a limited assurance engagement is to reduce the risk of the assurance engagement to an acceptable level under the terms of the engagement, but greater than that of the reasonable assurance engagement, and it is therefore a basis for the practitioner to express the conclusions in a negative form (Socol, 2017, p. 24).

The review of historical financial statements is a limited assurance engagement. In a review of financial statements, the practitioner expresses a conclusion aimed at enhancing the confidence of the users concerned regarding the preparation of the financial statements of an entity in accordance with an applicable financial reporting framework. The practitioner's conclusion is based on obtaining limited assurance by the practitioner. The

practitioner's report includes a description of the nature of a review mission to provide readers with the context of the report which allows the understanding of the conclusion. The practitioner mainly conducts interviews and analytical procedures to obtain sufficient and adequate evidence as the basis for the conclusion on the financial statements as a whole. If the practitioner becomes aware of an issue that causes him to believe that the financial statements can be materially misstated, the practitioner conceives and performs additional procedures that are considered appropriate to the circumstances in order to be able to draw a conclusion on the financial statements.

According to ISRE 2400, the goals of the practitioner in a review of the financial statements are (IAASB, IFAC, CAFR, Vol. II, ISRE 2400. 5-8, ISRE 2400.14, 2016, pp.3-5):

- Obtaining limited assurance, primarily by conducting interviews and analytical procedures, as to the extent to which the financial statements as a whole are free from material misstatement, thus enabling them to express a conclusion if he became aware of the issues that determine it to believe that the financial statements are not prepared in all material respects in line with an applicable financial reporting framework;

- Reporting on financial statements as a whole and communicating, as required by ISRE 2400.

Materiality is a basic instrument used in the process of auditing financial statements, its value is determined by the auditor through applying professional judgment on some financial statement indicators, based on general information about the work performed by the audited entity. Through this value, the auditor has the ability to identify those items that may contain material misstatements due to fraud or error.

The purpose of this paper is to present general information regarding materiality and to highlight how it is determined in the case of a review mission of historical financial statements.

2. Methodology of scientific research

In order to achieve the purpose of the present paper, at the basis of the applied scientific methodology is the presentation from a theoretical point of view on the general aspects regarding materiality and those related to the review mission of the historical financial statements, through the analysis of the specialized literature, and then the presentation from a practical point of view of a case study on determining materiality in a review mission of historical financial statements.

3. Using materiality in a mission to review historical financial statements

Review missions of historical financial statements may only provide limited assurance regarding the possibility that the information provided by the financial statements may contain material misstatement due to fraud or error. As in audits that provide reasonable assurance, the auditor uses materiality as the primary tool to identify possible misstatements in that information.

In general terms, a financial-accounting problem, ultimately an economic one, can be considered significant if its knowledge or ignorance could influence the perception of the user of the financial statements or the audit report. In other words, the information is significant if its omission or erroneous declaration could influence the economic decisions of users taken on the basis of the financial statements. Materiality represents the relative importance of the element or error judged in the specific circumstances of the omission or misstatement. Thus, materiality is rather a limit, rather than providing a primary qualitative attribute that information must have in order to be useful. (Domnişoru, 2011, pp. 207-208)

When preparing the audit plan and on the occasion of its subsequent modification, the auditor takes into account those specific account balances and those classes of transactions that are significant and need to be further examined. Depending on the materiality level established, the auditor selects audit procedures or procedures combinations to ensure a reduction in audit risk to an acceptable level. There is an inverse relationship between materiality and the level of audit risk. The higher the value of materiality, the lower the audit risk and vice versa. If the auditor establishes a low level of materiality, it is likely that certain distortions will become significant, exceed this threshold and hence increase the audit risk. To reduce auditing risk, the auditor extends control tests (which reduce control risk) and tests on details (which reduce the risk of non-detection), thereby increases the amount of audit evidence and confidence in the content of the financial statements. The establishment of the preliminary level of materiality is made both at the level of the financial statements as a whole, as well as at the level of categories of transactions or groups of accounts (Oprean, Popa and Lenghel, 2007, pp.205-206).

For determining the level of materiality, the financial auditor must (Dănescu, 2007, p.53):

- Identify the user to whom they are addressed;
- Establish links between the information he provides and the decision-making process;
- Know what decisions users will take based on audited financial statements

Determining materiality involves the exercise of professional reasoning. A percentage is often applied to a benchmark chosen as the starting point for determining materiality for the financial statements as a whole. Factors that may affect the identification of an appropriate benchmark include: elements of financial statements (for example, assets, liabilities, equity, income, expenses) if there are elements that users of an entity's financial statements tend to focus on, the nature of the entity, the ownership structure of the entity and the way it is funded, and the relative volatility of the benchmark. Examples of benchmarks that may be appropriate depending on the circumstances of the entity include reported income categories, such as profit before tax, total income, gross profit and total expenditure, total equity or net asset value. Profit before tax from continuing operations is often used for profit-making entities. When profit before tax from continuing operations is volatile, other benchmarks may be more appropriate, such as gross profit or total revenue (IAASB, IFAC, CAFR, 2016, pp. 341-342).

There is another important notion, namely the trivial error, the clearly insignificant error. All estimated/identified errors that are less than the trivial error (after their extrapolation to the population) are ignored by the practitioner and can not significantly affect the financial statements or other reports or situations that are the subject of the mission. Amounts above this level are reported and discussed with the client's management, and if, for example, it is a review mission, it is required to correct those identified misstatements (Păunescu and Radu, 2018, p. 62).

Thus, materiality provides the auditor with a framework through which it can identify those information from financial statements that may be erroneous or even fraudulent.

4. Case study on determining materiality in a review mission of historical financial statements

The entity S.C. ALFA S.R.L. carries out the review of the historical financial statements of the S.C. BETA S.A. entity. This is the second year in which S.C. ALFA S.R.L. reviews the financial statements of S.C. BETA S.A. In the previous financial year, the conclusion of the report was unmodified, and nothing drew the auditor's attention to the

fact that the financial statements could be materially misstated. As in the previous year, in the initial phase of the audit, the risks analyzed are small and all the indicators analyzed are positive and are increasing compared to the previous financial years.

The object of S.C. BETA S.A.'s activity is *Processing and preserving meat*.

The S.C. BETA S.A. entity is not listed on the stock exchange and the general reporting framework applied by it is Order of the Minister of Public Finance no. 1802/2014, the entity not being required to audit their financial statements.

The entity of S.C. BETA S.A., being a joint stock company, its shareholders are made up of 5 shareholders, three of which hold 70% of the total shares, and two shareholders of the three are part of the entity's management team.

When contracting financial services for reviewing the financial statements, the S.C. BETA S.A. entity does not have commercial credits, but wants to contract such a loan in the coming year because it wants to acquire state-of-the-art equipment to increase its production capacity to those of the highest standards in the field, with the long-term goal of expanding the business and opening outlets to sell their own products in locations from across the region in which they operate.

In this respect, the management, the shareholders and, implicitly, the banking company that will grant the necessary credit, are mainly interested in the turnover registered by the entity and its evolution.

Turnover is one of the main indicators by which the entity monitors the growth of its business and the achievement of its objective.

Within Table no. 1 are presented the calculations made by the auditor in order to determine materiality.

Table no. 1. The determination of materiality

Indicators	The current exercise - lei	Previous exercise - lei
Total Assets (before Debt Reduction)	62.066.991	63.676.974
1%	620.670	636.770
2%	1.241.340	1.273.540
Turnover	266.096.159	269.361.750
1%	2.660.962	2.693.618
2%	5.321.923	5.387.235
Profit before tax	86.125.818	89.061.095
5%	4.306.291	4.453.055
10%	8.612.582	8.906.110
Materiality	5.321.923	
Trivial error	266.096	

In order to determine materiality, the auditor analyzed the following indicators: total assets, turnover and profit before tax.

The value of materiality determined is that related to the value of the turnover to 2% of its value, namely 5.321.923 lei.

Based on the judgment used by the auditor, there are several arguments in determining materiality.

In the case of the judgment of choosing the turnover indicator to determine the materiality value, the auditor relied on several arguments. First of all, the S.C. BETA S.A. entity wishes in the coming year to contract a commercial credit to increase its production capacity by acquiring state-of-the-art equipment with the aim of expanding its business. In this respect, the management, the shareholders and, thus, the banking company that will

grant the necessary credit, are mainly interested in the turnover registered by the entity and its evolution. Depending on this indicator, the entity monitors the increase in activity and the achievement of its objective.

In the case of the judgment of choosing the percentage of 2% applied to the turnover to determine the value of materiality, the auditor relied on several arguments. Firstly, the mission is one of reviewing the historical financial statements that offer a limited assurance to users. If the S.C. ALFA S.R.L. entity carried out an audit mission that provided reasonable assurance about the financial statements of S.C. BETA S.A., then the auditor would have chosen the percentage of 1% applied to the turnover. The mission is a recurring one, being the second year in which the audit entity performs the review mission of the financial statements of entity S.C. BETA S.A. For the previous financial year, the auditor did not identify significant misstatements in the financial statements. As in the previous financial year, the risks analyzed at the initial stage are small, the economic and financial indicators of the entity are positive and growing.

At the same time, in order to reduce the risk at a low level, the auditor also determines the trivial error, through which, within the mission, he analyzes only the elements that exceed this value and, depending on his judgment, he applies the analytical procedures in order to obtain sufficient and adequate evidence on the basis of which it can establish the conclusion of the financial statements review mission. According to the auditor's manual of procedures, the percentage of trivial error applied is 5% of the materiality value, so the value of the trivial error is 266.096.

As a review mission, the auditor will review the value of materiality, either during the mission, or as long as he considers it is necessary, but also at the end of the mission, and in doing so will make all the necessary adjustments.

Even in the case of a financial statement review mission that provides end-users with limited assurance, the auditor applies professional judgment to determine the materiality value, thereby reducing to a low level the likelihood that the financial statements will contain material misstatements.

5. Conclusions

In order to meet the diverse needs of society, financial audit provides several types of audit engagements that can be performed by auditors. These engagements can be classified by the type of assurance they can provide, respectively reasonable assurance, limited assurance or non-assurance. In a review of historical financial statements, the auditor may provide limited assurance to users that the information provided by the financial statements may contain errors or even frauds.

In the review missions of historical financial statements, as in an audit mission that provides reasonable assurance, materiality is a tool used by the auditor to identify what information may be affected by errors or frauds. The determination of this value is influenced, first of all, by the auditor's judgment, then by the general data regarding the work performed by the audited entity.

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ASSESSING THE RISK OF FRAUD IN THE INTERNAL AUDIT MISSION

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***Abstract:** The purpose of an internal audit is to provide advice and provide objective assurance on the effectiveness of the managerial internal control system by providing recommendations that ensure and contribute to improving the work of the public entity. By assessing systems, processes, high-risk activities in the presence of errors, fraud, irregularities or significant non-conformities. The reality shows that, depending on the determinants, synthesized in pressures, opportunities and attitudes, there are significant differences in the risk of fraud. Differences can be identified at different levels of the internal control system, areas of activity and in different times, between financial years. The risk of fraud and corruption must be managed by the entity's management but also regularly evaluated by the internal auditor in conducting audit engagements. The establishment, assessment of the control environment and the management of major risks with a high degree of fraud implies a concise mechanism of effective activities in the prevention of fraud and corruption at entity and process level. This article will outline the basics of fraud in the public entity, the assessment of fraud risk by internal auditors using non-statistical models and indicators.*

***Keywords:** internal audit, fraud risk, internal control, fraud, audit mission, entity.*

***JEL classification:** H83, G32, M42, C33.*

1. Introduction

The achievement of the managerial internal control process within the public entity ensures the optimal management of the resources according to the objectives of the public entity, based on the principles of good governance that are ensured through policies, procedures and the approach of associated risks. Effectively implemented rigorous control systems can significantly reduce the risk of fraud but cannot completely eliminate the risk of fraud occurring or remaining undetected. From the perspective of the concept of "fraud" we can define: data from several sources, such as:

- an illegal act characterized by the deceit, deception or betrayal of trust committed by a person or a public entity for the purpose of obtaining funds, goods / values or services, or evading payment, in order to secure a personal advantage in business, and "error" is defined as the irregularity of violation of the regulatory environment and relevant internal regulations of the public entity, consisting of an unintentional activity or omission which adversely affects or may adversely affect the activity of the public entity (The Law on Prevention and Combating Corruption No. 90-XVI of 25.04.2008);

- intentional and hidden actions committed both by parties / individuals inside and outside the entity. Actions are illegal and denote illegalities. The shares result in loss of funds of its entity, its value and reputation, any other illegal advantage obtained personally or by other parties (The Law on Prevention and Combating Corruption No. 90-XVI of 25.04.2008);

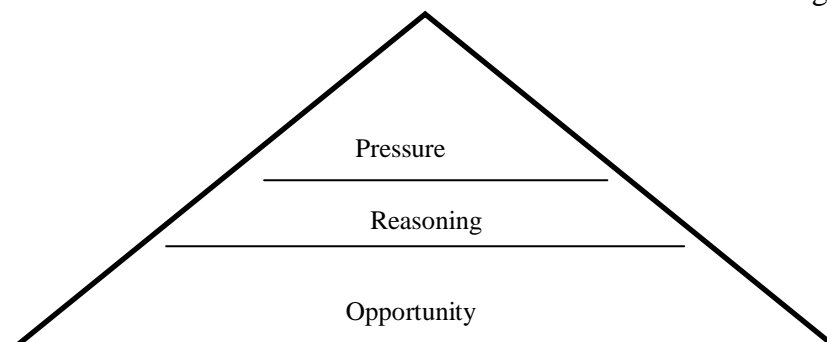
- distortions of financial statements that may result from fraud. The factor that distinguishes "fraud" is the extent to which the action behind the distortion of financial statements is intentional (International Audit Standard no. 240);

There are two types of intentional misstatements that are relevant to the auditor - misstatements resulting from fraudulent financial reporting and misstatements resulting from the misappropriation of assets. Although the auditor may suspect or, more rarely, identify fraud, the auditor does not make any legal determination as to whether the fraud

really took place (International Regulations on Quality Control, Auditing, Review, Other Insurance Services and Related Services, Volume 20).

Persons who commit fraud take advantage of weak internal controls or the possibility of neglecting controls and are motivated by the desire to obtain money or other unfair advantages.

The basic characteristics of fraud are identified on the basis of the "triangle of fraud", which are:



Source: Vona, 2008, p. 7.

- Opportunity - person who has access to the activity or manage a control procedure that allows for system fraud. The position of a person, as well as his responsibilities and authorization, also contribute to the possibility of committing fraud.
- Reasoning - a conscious decision of the perpetrator to place his needs above the needs of others. Ethical decision-making varies depending on person, culture, and experience.
- Pressure - are events taking place within the entity or in the individual's life. Pressures vary according to the global risk factor.

Six premises must be understood by applying the triangle of fraud concepts:

1. The three elements of fraud - rationalization, pressure and opportunity - coexist at different levels on the entity's staff.
2. Fraud elements will vary according to your personal circumstances.
3. The power of an element can cause a person to commit a fraudulent act.
4. Resistance of an element can eliminate the concern.
5. Identifying the three elements is easier than measuring the three elements.
6. Fraud risk factors may come from internal or external sources.

The three elements of fraud co-exist at different levels within the organization and influence each individual differently.

The power of one can cause a fraudulent or a combination of elements.

Perhaps the power of an element can eliminate fear of the perpetrator's detection. Therefore, the fraud assessment process must take account of fraud

From the above, one can conclude that there are various processes of fraud in an entity's internal control system. The most important is the decision-making culture in establishing internal procedures for assessing the vulnerability of the internal control environment through effective tools to identify, manage and report fraud risks.

2. Internal audit responsibility for fraud risk assessment in audit engagements

In fact, identifying the condition of fraud is easier than measuring the items. The audit process should be aware of the condition of fraud, but the classification of the three factors is extremely subjective. The auditor's response to the assessed risks of a process or whole system is based on evidence that it does not contain material misstatement due to

fraud or error. Due to the inherent limitations of an audit, there is an inevitable risk that some significant misstatements in the process or system will not be detected even if the audit is planned and performed in accordance with ISAs.

In the internal audit engagement, the purpose of the auditor is to establish the objectives that take into account the probability of significant errors, fraud, nonconformities and other risks (SNAI 2210), and in order to support his opinion, the auditor needs to obtain a number of sufficient evidence appropriate and to assess the influence of the risk of fraud on the distortion of the information presented in the documents analyzed. Expressing an opinion of the evidence obtained on the distortions is objective, independent and professional in accordance with the regulatory framework, which ensures the suspicions obtained under the most significant aspects.

Therefore, internal auditors have sufficient knowledge to assess the risk of fraud and how it is managed by the public entity by assessing the possibility of committing fraud acts and how the public entity manages the risk of fraud (Law on public internal financial control no. 229 from 23.09.2010).

Through reasonable assurance engagements, reasonable assurance is given that the internal control system, as a whole, does not contain material misstatement as a result of fraud or error. By objectives set at:

- the planning stage, the internal auditor identifies and assesses the risks of material misstatement of the internal control system and financial statements as a result of fraud;
- the execution stage, the internal auditors obtain sufficient and appropriate audit evidence about the assessed risks.

The auditor should apply a series of procedures to test the existence or absence of fraud risk at the level of the audited entity or process, depending on a range of financial and non-financial factors. According to the International Standard of Auditing (ISA) 240, the auditor should maintain professional skepticism throughout the audit, recognizing the possibility that material misstatement as a result of fraud may exist by disregarding the auditor's experience of honesty and integrity of management and responsible persons with the governance of the entity (International Audit Standard no. 240, p. 168).

The skepticism and professionalism of the auditor to identify possible fraud opportunities depends on the techniques and tools used in the audit engagement. The auditor's risk is more difficult to detect significant misstatement as a result of management fraud than employee fraud, given that management is frequently in a position to manipulate directly or indirectly. Thus, the auditor will have to show professional skepticism throughout the audit, to obtain reasonable assurance, to take into account the possibility for management to avoid controls and to recognize that audit procedures that are effective for detecting errors may not be effective for detecting fraud. The internal auditor should use procedures to detect such misstatements in identifying and assessing the risks of fraud.

An auditor conducting an audit in accordance with ISA will obtain reasonable assurance about misstatements by applying ISA 315, Identifying and Assessing Risks of Material Misstatement by Understanding Entity and its Environment and ISA 330.

The internal auditor must have sufficient knowledge to assess the risk of fraud and how it is managed by the public entity by assessing the possibility of fraudulent acts and how the public entity manages the risk of fraud (Law on public internal financial control no. 229 from 23.09.2010). The role of fraud detection audit, which is not the most important, is to analyze and test control tools.

Through reasonable assurance engagements, reasonable assurance will be given that the internal control system as a whole does not contain material misstatement as a result of fraud or error, thus contributing to the prevention or detection of subsequent fraud, *see*

Table nr. 1. Potential contributions by the internal auditor to prevent or detect fraud

Mission type	Prevention of fraud	Detection of fraud	Auditors role
Assurance mission	<ol style="list-style-type: none"> 1. Identify and evaluate all internal and external risks that could lead to fraud; 2. testing existing anti-fraud measures; 3. Creating a list of fraudulent practices detected in audits they have carried out to raise awareness of fraud. 	<ol style="list-style-type: none"> 1. Establishment of fraud indicators. 2. Methods and models for assessing fraud risks; 3. Analysis of internal documents and sensitive posts. 	<ol style="list-style-type: none"> 1. formulating recommendations for improving the internal regulatory framework in place to prevent fraud; 2. Reporting weaknesses or deficiencies; 3. formulating appropriate recommendations or corrective measures for management to avoid future fraud; 4. Reporting the weaknesses of the deficiencies and the vulnerability of the internal control environment.
Counseling mission	<ol style="list-style-type: none"> 1. Participating in the establishment of a national anti-fraud strategy within the entity by sharing their experience; 2. formulating recommendations for improving the internal normative acts in force; 3. advising on planned activities to identify corruption / fraud based on prior knowledge and experience. 	<ol style="list-style-type: none"> 1. Establishment of fraud indicators. 2. Analysis of internal documents and sensitive posts. 	<ol style="list-style-type: none"> 1. Reporting weaknesses or shortcomings to the competent authority, without delay or at least as soon as possible; 2. where appropriate, formulating recommendations to avoid future fraud; 3. formulating appropriate recommendations or corrective measures for management

Source: *elaborated by the author*

As outlined in ISA 240, the potential effects of inherent limitations are particularly important in the case of fraud resulting from fraud. The risk of not detecting significant misstatement as a result of fraud is greater than the risk of not detecting a misstatement resulting from the error. This is because fraud may involve sophisticated and carefully organized schemes designed to conceal, such as forgery, deliberate failure to record transactions, or intentional misrepresentation auditor addressed (International Regulations on Quality Control, Auditing, Review, Other Insurance Services and Related Services, Volume 20, p. 170).

Discrimination can be more difficult to detect when accompanied by complicity and a well-thought-out scheme in the application of the corrupt scheme.

Thus, the risk assessment of fraud will be done through the analysis of the vulnerability of the internal control environment to the management and reporting of financial resources as follows:

- in the case of expenditure - a deliberate act or omission involving:

(i) the use or submission of false or incorrect or incomplete statements or documents that has the effect of misappropriating or illegally holding funds from the public budget,

(ii) failure to disclose information that violates a specific obligation having the same effect

(iii) misappropriation of such funds for purposes other than those for which they were originally granted.

- Income - A deliberate act or omission involving:

(i) the use or disclosure of false or incorrect or incomplete statements or documents which has the effect of illicitly diminishing public resources,

(ii) failure to disclose information that violates a specific obligation having the same effect

(iii) misappropriation of a legally obtained benefit having the same effect.

An analysis of the risks of distortion and fraud will be made at:

- planning stage - identifying and assessing the risks of material misstatement of the internal control system and management of financial resources;

- the execution stage, the auditors are to obtain sufficient and appropriate audit evidence about the assessed risks.

The procedures applicable by auditors at different stages of the audit engagement to identify / determine the risk of fraud / corruption are:

- stage of knowledge process / activity, auditors will examine the process of identifying and managing the risks of fraud / corruption and if the existing internal control system, prevent and / or detect such risks.

- Identifying the factors leading to the risk of fraud is to accumulate information on the internal control system and analysis of performance measures of the public entity in the last few years to identify the presence of models inconsistent; this will identify weaknesses in the internal control that creates premises for fraud

- fraud / corruption risk assessment for auditors is an instrument for determining the probability of committing fraud / corruption and the consequences for the public entity when it / they will occur. Therefore, the fraud triangle is a component that also provides for risk assessment within the internal audit engagement, and when assessing the fraud risk factor, auditors should consider:

- the correlation between the opportunity to commit fraud and the ability to hide,

- ability and issues that affect employees,

- culture and ethics of the organization in decision-making and internal control.

During their internal audit described the evidence that can be considered as suspected fraud and the possibility of fraudulent financial reporting, based on indicators that may indicate possible risks of fraud / corruption that can be called "red flags" or "strong warning" and requiring immediate attention to detect possible fraud / corruption cases.

Indicators that may indicate possible fraud / corruption risks at the public entity level, such as (Decision of CC RM no. 8 of March 21, 2016):

- fraud indicators in financial reports;

- indicators of forged documents;

- Indicators in the field of contracting and procurement;

- assets ratios;

- indicators for corrupt payments;

- Indicators of conflicts of interest, etc.

Another classification of the indicators is in the Methodological Standards of Public Internal Audit establishes indicators such as:

A. Opportunity / circumstances:

- the type of public entity or subdivision
- complex organizational structures or permanent change
- inefficient driving control
- insufficient internal control
- Differences in financial transaction management
- lack of evidence or contradictory evidence

B. Rationale / justification

- neglecting the risks
- strange or deviant behavior

C. Performance and pressure incentives

- personal financial pressure on management and employees
- unfavorable relationships.

The internal audit activity must always comply with the relevant legislation, standards and instructions accepted at national and international level. By setting the limits of its competencies and its obligations towards the manager of the public entity and the foreign bodies. An auditor should be objective in clear and relevant evidence in identifying potential indications of suspicion of fraud and corruption.

The role of the auditor in detecting a potential fraud case is limited to detecting and recording suspicious circumstances, based on the facts established by the audit, including on-the-spot checks. Auditors should report / inform the hierarchically superior manager, the manager of the public entity or, as appropriate, the competent law enforcement authorities in writing of suspicious circumstances. This stage offers the possibility to carry out in-depth verifications or on-the-spot checks or involve other authorities, as the case may be. At the end of the process, the internal auditor will have to be able to reasonably decide whether or not there was an irregularity and, if so, to determine the financial remedies to be applied. They should also be able to decide whether a case should be referred to the judicial authorities and whether it is necessary to inform the manager of the public entity.

3. Models for risk assessment of fraud through statistical procedures

When sufficient evidence is obtained, the internal audit will use models based on the estimation of the survival function, such as the *Kaplan-Meier* estimator (Vona, 2008; Dobroțeanu and Dobroțeanu, 2002), also known as the product and / or service limit estimator and the Cox model.

Kaplan-Meier's estimator will estimate the survival function of the entity subject to financial fraud, processes, field of activity, and levels of financial leverage, and the Cox model will estimate the gambling function of processes that are subject to financial fraud (fraud risk assessment).

The combination of estimation and testing of the hazard function coefficients is achieved by predictive factors (entity's scope of activity and leverage levels).

It is a nonparametric statistic used to assess the risk of fraud. By the survival function $S(t)$ it is probable that a process or transaction will survive the moment t , i_e the probability that the fraud did not occur until the time t (Statistical Fraud Risk Assessment for Audit Opinion Based on Durable Models, Financial Audit No. 4, 2014, p. 22).

$$S(t) = P(T > t) = 1 - F(t) = \int_t^{\infty} f(x) dx$$

By the Kaplan-Meier estimator, $S_{(it)}$ at different time points, t_i can be defined as:

$$\hat{S}(t_i) = \prod_{t_{i-1} \leq t_i} (1 - \hat{m}_i)$$

where is the likelihood of knowing the fraud at the time of you t , and $(1 - \hat{m}_i)$ is the probability of not knowing the fraud. Graph by survival survival *curve graphically*.

In order to compare the probability of not subjecting the processes to fraud according to the object of activity and the level of the leverage, the functions / survival elements of the selected samples will be compared. Differences between them will be tested using the Log-Rank test statistic.

The Log-Rank test is:

$$U = \sum_i (O_i - E_i)$$

where: O_i – - the number of processes / transactions (fraud) observed

E_i – - the number of processes / transactions (fraud) estimated.

For the acceptance / rejection of the survival function matching assumption for the studied groups the calculated value of the Log-Rank test is compared with the theoretical value of the *Hi square* with $(k-1)$ degrees of freedom, where k is the number of samples.

The COX model estimates and tests the influence of the field of activity and the level of leverage on the risk of fraud (Statistical Fraud Risk Assessment for Audit Opinion Based on Durable Models, Financial Audit No. 4, 2014).

The Cox model allows the analysis of long-term data, similar to regression models. The Cox model estimates the hazard rate, $h(t)$, knowing the event studied by a linear combination of p explanatory factors (X_1, X_2, \dots, X_p).

The hazard rate can be defined in the form of:

$$h(t) = [h_0(t)]e^{b_0 + b_1X_1 + \dots + b_pX_p}$$

or in logarithmic form

$$\ln h(t) = \ln h_0(t) + b_0 + b_1X_1 + \dots + b_pX_p$$

where $h_0(t)$ represents the reference hazard rate, and b_i is the regression coefficient.

The rate of risk that the sample population contains fraudulent items during the observed period, under the influence of preachers (field of activity and financial leverage) can be estimated using a SPSS program (Statistical Fraud Risk Assessment for Audit Opinion Based on Durable Models, Financial Audit No. 4, 2014).

The final elements that conclude certain processes concern the hazard rate values at different time points, the regression coefficients associated with the preachers, and the degree of their statistical significance.

The coefficients of regression are also calculated as exponential (eb , where "e" is the basis of the natural logarithm).

The percentage change in the hazard rate, with a change of 1 unit of the predictor variable, is equal to $100(eb - 1)\%$.

Testing the significance of regression coefficients is based on the Wald test statistic and is calculated as follows:

$$Wald = \frac{b_j^2}{\sigma_{\hat{\beta}_j}^2}$$

where b_j represents the value of the regression coefficient, and the standard deviation of the parameter estimator $\hat{\beta}_j$.

Based on the Kaplan-Meier estimator and Cox model function, the time elapsed between the start of the first reporting and the occurrence of the fraud, the status of the

entity at the end of the analyzed period (fraudulent / unframed), the scope of activity and the financial leverage.

4. Conclusions

The primary responsibility for preventing and detecting fraud lies with the Managing Authorities. However, the success of the fight against fraud depends on the joint efforts of managing authorities, the internal auditor and other stakeholders. Each participant in the chain must fulfill its role in protecting the financial interests of the public entity.

Internal auditors can play an important role in preventing and detecting fraud at different levels. In most cases, the recommendations made by internal auditors to strengthen management and control systems will also have a positive impact on the prevention of fraud.

The main contributions to preventing and detecting fraud that internal auditors can make by conducting audit missions in the field of financial resource management and internal control environment.

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THE DEGREE OF ATOMICITY OF THE OWNERSHIP AND THE FIRM'S FINANCIAL PERFORMANCE - EVIDENCE FROM ROMANIA

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Rezumat: This paper examines the impact of the degree of concentration of the ownership on the firm's financial performance for a sample of 2,000 Romanian companies, in a time frame that range from 2009 to 2017. The effects of concentrated ownership on firm's performance is estimated using fixed effects model (FE), random effects model (RE) and a corrective model (PCSE) as methodology. The main results indicate the fact that between the financial performance, expressed by both indicators return on assets (ROA) and return on equity (ROE), and the variable which express the degree of ownership concentration is an inverse significant relationship. At the same time, other variables considered do not show significant differences in outcome: size, age, liquidity, leverage and tangibility negatively influence the financial performance of companies.

Key words: Concentrated ownership, financial performance, corporate governance, Romania.

JEL Classification: G32, G34, L25.

1. Introduction

From a structural point of view, the capital of a company can be held by a number of shareholders, with different holding rates. For the most part, shareholders may be individuals, other companies, institutions or state administrations. Usually, a company's shareholders are not directly involved in its management system. However, they are involved in the appointment of managers or board of directors to monitor the overall performance of the company. Starting from the reference study by Berle and Means (1932), in which it was highlighted that, for the most part, the activity of the big American companies is not managed by the persons who holding their ownership, the researchers in the corporate finance field were concerned about the effects that could be obtained from the separation of ownership from control.

Over time, the international researchers' concerns about the relationship between the shareholder structure and the financial performance of the company have led to mixed conclusions. Thus, the main studies conducted show that, given the presence of diversity within the shareholder structure, which may develop a divergence in pursuit and achievement of objectives, companies' financial performance may differ.

In this context, the purpose of this paper is to identify and explore the links between company ownership thru its degree of concentration and their financial performance. The paper is divided as follows: the first part of this paper summarizes highlights the bibliographic study of the relationship between the degree of the ownership concentration and the financial performance of the companies; the next part presents the methodology of econometric models considered, as well as the structure of the used data; the following part deals with the empirical study of the paper, showing the main results obtained in the analysis, respectively their interpretations and, last but not least, the last part presents the conclusions and final remarks of the study.

2. Literature review

Making a foray into literature, it can be noticed that, both through theoretical and empirical studies, researchers have focused their attention on the conflict related to the separation of ownership from control. As it is also stated in agent theory, the degree of the concentration of ownership is the key mechanism of corporate governance that helps alleviate conflicts arising from the separation of the two parties (Shleifer and Vishny,

1986). The concentration of ownership is represented by the proportion of shares held by a majority shareholder (Sanda et al., 2005). In other words, the concentration of ownership is measured by the fraction of shares held by the most significant shareholders (Singh and Gaur, 2009; Obiyo and Lenee, 2011; Karaca and Ekşi, 2012).

In the studies found in the literature, the dominant hypothesis refers to a direct relationship between the concentration of the ownership and the performance of the company. This positive effect of ownership concentration can be supported by the effectiveness of monitoring decision-making, which gives to the major shareholders more powerful incentives and decision-making power at a low cost. Grossman and Hart (1986) argue that shareholders, who have a more consistent stake in the company, show willingness and availability in terms of their active involvement in monitoring decisions.

On the other hand, in some studies, the authors claim the opposite, showing a negative effect of the degree of concentration of the ownership on the performance of the company through the expropriation effect. As La Porta, Lopez-de-Silanes, and Shleifer (1999) argue, the nature of agent theory issues and their effect varies significantly between companies with a higher concentration of ownership than those with dispersed one. Thus, in the presence of concentrated ownership, the conflict presented in the agent theory related to shareholders - managers can turn into a conflict related to majority shareholders - minority shareholders (Young et al., 2008; Bebchuk and Weisbach, 2010). In this way, the presence of a high degree of concentration in the ownership structure may cause a conflict of interest between the controlling shareholders (the majority) involved in the monitoring of the decision-making process and the minority shareholders (Filatotchev et al., 2013).

Despite the fact that a higher degree of concentration of shareholders may lead to the conflict between majority shareholders - minority shareholders, most empirical studies confirm that concentrated ownership may positively influence the performance of the company. This is due to the majority shareholders, who, through active involvement and monitoring, contribute to increasing the quality of the decision-making process, which in turn leads to the growth and maximization of the company's performance (Babić, Nikolić and Erić, 2013). However, the high level of concentrated ownership could become inefficient due to the fact that the decision-making process pursued only one goal, namely to maximize the value of the company, neglecting other important issues (Sánchez-Ballesta and Garcia-Meca, 2007). This conclusion is confirmed by the ambiguous and contradictory results of empirical studies that analyze the effects of the concentration of ownership on corporate performance (Thomsen and Pedersen, 2000; Thomsen, Pedersen and Kvist, 2006; Cheung and Wei, 2006; Perrini, Rossi and Rovetta, 2008).

3. Data and methodology

The impact of concentrated ownership on the financial performances of the largest active companies from Romania is analysed within a panel data framework. The sample comprised 2,000 Romanian companies, with data for a period of 9 years (2009-2017). The source of data is AMADEUS, platform database of Bureau van Dijk (2019). The following table shows the types of companies considered in the sample, classified according to the economic activities in the European Union (according to the NACE codes - Nomenclature statistique des activités économiques dans la Communauté européenne), as well as their percentage in the sample.

Table 1. Classification and proportion of companies according to economic activities

Economic activities	Number of companies	Percentage
A. Agriculture, forestry and fishing	49	2.45 %
B. Mining and quarrying	20	1 %
C. Manufacturing	631	31.55 %
D. Electricity, gas, steam and air conditioning supply	73	3.65 %
E. Water supply; sewerage; waste management and remediation activities	35	1.75 %
F. Construction	83	4.15 %
G. Wholesale and retail trade; repair of motor vehicles and motorcycles	701	35.05 %
H. Transporting and storage	132	6.6 %
I. Accommodation and food service activities	11	0.55 %
J. Information and communication	71	3.55 %
K. Financial and insurance activities	47	2.35 %
L. Real estate activities	18	0.9 %
M. Professional, scientific and technical activities	58	2.9 %
N. Administrative and support service activities	43	2.15 %
O. Public administration and defence; compulsory social security	1	0.05 %
Q. Human health and social work activities	10	0.5 %
R. Arts, entertainment and recreation	16	0.8 %
S. Other service activities	1	0.05 %
TOTAL	2.000	100 %

Source: Own processing

The dependent variable describes the financial performance. Past research identified a range of variables as potentially capturing firm performance. However, in this study, firm performance was measured by return on total assets (ROA) which represent the company's profitability related to its total assets and by return on equity (ROE) which denotes the return on the investment of the equity owners.

In order to capture the potential impact of concentrated ownership on financial performance, a dummy variable (CONC.3) was constructed. In line with most of the researchers, the variable takes the value 1 if the ownership of the companies is concentrated in the sense that the percentage holdings of the three largest shareholders (neglecting their identity) reach or exceed the threshold of 10% or the value 0 if the company's ownership is dispersed.

An appropriate set of control variables was introduced in the model, in line with the literature on financial performance determinants: firm size (SIZE) represents the annual absolute change of natural logarithm of total assets; firm age (AGE) defined as the natural logarithm of company age since establishment of the company until the certain year; liquidity (LIQID) measures the proportion of current assets to the company's current liabilities; leverage (LVRG) measures the proportion of funds provided by creditors to finance the firm's assets and tangibility (TANG) shows the proportion of fixed assets (tangible assets) over total assets.

Based on the analysis of the literature on corporate financial performance determinants, it was assumed that firms have their own intrinsic characteristics which could influence the financial performance and, therefore it was estimated a fixed effects (FE) model. It was also estimated a random effects (RE) model which imply a random variation across firms, uncorrelated to the explanatory variables. In order to decide between fixed effects and random effects empirical specifications, a Hausman test was employed which showed that fixed effects estimator should be preferred. Tests results were reported in the lower part of the estimation tables. In addition, it is important to identify the autocorrelation issue before the standard errors of the estimated coefficients to be computed. Wooldridge test for autocorrelation pointed out that first order autocorrelation could not be rejected.

Given the evidence of strong cross-sectional dependence, the presence of heteroscedasticity and autocorrelation, Prais-Winsten PCSE procedure was used as the baseline scenario. The procedure fits linear models when the residuals are not independent and identically distributed, allowing correcting cross-sectional dependence, heteroskedasticity and autocorrelation.

$$Y_{i,t} = \beta_0 + \beta_k X_{i,t} + \varepsilon_{i,t} \quad (1)$$

where Y represents dependent variable (ROA, ROE), β_0 represents the constant, β_k represents the estimated coefficients, X represents the independent and the control variables, $\varepsilon_{i,t}$ is the random component of the error, i - the companies, t - the time.

4. Results

The following table presents the results of the regressive analysis of the relationship between the financial performance of companies, the independent variable represented by the concentrated ownership and the control variables.

Table 2. Results of regression analysis

VARIABLES	ROA			ROE		
	(1) FE	(2) RE	(3) PCSE	(4) FE	(5) RE	(6) PCSE
CONC.3	1.999* (0.942)	1.949*** (0.223)	-1.263*** (0.448)	2.736*** (0.507)	3.249*** (0.465)	-3.095*** (0.717)
SIZE	0.651*** (0.101)	-0.118*** (0.063)	-0.929*** (0.224)	-0.580*** (0.211)	-2.334*** (0.167)	-4.088*** (0.485)
AGE	-1.136*** (0.187)	0.965*** (0.157)	-0.641*** (0.163)	2.412*** (0.392)	1.970*** (0.326)	-1.256*** (0.386)
LIQID	-0.014*** (0.002)	0.016** (0.007)	-0.029*** (0.011)	-0.032** (0.016)	-0.036** (0.017)	-0.0322** (0.016)
LVRG	-0.053*** (0.005)	-0.042*** (0.004)	-0.041*** (0.005)	0.001* (0.0003)	0.0008** (0.0003)	-0.0006* (0.0003)
TANG	-0.620*** (0.074)	-0.591*** (0.067)	-0.501*** (0.063)	-0.756*** (0.140)	-0.920*** (0.161)	-0.756*** (0.140)
Constant	-4.555*** (1.011)	3.355*** (0.837)	12.39*** (2.730)	19.13*** (2.113)	37.01*** (1.738)	55.95*** (5.599)
R-squared	0.017	0.013	0.019	0.004	0.006	0.060
Hausman test		223.92***			210.21***	
Pesaran CD test	24.82***			24.21***		

Wooldridge (F -test)	160.43***			287.26***		
Breusch-Pagan LM χ^2		7746.75***			7230.61***	
Observations	18000	18000	18000	18000	18000	18000
Companies	2000	2000	2000	2000	2000	2000

Source: Author's estimations

***, ** and * denote significance at 1%, 5% and 10% level of significance
Robust standard errors in parentheses

Analyzing the results synthesized in columns (3) and (6) of the table, it can be stated that there is a statistically significant negative relationship between the companies' concentrated ownership and their financial performance considering both financial performance measurement indicator, respectively the ROA and the ROE indicator. Few years ago, such a result was obtained by McConnell and Servaes (1990), Thomsen and Pedersen (2000), Welch (2003), Mahrt-Smith (2005), Shah and Hussain (2012), Tran et al. (2014), Wang and Shailer (2015) and Abdullah et al. (2019).

Thus, researchers support the fact that, in monitoring the determinants of financial performance, environmental influences are much more important than the structure / atomicity of ownership. Examining more closely these results, it can be noticed that the significance of the relationship between the concentration of the ownership and the performance of the companies leads to the conclusion that, under caeteris paribus condition, a change in the degree of atomicity of the companies' ownership is of considerable importance in the process of improvement of profitability. In other words, the financial performance of companies is influenced by the presence in the ownership structure of a small number of major shareholders or a larger number of minority shareholders. Regarding the Romanian economy, following the economic crisis, the ownership of the companies underwent changes in the sense that a tendency to disperse it appears. However, the changes mentioned in the shareholder structure have had a significant impact on the performance of the companies together with other factors in the low performances recorded in the post-crisis period.

Considering the control variables, it can be concluded that they are statistically significant at 1%. Thus, all of the control variables considered negatively affect the firm's financial performance. Overall, the model is statistically significant.

5. Conclusions

In conclusion, the ownership structure can influence the performance of the company in many ways. Differences in shareholder identity, different degrees of concentration, or unequal distribution of resources among shareholders affect their power and ability to control managers. Moreover, the wide range of shareholders and managers' objectives can influence the performance of the company in different ways.

The connection between the degree of ownership concentration and corporate performance has been the subject of an ongoing debate in the corporate finance literature, showing mixed results. The purpose of this study was to observe empirically whether the relationship between concentrated ownership and firm's financial performance exists. In this regard, this research contributes to the expansion of the literature on the impact of corporate governance from the perspective of the concentrated ownership on the financial performance, considering a sample of 2,000 Romanian companies, in a time frame that range from 2009 to 2017. The main results indicate the fact that between these two variables is an inverse relationship. At the same time, control variables considered do not

show significant differences in outcome: size, age, liquidity, leverage and tangibility negatively influence the financial performance of companies

Therefore, considering both theoretical contributions and practical implications, this research could be developed by integrating into the sample a variable indicating the ownership structure. In this way, the results of the research could outline more pertinent conclusions regarding the influence of the atomization degree of the ownership structure on the financial performances of the Romanian companies.

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ANALYSIS AND MANAGEMENT OF MACROECONOMIC RISKS OF THE REPUBLIC OF MOLDOVA

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***Abstract:** Macroeconomic risks have a complex effect on the level of business activity, liquidity and financial stability of the economy of the Republic of Moldova. Risks and vulnerabilities can develop endogenously within the financial system, but can also occur in the real economy and be transferred to the financial system. The systems approach determines the reform of the macroeconomic risk management system as part of the strategic planning process for the development of the banking sector, the financial system and the country as a whole. The methodology used to calculate indicators of the macroeconomic risks were based on IMF methodology. Authors conclude that Moldova's is lagging in terms of per capita income and weak social development emphasizes the need for faster and more comprehensive growth. However, the existence of an export-oriented economy development model, along with a weak financial system, makes the real sector vulnerable to external shocks and does not allow for a sustainable economic growth.*

***Key words:** macroeconomic risks, business activity, liquidity and financial stability, Moldova.*

***JEL Classification:** B22, B27, F4.*

1. Introduction

Macroeconomic risks have a complex effect on the level of business activity, liquidity and financial stability of the economy of the Republic of Moldova. Risks and vulnerabilities can develop endogenously within the financial system, but can also occur in the real economy and be transferred to the financial system. The systems approach determines the reform of the macroeconomic risk management system as part of the strategic planning process for the development of the banking sector, the financial system and the country as a whole. The size and likelihood of endogenous imbalances can be influenced by financial authorities through regulation, supervision, or adequate crisis management (IMF).

2. Scientific Research Methodology

The methodology used to calculate indicators of the macroeconomic risks was published in the following IMF publications:

- External debt statistics: guide for compilers and users (IMF, 2014);
- Balance of Payments Manual (IMF, 2014).

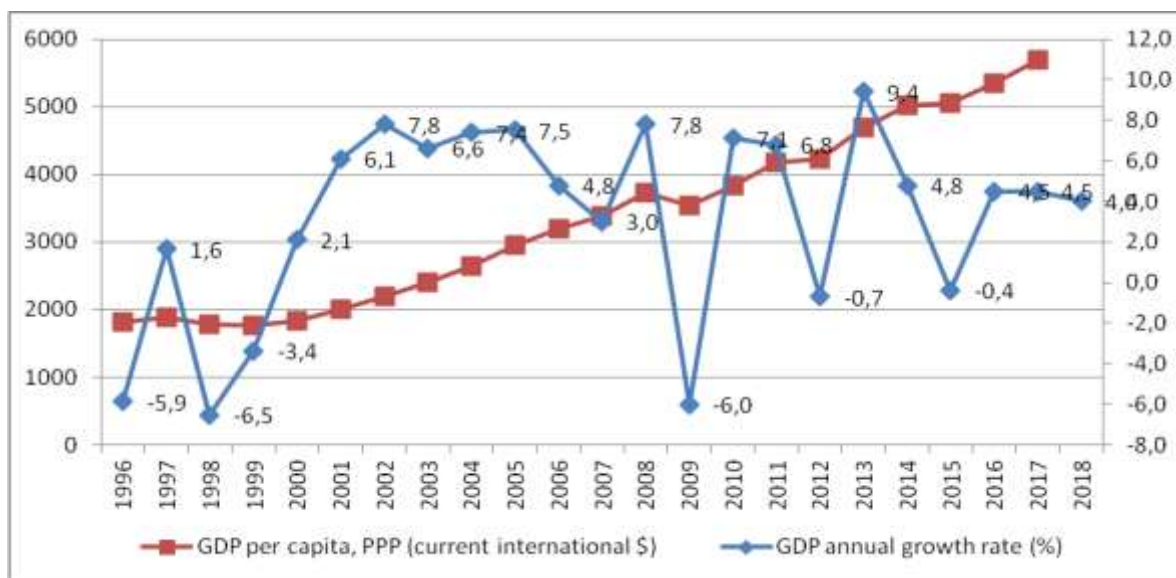
Based on the IMF's recommendations, "an analysis of the vulnerability of low-income countries should focus on the vulnerability of these countries in the event of a sharp fall in economic growth as a result of external shocks, such as abrupt changes in the terms of trade and fluctuations in external financial flows. These shocks can cause instability in the public sector and in the foreign economic sector, deterioration of the debt situation, tension in the banking system and a sharp drop in production. All these factors can lead to a significant decline in welfare and even social disruption" (IMF). **Risk management includes continuous inspection and analysis of potential risks of vulnerability** that may pose a threat to the financial system and economic activity, because different sources of risk tend to have different policy implications.

3. Analysis of macroeconomic risks of the Republic of Moldova

The main macroeconomic risks of the economy of the Republic of Moldova: *unstable rates of economic growth of the country; poverty; foreign economic dependence; change in exchange rates and inflation; level of political instability.*

By 2013, the economy of the Republic of Moldova had overcome the impact of the global economic crisis of 2008-2009.

Figure 1. GDP annual growth rate, (%), and per capita, 1996-2018, Republic of Moldova



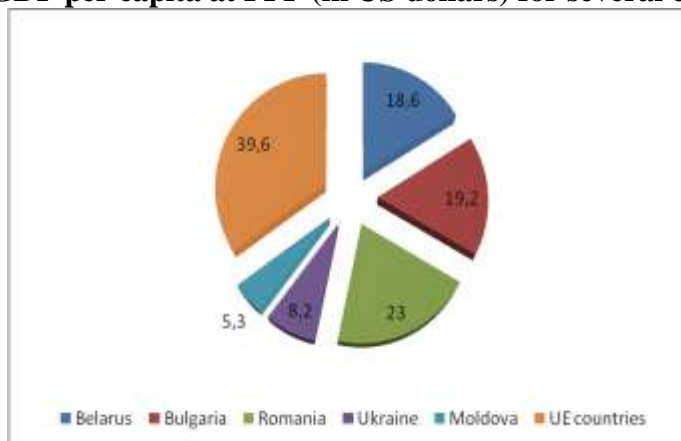
Source: elaborated by authors based on NBS data

Despite the sharp decline in economic growth in 2012, the average annual GDP growth in 2010-2013 exceeds 5%. In 2013, the economic growth rate increased to 9.4%. Financially, the banking crisis in 2014-2015 again led to a significant decline in GDP - 0.4%.

The instability of the growth process can also be detrimental to growth itself, which in turn can have a negative effect on poverty. The degree of inequality in a country itself can affect economic growth (Ames B., Brown W., Devarajan S.).

Despite the restoration of economic growth over the past 2 years (4.5%) and regional GDP growth per capita, the relative level of GDP per capita remains at extremely low levels. According to the national statistics of the Republic of Moldova, the minimum level of GDP per capita was registered at the end of 2004 (2028 USD), by 2013 it had increased to 5014 USD and was only 13% of the world average. The national level of GDP per capita is the lowest among European countries with economies in transition. According to the IMF (World Economic Outlook, April, 2018), Moldova belongs to the 10 poorest countries in Europe: Moldova, Ukraine, Albania, Bosnia and Herzegovina, Belarus, Macedonia, Serbia, Montenegro, Bulgaria and Romania.

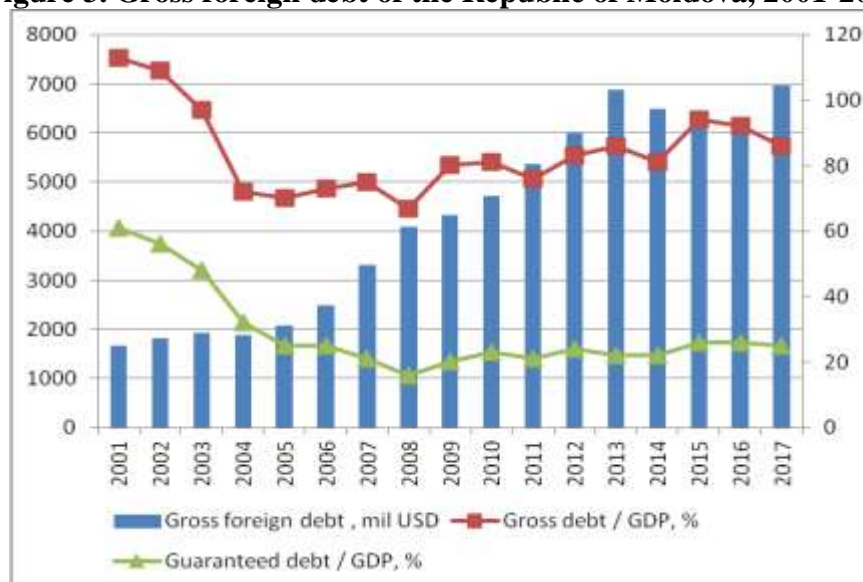
Figure 2. GDP per capita at PPP (in US dollars) for several countries, 2016



Source: elaborated by authors based on WB data

New, rising risks are closely related to the rapid integration of developing countries into international financial and capital markets. After the global economic crisis from 2008-2009, the growth of the global economy was mainly based not on creating new jobs and generating income through long-term investments in industrial development, but on building up public and private debt as a source of demand in the short term. Under these conditions, the growth of the total external debt of the Republic of Moldova, which accumulates not only the debt obligations of the general government sector, but also the debts of the private sector — banks and non-financial corporations — represents a potential danger to financial stability.

Figure 3. Gross foreign debt of the Republic of Moldova, 2001-2017



Source: elaborated by authors based on NBM and NBS data

At the international level, various indicators and thresholds have been set for assessing the risks of the external debt sustainability of countries. The sustainability of the external debt position is determined by comparing debt burden indicators to the HIPC targets. With the introduction of the HIPC Initiative in 1996, and its enhancement in 1999, the key indicators used to evaluate a country's debt sustainability are the following:

- present value of debt to exports (150%);

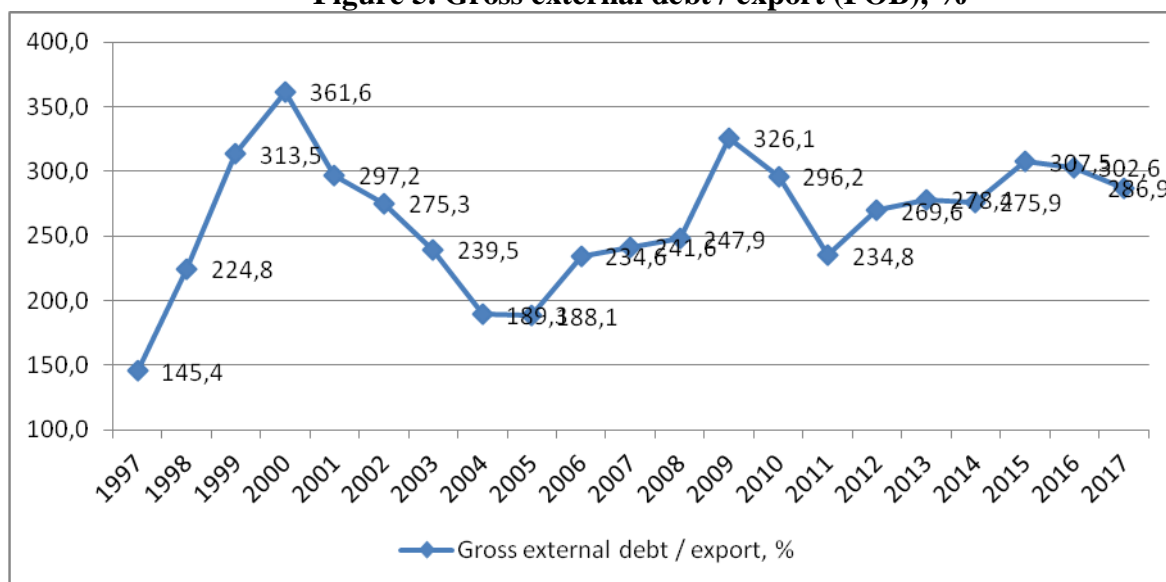
- present value of debt to domestic budget revenue (250%).

At present, when determining indicators of external debt sustainability, countries should be guided by a provision developed by the IMF: *External debt statistics- guide for compilers and users* (IMF, 2014). For developed countries and for countries seeking to join the EU, external debt sustainability is a measure of public debt that does not exceed 60% of GDP (Maastricht criteria).

In the Republic of Moldova, despite a significant level of gross external debt in relation to GDP, the level of debt guaranteed by the state remains at a level significantly below the threshold according to the Maastricht criteria. However, a general increase in the volume of private sector debt is likely to ultimately have a negative impact on the financial situation of the public sector, in particular, in the absence of national or international regulatory systems for resolving the problem of contingent public sector obligations on a systemic basis (UNCTAD). The main danger in the context of the acceptability of the level of external public debt lies in the ever-increasing number of cases of bankruptcy of companies and in the transfer of unacceptable corporate debt to the balance of the state. In addition, the economy of the Republic of Moldova is faced with growing difficulties due to over-indebtedness of customers and defaults in the microenterprise sector.

In terms of public debt, the economy of the Republic of Moldova meets the EU criterion, but according to the calculations of IMF, the ratio of total external debt reported to exports is at the level of critical values (150%).

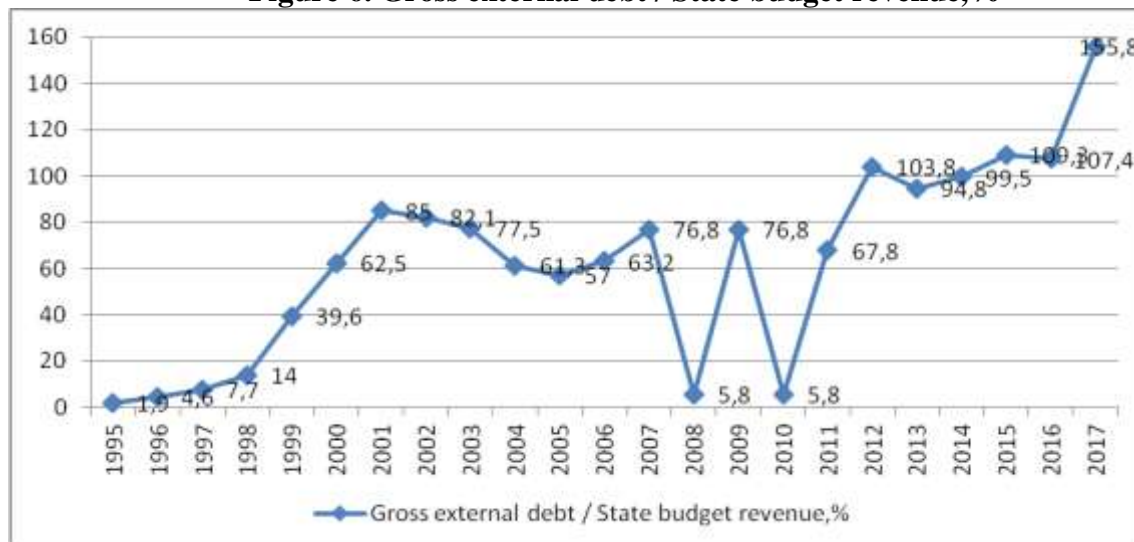
Figure 5. Gross external debt / export (FOB), %



Source: elaborated by authors based on BNM

The ratio of total external debt reported to exports gives an assessment of the country's solvency in the near future. The more important this indicator is the more foreign trade, currency and budget policy needs to be adjusted. Thus, the ratio of gross external debt of the Republic of Moldova to budget revenues increased significantly during the 2015 crisis, but remains below the thresholds defined by the IMF (250%).

Figure 6. Gross external debt / State budget revenue, %

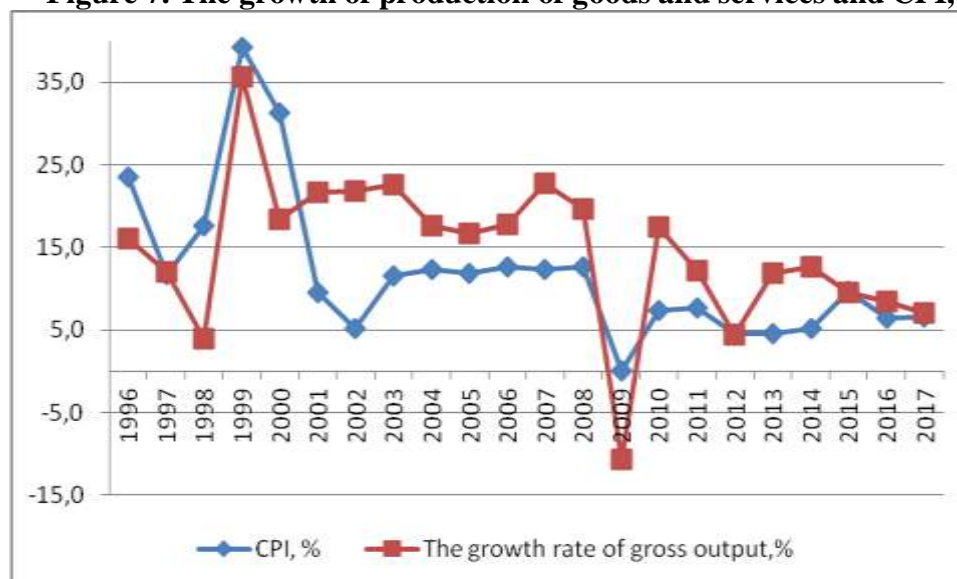


Source: elaborated by authors based on WB data

The state budget deficit in accordance with the Maastricht criteria should not exceed a threshold level of 3% of GDP. In Moldova, the state budget deficit meets the criteria for financial sustainability. However, since 2014, the level of the “net borrowing”¹ indicator has been growing, which shows a lack of financial capacity to be distributed to other sectors of the economy. According to BNM (NBM), this indicator in 2017 amounted to 132% compared to 2016 and indicates an increase in the debt burden on the budget.

The real types of macroeconomic risks in the Republic of Moldova are inflation and currency risks. Monetary regulation of BNM provides for maintaining the level of inflation within a variable interval of ± 1.5 pp from the target indicator of 5% and is aimed at increasing domestic demand. However, the average annual price increase (CPI) in 2000-2009 accounted for - 16.2%; in 2010-2011 - 7.5%; from 2012-2013 - 4.6%; in 2014 - 5.1%. In 2015, the CPI growth was 9.7%, significantly exceeding the stipulated target interval. Over the past 2 years, inflation has been maintained at 6.4–6.7%. Production factors and changes in market conditions, especially with low growth rates of labor productivity, a shortage of certain goods and resources, higher prices for imports as a result of rising prices on the world market etc lead to higher cost inflation. It can be mentioned that both types of inflation are related. Cost inflation usually leads to a reduction in lending to the real sector of the economy; the inflow of foreign investments decreases as a result of the flow of capital from the production sphere to the sphere of circulation. The processes of reducing inflation and raising production should go on simultaneously, as they condition each other.

¹ Net lending (+) / net borrowing (-) is equal to government revenues less expenses, minus net investments in non-financial assets. It is also equal to the net results of transactions in financial assets and liabilities. Net lending / net borrowing is a consolidated measure indicating the extent to which the government either provides financial resources to other sectors of the economy or abroad, or uses financial resources from other sectors of the economy or from abroad. Source: IMF, Government Finance Statistics Annual Report and data files

Figure 7. The growth of production of goods and services and CPI, in %

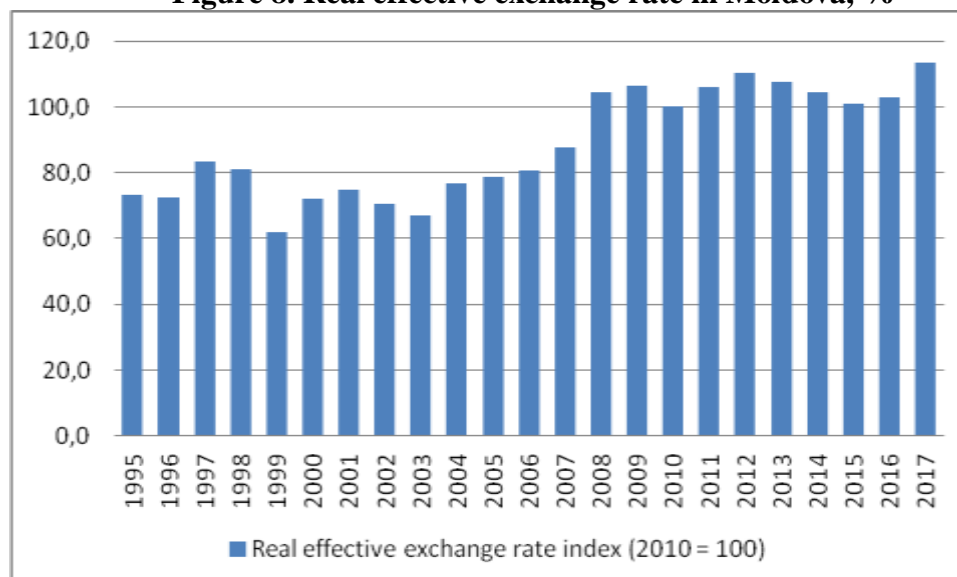
Source: <http://www.statistica.md>

From the analysis of data for countries with emerging markets it has been found that inflation has a non-linear effect on the indicator that defines the goals of sustainable development - the growth rate of GDP per capita. If the inflation rates take values higher than 6%, then a further increase in inflation leads to a drop in the growth rate of GDP per capita. Inflation below 6% does not have a statistically significant effect on economic growth (Shagas N.L., Bozhechkova A.V., Perevyshin Yu.N., Perevyshina EA, Tumanova EA, 2016). The growth of inflation estimated using the GDP deflator, shows periods of sharp decline in per capita income during periods of crisis in the economy of the Republic of Moldova. The GDP per capita indicator shows an assessment of the efficiency of the economy and production organization in terms of ensuring the level of material well-being of the population; this is a final indicator of the assessment of sustainable development and an indicator of the crisis state of the economy of the Republic of Moldova.

In terms of inflation, the purchasing power of the national currency is significantly reduced. In transition countries, in the long run, inflation by 50% depends on the nominal effective depreciation of the national currency, by 40% - on unit labor costs and 10% - on utility prices. Inflation is closely related to the dynamics of the money supply in circulation and the devaluation of the national currency (IMF, 2004). The available statistics on countries in transition indicates that the degree of transfer of the exchange rate to the consumer price index during the month is about 50% (Korhonen I., Wachtel P., 2005). The currency crisis of 2015 in the Republic of Moldova was reflected in:

- significant depreciation of the national currency;
- reducing the level of foreign exchange reserves of the country;
- loss of public confidence in the national currency;
- falling prices for domestic financial assets;
- reducing confidence in government institutions and banks.

As a result of the currency crisis, cash accumulation could not be used to invest in the real sector of the economy and led to the disruption of the financial system of the country and the financial instability of the economy. The growth of the real effective exchange rate in the Republic of Moldova indicates that the competitiveness of domestic goods on world markets is declining.

Figure 8. Real effective exchange rate in Moldova, %¹

Source: World Bank

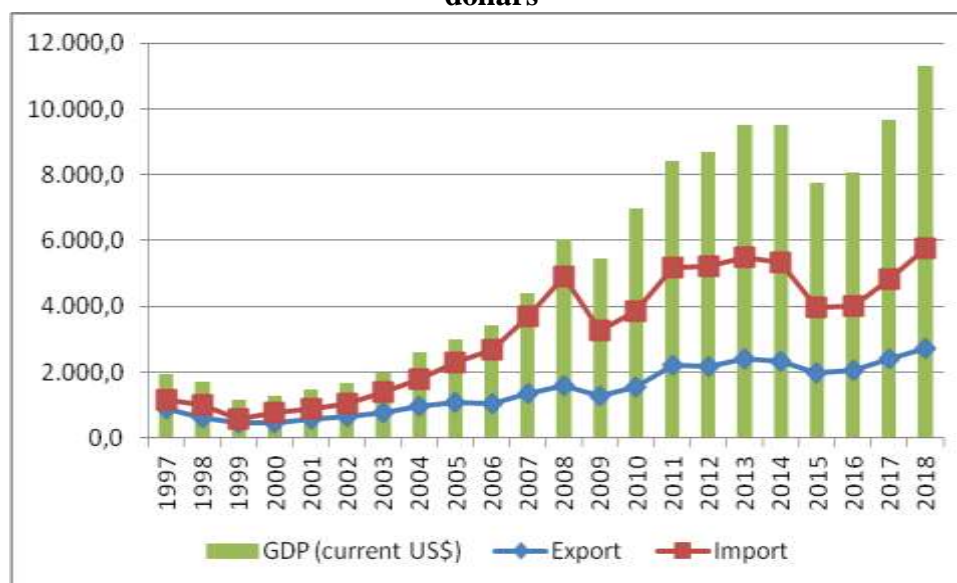
International experience shows that the dynamics of the real exchange rate on the eve of the crisis most often signals the appearance of a crisis. The main mechanism for the transmission of the crisis on the economy of the Republic of Moldova is represented by the fall in remittances. This fall was most clearly manifested during the crises of 2009 and 2015.

The existence of a model for the development of a national economy focused on the export of labor, along with a weak financial system of the Republic of Moldova, makes the real sector vulnerable to external shocks and does not allow achieving sustainable economic growth. External imbalance is reflected in the country's balance of payments. The growth of the balance of payments deficit in relation to GDP was registered a year before the crisis in 1998, in 2008, 2011. Before the financial and banking crisis of 2015, there was also an increase in the balance of payments deficit (Perciun, Petrova and Gribincea, 2018).

The main reason for the steady current account deficit of the balance of payments is associated with a decrease in the level of export opportunities in the economy of the Republic of Moldova; and an increase in imports due to dependence on energy imports and an increase in consumer demand stimulated by remittances from abroad. The tension in the external sector is due to the low level of export opportunities in the economy of the Republic of Moldova. The main share of export growth is agricultural raw materials (grain and sunflower seeds) and products on a give-and-take raw materials. Moldova's imports include a significant share of food and consumer goods.

¹ The real effective exchange rate is the nominal effective exchange rate divided by the price deflator or cost index.

Figure 9. Export-import and GDP of the Republic of Moldova, in million US dollars



Source: www.statistica.md

Import growth outpaces export growth in many countries. However, the trade balance deficit in Moldova is significant compared with other countries in transition. In 2016, the negative trade balance was of \$ 1.98 billion. In 2017, the negative trade balance increased to \$ 2.406 billion and its volume became equal to the volume of annual exports of goods.

The most significant impact on the competitiveness of the Moldovan economy is exerted by changes in external terms of trade. According to experts of the UNCTAD (2016), the terms of trade in the Republic of Moldova or the ratio of import and export prices are the worst compared with the indicators of the main trading partners of the Republic of Moldova. According to the data for 2016 the volume of exports in relation to GDP in the Republic of Moldova is 43.6%, and imports -71.8% of GDP (UNCTAD, 2016). The level of exports and imports to GDP in Romania is 41.3% and 42.3% respectively of GDP, in Russia -25.7% in exports and 20.5% of GDP in imports UNCTAD (2016). The deterioration in the terms of trade affected the fall in economic growth in 2009 and 2015. In 2015, the terms of trade ratio dropped to 97.9%, in 2016 it rose to 105.1% and, by 2017, fell slightly again to 103%.

4. Conclusions

The growth of the Moldovan economy is extremely vulnerable, as it is exposed to external risks from trading partners and global processes, as well as internal macroeconomic risks.

Moldova's is lagging in terms of per capita income and weak social development emphasizes the need for faster and more comprehensive growth. However, the existence of an export-oriented economy development model, along with a weak financial system, makes the real sector vulnerable to external shocks and does not allow for a sustainable economic growth. So, to manage economic growth becomes almost impossible. Contradictions of the interaction of macroeconomic and financial policies in the context of political instability can lead to the accumulation of a potential systemic risk.

For the effective implementation of risk management programs, it is important to track the performance of all sectors of the economy. At the same time, the assessment of

macroeconomic risks and forecasting crises are the theoretical basis for decision-making in politics and the economy, contributing to the minimization of negative processes. Especially important benchmarks for risk management are indicators of the sustainability of public finances, the stability of exchange rates, the sustainability of price levels defined in the Maastricht criteria for countries seeking economic and institutional convergence with EU countries.

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THE COSTS OF FISCAL AND BUDGETARY POLICIES FROM THE PERSPECTIVE OF SUSTAINABLE DEVELOPMENT

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Abstract: *The choice of the subject of this communication was based on the following considerations: fiscal and budgetary policies currently in place in Romania are not fully in line with long-term strategic objectives (sustainable development strategy at national and European level!); the mechanism for substantiating, adopting and implementing fiscal and / or fiscal policy measures in Romania does not clearly include elements for identifying costs and risks (especially those related to non-implementation of the sustainable development strategy); there is no full consensus on the implementation of long-term fiscal and budgetary policies beyond the electoral cycle, with a long-term development strategy (sustainable). The purpose of the communication is to identify and present some methods of determining the costs related to the non-application of the objectives of the sustainable development strategy, in the case of fiscal-budgetary policies in Romania.*

Keywords: *Sustainability of economic development, government costs, public policies.*

JEL Classification: *E62, H61, H72.*

1. Introduction

The choice of this research theme started from the following considerations:

- fiscal and budgetary policies currently in place in Romania are not fully in line with long-term strategic objectives (sustainable development strategy at national and European level!);

- the mechanism for substantiating, adopting and implementing fiscal and / or fiscal policy measures in Romania does not clearly include elements for identifying costs and risks (especially those related to non-implementation of the sustainable development strategy);

- there is no full consensus on the implementation of long-term fiscal and budgetary policies beyond the electoral cycle, with a long-term development strategy (sustainable).

The correlation of fiscal and budgetary policies with sustainable development objectives has emerged as a key political issue across Europe over the last few years, partly because the fiscal positions of many countries on the continent have been severely affected by the global financial and economic crisis, due to the recognition of the long-term fiscal costs of demographic change, especially the aging of the population, as well as to counteract the effects of climate change. Many of the new Member States of the European Union, including Romania, face major challenges to ensure the alignment of macroeconomic policies with sustainable development goals.

At first glance, the cost-benefit analysis in the application of fiscal policy measures in line with sustainable development goals seems to be a simple accounting exercise that involves comparing present and future, up-to-date and aggregate costs and benefits and choosing the project of interest public if the net present value is positive or the choice of the project with the highest net positive present value, when only one of the projects needs to be implemented (Văcărel, 2004, p.499).

In practice, however, the analysis involves several complex calculations, economists sometimes resorting to empirical methods of study. One of the issues of cost - benefit analysis is that aggregation of many cost - benefit components is sometimes intuitive, and for other components, even intuition can not suggest measurement methods.

If sustainable development is being discussed and a cost-benefit analysis is made, it is inevitable that the set of necessary macroeconomic policy measures is needed to implement it and, of course, what are the costs involved. In this case, measures in the field

of fiscal and budgetary policies (at least those involving legislative changes) should be accompanied (in fact!) By impact studies that directly present the resulting costs and benefits. Furthermore, measures in the fiscal and budgetary policy are often linked to electoral cycles and are not in line with medium- and long-term sustainable development objectives, which increases costs and risks for major future changes (meaning harmonization with sustainable development objectives).

2. Evaluation of measures included in the fiscal-budgetary policies from the perspective of sustainability

An essential factor for the success of the strategy to improve fiscal sustainability is the credibility of the measures adopted, the way in which the real economy responds to these measures. Measures to be taken include raising the tax base, including minimizing the underground economy and tax evasion, stimulating job growth and consumption, and so on. All these measures are taken in a broader context of the decision-making process (with materialization in the Governing Program, development strategy, government policies, concrete action plans and concrete measures) as can be seen from Figure 1.

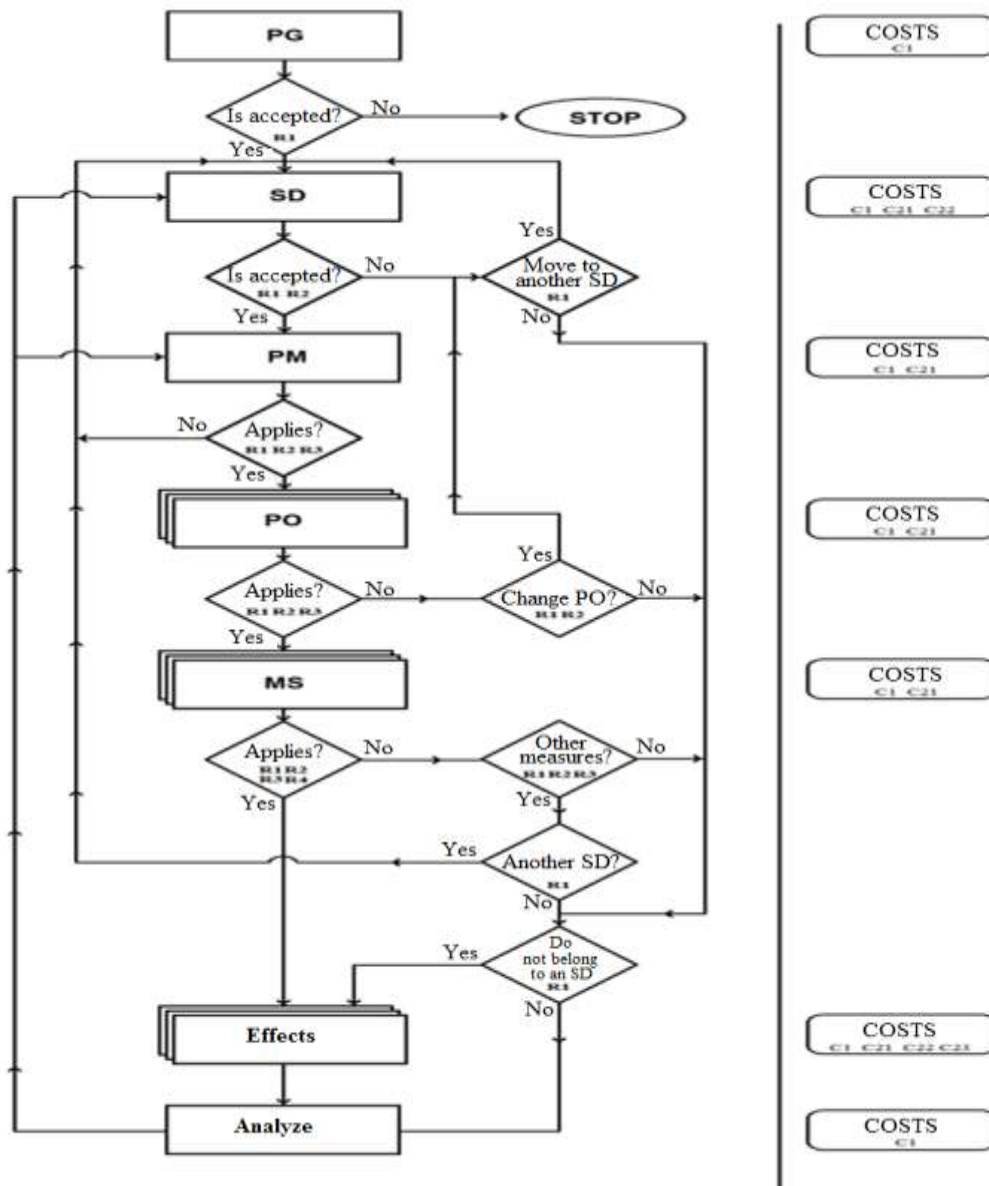
In the last few years some normative acts have been issued that oblige the state institutions with regulatory role to carry out the impact study of the legalized measures. Here we are H.G. no.775 / 2005 updated by H.G. no.523 / 2016 for the approval of the Regulation on the procedures for elaboration, monitoring and evaluation of public policies at central level or Law no.24 / 2000 updated by the Law no.194 / 2007 on the normative technical norms for the drafting of normative acts.

However, all these normative acts are not fully respected, in the sense that no impact studies are carried out or, if they are done, they are not made in a transparent way.

Also, regulatory measures, once adopted, are undergoing very short-term changes, which for the taxpayer ultimately means extra costs.

Ordinance no.114 / 2018 is a telling example in this respect. The fact that a quality impact study has not been carried out has led to many debates, criticisms, opinions showing the mistakes that have emerged in the way of setting new taxes on electricity, gas, telecoms and the banking system.

Figure no.1. Stages of decision-making



Legend

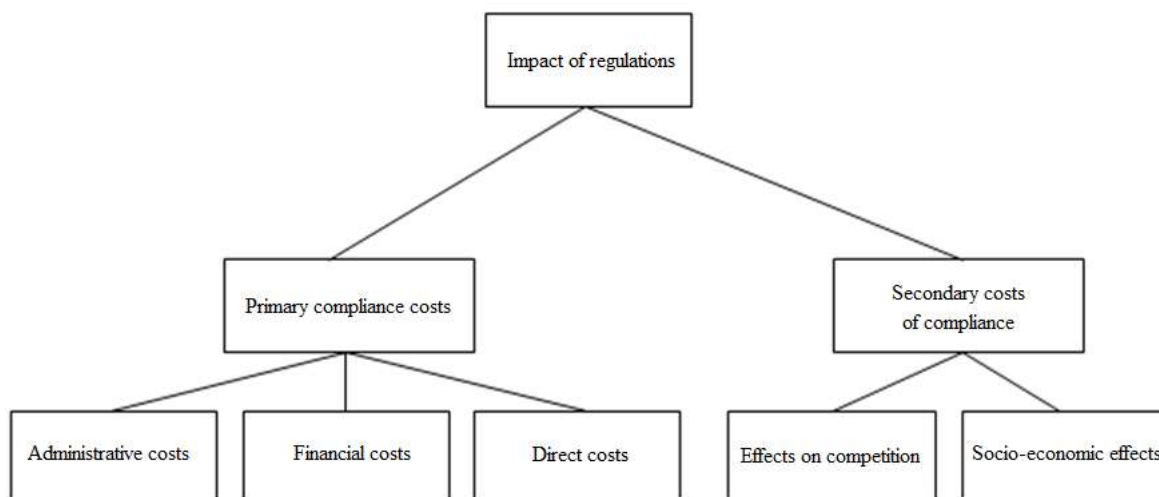
- PG – Governance program
- SD – Development strategy
- PM – Action plan
- PO – The mix of government policies
- MS – Policy enforcement measures
- C1 – Implementation costs
- C21- Subsequent correction costs to comply with the SD
- C22 – Subsequent costs of switching to another SD
- C23 – Correction costs (subsequent) that lead to deviations from the potential development strategy
- R1 – Risk of failure to implement PG
- R2 – Risk of non-implementation of SD
- R3 – Risk of PM failure
- R4 – Risk of non-implementation of measures

3. Quantitative evaluation methods of alternatives. Cost identification

Costs are classified into two main categories: financial costs (historical, accounting) and economic costs. The category chosen by those who formulate public policies depends on the perspective of the analysis. For public policies and legislative proposals that affect certain groups of society, such as business communities, retirees, mothers, etc., financial cost calculations will only be the first step. The next step will be to calculate economic costs. Economic costs are those financial or other costs that a proposal of public or legislative policy generates for certain groups of society. In cases where the legislative proposal does not affect groups of the company or if the impacts are insignificant, those who formulate public policies only calculate the impact on the state budget, that is, only the financial costs. Because costs can be structured by considering different perspectives, policymakers should be aware of possible mistakes if the same costs are included multiple times using different classifications. Double cost accounting and inaccurate results can be achieved.

There is a wide range of costing and calculation methods used. In general, costs are defined as the value of the resources that were used to implement a particular public policy. Identifying the costs of public policy or project is an essential step in an efficient alternative assessment process as well as the first step in delivering cost-benefit analysis. The impact of regulations can be represented as in the scheme below.

Figure no.2. A possible cost structure related to the implementation of governmental measures



The process of monitoring the cost of public policies should take into account the typology of these costs (OECD, 2001):

- direct administration costs - the cost of delivering a service or administering regulations;
- accounts of compliance of affected businesses or citizens - administrative, bureaucratic and capital costs;
- in indirect economies in general, such as environmental or social effects, diminishing competition, innovation and investment.

Financial costs

Financial costs, from the perspective of public policy impact analysis and regulatory issues, are in fact the financial resources from the state budget that are needed to implement a particular public policy or legislative proposals. The financial costs of public

policy need to be calculated and found in the draft strategy or public policy proposal. Often, the financial costs of these public policy documents are approximate calculations that have been elaborated in detail during the implementation phase when some public policy activities are included in the proposals for the annual budget of public authorities.

During the elaboration of the draft normative act, those who formulate public policies will take into account the financial costs according to Chapter 3 "Tax Impact on the State Budget and the Local Authorities" related to the substantiation note and will calculate them according to the economic classification of the budget state. With this classification, revenue and expenditure are divided according to the specific economic purpose.

Economic costs

The main components of economic costs

The general impact of public policy or legislative norms can not be emphasized simply by calculating the fiscal impact on the state budget. The impact is much broader, going beyond the fiscal impact on the state budget. They influence society in general, so also the economic aspects of public policy analysis must be taken into account. Economic costs are all costs incurred by the company as a result of an activity carried out under a particular public policy. From the perspective of society, economic costs consist of financial costs (state budget) and other costs imposed on members of society.

Economic costs = financial costs + group costs in the company (external costs)

External costs are created by negative externalities, ie negative effects and / or pressures generated by the implementation of public policy or legislative norms. It should be noted that beneficiaries may also have to bear costs because of the negative externalities they create.

The economic costs of the alternative are closely linked to the concept of opportunity cost, a very common concept used in the economy. Opportunity cost is the second best alternative from the insured benefit perspective, which could be implemented using the same budget resources. In the case of public policies, the opportunity cost will be expressed not in monetary terms but in the form of other benefits that can be obtained from the alternative use of funds. For example, the opportunity cost for building a new national library is the second best alternative, namely increasing the number of university scholarships. This transposition allows expression of the benefits of building the national library in the form of the benefits of the second best alternative (university scholarships) using the same budgetary resources needed to build the library.

Economic pressure imposed by legislation

Legislative activity of public authorities creates both positive and negative impacts on different groups of society. Therefore, in order to highlight the economic cost of a legislative activity, those who formulate public policies need to consider not only the fiscal impact on the state budget, but they also have to calculate the additional costs of legislation that apply to other groups of society, including for business communities. This information is useful for analyzing the social and economic impact of a particular legislative proposal. The following figure illustrates the distribution of costs imposed by legislation on different groups of society. Administrative compliance costs are costs for businesses that need to run to comply with information requirements imposed by central government law. Obligations of information are obligations arising from legislation, concerning the provision of information and data to the public sector. The first countries that began to measure the administrative burden are the United States and the U.K. Later, the

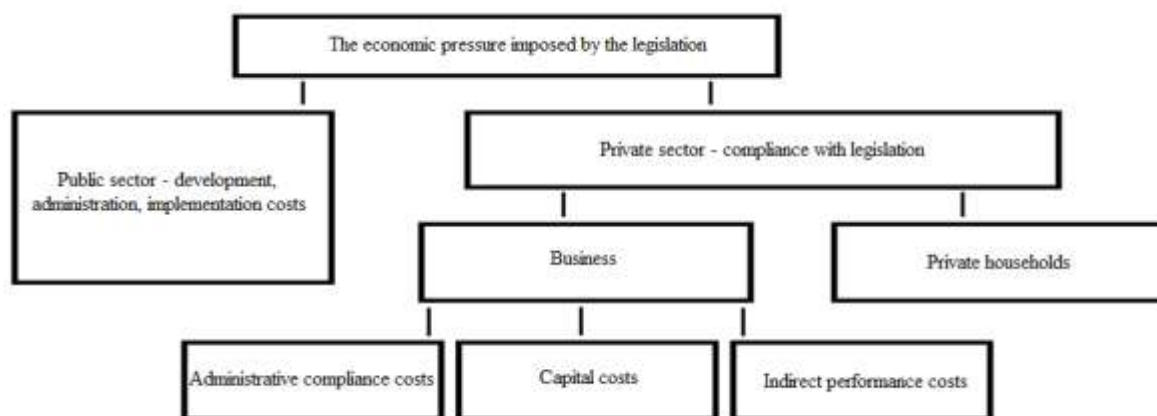
Netherlands has developed the standard cost modeling methodology that has gradually become popular in EU countries. Their methodology is based on the International Standard Cost Handbook developed by OECD countries¹.

If the legislative proposal creates cost pressure on households, it is necessary to assess how these costs affect different groups of the company. In such cases, formulators of public policies often collaborate with researchers because household surveys contain many data to be analyzed. As mentioned above, carrying out an impact assessment in the regulatory sphere and drafting the substantiation note for draft normative acts as well as financial costs should be included in Chapter 3 "Tax Impact on the State Budget and Local Authorities". Economic costs will be described in detail in Chapter 2 "Socio-Economic Impact". Section 2.2. "Impact on business environment" will contain the economic costs for companies. Section 2.3. "Social Implications" will be completed if the legislative proposal also includes compliance costs for private households. Total economic costs will be described in section 2.8. "Other information".

Calculation of compliance costs

In this case, we can take as an example the entry of a state into the Eurozone, which creates administrative pressure for both public institutions and private companies. However, this example is simplified, assuming there is a legislative requirement, only for companies, to move from the accounting system to the local currency to the euro accounting system (see figure below).

Figure no.3. Distribution of economic costs imposed by legislation



Costs for the State Treasury

After installing the new system, the State Treasury will recognize compliance with the new requirements. Although the State Treasury has sufficient office space for an additional number of employees, it does not have the necessary equipment, furnishings and consumables to enable them to carry out their work. The Treasury already has a system administrator within the standing staff that will maintain the database of contractors that have the obligation to comply with the legislative requirements. However, such a database should be based on an outsourcing contract.

Thus, the fiscal impact on the state budget for the Treasury is as follows:

- Current costs:
 - Salaries
 - total salaries for inspectors = monthly salary * number of inspectors;
 - Goods and services

¹ web: <http://www.oecd.org/dataoecd/32/54/34227698.pdf#search=%20Standard%20Cost%20model%22>

- contract with IT company creating the new register = hourly rate * number of specialists * number of hours

- Special software for checking requirements;
- Updating anti-virus programs
- Capital costs
- office furniture;
- computers.

Administrative compliance costs for an enterprise

Assuming that the company has to hire an accountant and an IT specialist to create the accounting system and train the employees of the enterprise so that they can use the new software, the regulatory compliance costs are as follows:

- Direct staff costs (variable costs)

- contract with hired accountants = hourly fee * hours worked to create the database * number of accountants + hourly fee * hours worked for training courses * number of accountants

- salary of IT specialists employed = hourly fee * hours worked to create the database

- Direct cost of materials (fixed costs):
- additional computers for entering data from existing registers;
- software for the new accounting system;
- anti-virus programs and upgrades
- Other direct travel expenses
- the amount of time lost during trips and meetings with Government officials.

Sometimes, in order to calculate the total administrative compliance costs, the costs for small, medium and large businesses must be calculated separately. The next step is to assess the distribution of businesses. When policymakers know the percentage of each type of enterprise, the total administrative compliance costs for all businesses will be the sum of these multiplier factors.

Costs of environmental impact

Another area in which negative externalities can be identified and measured is the environment. Policy makers need to know whether public policy or legislative proposal improves or worsens the state of the environment. At the level of public policies that are not directly related to environmental issues, the environmental impact assessment will be more qualitative based on the analysis of documents and expert experience. Public policies with a significant impact on the environment usually involve considerable costs for all members of society.

For example, public policies addressing waste management issues, especially hazardous waste management, obviously involve extremely high costs and are also associated with investment in complicated technologies. In such a case, the costs must be distributed among all those who produce waste.

Also, public policies on regional development that involve development from different economic perspectives can create some negative externalities for the environment. The main environmental factors to be monitored from the perspective of negative externalities are: air quality, quality and quantity of surface water and groundwater sources, waste management, noise pollution, coastal and marine resources, land and land resources, recreational, forestry resources, biodiversity / protected areas, global climate. Monitoring of the main indicators of the natural environment is provided by special agencies, equipped with the necessary technologies and specialists in the field.

However, the calculation of environmental costs and benefits does not differ from the calculation of costs and benefits in other sectors. However, most public policies and

legislation do not have a significant environmental impact because environmental impacts are generated at project level, especially when major infrastructure projects or industrial projects are being implemented. As a rule, there are special national agencies dealing with environmental issues and evaluating projects with an impact on the environment. Therefore, when policy makers assess alternatives, they may find that they have a significant impact on the above-mentioned natural resources, so they have to cooperate with the agency and carry out a detailed environmental impact assessment.

4. State cost

The fiscal cost of the state, whether expressed as a sum of taxes and taxes, or expressed by the ratio between government expenditure and GDP, is only the tip of an iceberg of the cost of the state institution. The significant part of the state's cost is much higher than the value of the transparent levy. The hidden burden of the state institution includes, beyond the level of fees and the cost of running the administrative, legislative and judicial apparatus, and the cost of its effects.

When assessing the state's total cost, we can begin by thinking that even a small business needs the complex services of an accountant or lawyer to mediate the difficult relationship with the state. Taxation applies to company revenue only after the costs of these services required to carry out the business have already been paid. In large part, the cost of the accountant's salary is imposed on the contractor by the state, albeit in a hidden way. The cost of that salary is even higher as the tax is not bigger, but more complicated.

In general, administrative procedures attached to the state's initiation of economic activities, their liquidation, and their level of deployment are costs for economic agents. The example of the salary paid to the accountant is an easy-to-quantifiable State example. But there are costs we can hardly understand even though we pay them. We are not referring here only to the time spent with information on procedures, the way to agencies, the number and complexity of the acts required to obtain licenses and permits for simple activities. Not only is the fact that entrepreneurs often spend more resources with reporting activity to the state than with the main economic activity.

In order to give us an idea of the state's total cost, we should understand all the mechanisms by which the state constrains the economy, restricts civil liberties and suffocates the ways in which wealth is produced. We want to explain why the burden of our state includes, besides the cost of taxes and the cost of the uncertainty created by a constantly changing tax and the administrative cost of tax and parafiscal taxes. State burdens are expressed through hidden tax rules such as inflation and budget deficits and change business cycles to the extent that they are created by credit expansion, and in the event of an economic crisis, represent a cost of the state's monopoly over the issue of currency.

The state's cost includes the effects of choking entrepreneurial activity by imposing legislative and administrative barriers to entry and exit. Because of the poor management of natural resources and public spaces by the state, we leave unused valuable resources. The same is true for a whole range of economic sectors. From the state monopoly on education and state control over culture and religion, to control over the pension system and health system, from unwarranted control over the provision of infrastructure, public transport and public utilities¹, to the complicated case of the judicial assurances we may

¹ See also the intervention of Pierre Garelo at the CADI-Konrad Adenauer Conference "Public Services Should Be Outsourced to the Market", originally published in the Economist, January 24, 2011 and accessible online at <http://www.cadi.ro/index.php/vizualizare/articol/multimedia/382>

have in a more liberal market for justice production, the state is at the same time a bad resource manager, but a good tool for exploiting others by others.

In our study we use two concepts, which economists call "opportunity cost" and "transaction cost" respectively. Opportunity costs are the value of missed opportunities; transaction costs are transaction costs beyond the value of the services that are the subject of the transactions. Regulations hampering trade are transaction costs. How can we estimate the monetary transaction costs? Some can be estimated by comparing with the market price of the services that solves the problem of those transaction costs. If we know the value of the bribe given to obtain an opinion then we can say that the respective settlement, which is a transaction cost, has an opportunity cost at least equal to the value of the services that can be bought with that amount. Many of the costs can not be measured in monetary terms, but we can approximate their magnitude.

If we admit that taxes and regulations stifle entrepreneurial activities (as entrepreneurs do not allow their business under too high taxes or regulations too restrictive) and entrepreneurial activities bring new or new services to the surface, then inevitably the costs of taxes and regulations include types services that do not yet exist today. The simplest example in this respect is that of foreign investors "driven" by excessive bureaucracy, corruption, fiscal or legislative instability, by unfavorable regulations. In this case, the state's cost is represented by unrealized investments, which are not limited to the simple amount invested, but rather to the impact on the economy. These are the opportunity costs of the most difficult to measure taxes and regulations. They constituted the first methodological difficulty we faced. There is another reason that makes the total cost of the state hard to quantify.

What is the opportunity cost of not using a one-hectare plot of land in Bucharest? We should take as a benchmark the market value of a similar land in the neighboring neighborhood. That would be the cost for us of not using it here and now, all the others remaining equal. But we know that the value of this land on the real estate market in Romania is less than a one-hectare land in Hong Kong and due to some aspects that can be attributed to the malfunctioning of the Romanian state. What then is the real cost we are facing from the state in relation to that land plot?

If, after a fair market liberalization, many other elements were privatized prior to the privatization of the respective real estate resource, the value of the last privatized resource in the list would be higher now. We can apply the same reasoning to every natural resource owned by the state that theoretically can be the object of private property. If the types of economic resources are so interrelated that changing ownership of a resource becomes relevant to many other types of resources then we can not separately assess a state cost type of another type of state cost because each depends on the other. This vicious circle makes it difficult to estimate the total cost of the state. This is the second methodological difficulty to be considered. Taking into account these difficulties, we use the methodology of the economic analysis of institutions to show why tax costs are just the tip of the iceberg.

The unseen burden of fiscal policy is uncertainty

As it is known, by 2017, social contributions and taxes paid by the employee and the employer amounted to more than 40% of the labor cost to employees and employers. The real tax burden, however, includes, in addition to the amounts collected and the costs created by the bureaucratic machinery, the uncertainty regarding the fulfillment of the obligations of the state (eg reimbursements) and the policy regarding the future. The uncertainty of fiscal policy is a less visible and less quantifiable cost, but it makes it difficult for entrepreneurs to develop plans in the medium and long term, reducing not only the return of existing firms but also the interest of potential Romanian or foreign investors.

Ramped by a long recession and under pressure from the IMF, Romania had to cope with some sudden changes in fiscal policy, such as GEO 58/2010, aimed at expanding the tax base to increase budget revenues for the previous year. First, pensioners were threatened with the reduction of pensions, then the VAT rate was increased from 19% to 24%. The talk about the less transparent tax effect on the economy sends us in May 2009 at the minimum tax program scheduled to disappear by July 2010 at the latest. It has ravaged the already sensitive market in the face of the financial crisis (175,000 firms suspended their activity in 2009 and in the first half of 2010, according to data registered with the Trade Register), being abolished only on 1 October 2010. Created with the stated purpose of reducing tax evasion, it is possible that the minimum tax even led to its increase. Thus, if the actual earnings recorded by certain firms were not declared, some of these companies, but others, have now fully entered the underground economy. What can be seen is the revenues of 780 million lei in 2009 and the companies' obligations of almost 1 billion lei for the first semester of 2010. The unseen costs are the amount that would have been collected anyway from the profit tax, the number of companies that would have remained the market and employees who would not have been unemployed as a result of the suspension of thousands of businesses and the dissolution of others. Unemployed people not only do not contribute to state revenues, they also put pressure on the social security budget.

Of course, the change in the micro-business taxation system, from a 3% income tax to a 16% corporate tax, did not have a positive impact on economic activity. By a new "change of change" it was decided to return to the old 3% quota. The tone of change has continued to threaten the single rate, although it has brought higher total budget revenues compared to its pre-2005 introduction of wage and income tax; even in 2009, a year marked by the economic crisis, revenue rose to 3.7% of GDP over the previous years. Although the Senate approved the draft law on the change of the flat rate from 16% to 10% on October 5, 2010, the Government did not support the initiative, which elaborated the fiscal-budgetary strategy and the budget for 2011 based on the 16% share. Another evidence of incoherence and unpredictability is the evolution of social contributions. It is well known that the level of the contribution due by the employee to the pension pillar II (mandatory private pensions) was scheduled to reach 3% from 2010, but only from 1 January 2011 the share reached this level. Not only did the previously established scheme fail, but the entire contribution to Pillar II was threatened in the spring of 2010 with renationalisation. The situation was caused by the precarious condition of the state pension fund, which is not surprising given the pensioner's pension ratio, the increase of unemployment and the discouragement of work through the high level of taxation.

The cost of administrative barriers to market entry

Administrative barriers to entry and exit from a market are a significant burden imposed by state-run entrepreneurs and consumers. Whatever their form, administrative constraints limit entrepreneurial initiatives and hamper competition, affecting also consumers who face artificially high prices. Entrepreneurs generate a fast and sustainable growth with everything they need - growth, job creation, skills upgrading and innovation. Thus, the decision of those who govern at local, regional and community level to "protect" certain markets and players is hindering economic growth. The instruments by which the authorities control entry and exit from the market consist of imposing licenses or membership of certain professional associations, obtaining approvals, introducing tariffs, fees, regulating the minimum wage, and the bureaucratic burden it is incurring those who want to set up or liquidate a firm. Because market entry restrictions force economic agents to dispose of significant resources by trying to comply with legislation and regulations, the potential for innovation and development is low.

Small and medium-sized enterprises have to lose in particular.

Empirical studies (Klapper, Laeven and Rajan, 2006) confirm that when the costs created by barriers to entry, largely fixed costs, are high, the average size of firms entering the market will be higher. Investors will not be able to enjoy the benefits of limited liability at first. Instead, companies already on the market will rely on the gain generated by the existence of these barriers and will be less interested in increasing their productivity and efficiency. At the same time, regulations with restrictive effect on entry and exit of markets affect the allocation of resources and change the structure of investments. As a result, they have the effect of redistributing resources from favorable market areas where they would naturally invest in less profitable ones. But the tendency of economic agents to serve profitable markets remains: they are trying to overcome administrative bottlenecks by different means. This explains why countries where entry costs are high are also those where corruption and the underground economy are significantly higher. The institution of bribery is generated and fed mainly by the complexity and costly nature of administrative barriers.

We will present three illustrative examples for our general thesis, that administrative barriers have harmful effects and that the current state of state intervention in the economy is arbitrary and unacceptable. The Notary Office Market is one of the most restricted and regulated markets in the liberal professions in Romania. Access to the market is made more difficult by the necessity of belonging to a professional organization, the Union of Notaries Public in Romania (UNNPR), and restricting the number of professionals who can enter the market annually.

According to Law 36/1995 (amended by the Order of the Minister of Justice no.710 / C / 1995 and then the Order of the Minister of Justice no.1758 / C / 2004), the UNNPR not only influences the establishment of the number of public notary positions to be voted on in an annual competition, but also submits a proposal to the Ministry of Justice, but also establishes the conditions for acceding to this status. Art. 16 of the law mentions that in order to become a notary, the graduates of the faculties of the faculty have to do a 2 year internship and then to promote the notary public examination organized by the UNNPR - according to the law, the evaluation committee is a single representative of the The Ministry of Justice. Practically, notaries have developed their own law of operation, and UNNPR has come to have a legal monopoly on the job. Encouraging the promotion of this interest by the guild made the number of notaries on the market insufficient. In 2018 there are over 2540 public notaries. The small number of notaries becomes evident when we compare our country with Italy: if there is a notary at 8250 inhabitants, in Italy a notary serves 6000 inhabitants. As a result, Romania has among the highest prices for notary services in the European Union. According to a report by the Competition Council, Romanians pay 14 times more than Germany, 7 times more than Portugal, 6 times more than Austria and Spain.

Another example is the tourism sector, where legislation creates a number of barriers to entrepreneurial activity or to the development of the competitive environment. Accommodation services are overly regulated, and the rules imposed are not strictly necessary to ensure quality services. To operate legally, all units need a classification certificate, a document designed to protect tourists, which has to translate into a code the building elements, the quality of the facilities and the services provided. Similarly, travel agencies need a tourism license to operate, released by the line ministry. Thus, the ability to provide high quality services is not given by the market but by obtaining this license. Criteria for obtaining this act include the obligation for the travel agency to be located on the semi-basement, ground floor, mezzanine or 1st floor. In addition, it must have "furniture appropriate to the work done". Employees must have a tourism patent (also

issued by the relevant ministry), and training or qualification courses for various trades in tourism must in turn be authorized and approved by the CNFPA and the ministry. Another condition for receiving a travel license is to contract an insurance policy for the insolvency or bankruptcy risk of the agency, but the policy may be terminated only with insurance companies that have been approved by the relevant ministry.

Another example of closed market is communications, regulated and controlled by the National Authority for Administration and Regulation in Communications (ANCOM). This agency establishes the technical and operational conditions under which an economic operator may operate, may impose separate accounting obligations and may even impose obligations on tariff control. ANCOM also grants, following selections, licenses for the use of radio frequencies for the broadcasting of digital terrestrial television programs. For example, the number of licenses was established by art. III of GD 464/2010, and the granting of the license "is conditional upon the payment to the state budget of a license fee" amounting to between 1 and 2.5 million euros. Furthermore, Law 504/2002 establishes, by art. 3, what principles should be pursued by the broadcasting of television programs: "political and social pluralism, cultural, linguistic and religious diversity, information, education and entertainment of the public, respecting the freedoms and fundamental human rights". The same law states that although any form of censorship on audiovisual communication is forbidden, the decisions of the National Audiovisual Council (CNA), because they are normative, do not constitute interference in the form or content of media services. The institution is the guarantor of the public interest in the audiovisual field. Thus, state control over the communications market means controlling the state over their content. The effect of administrative barriers is therefore harmful to the Romanian economy by restricting competition and creating closed and rigid economic and social systems. Removing them would harm the state's elite, but it would benefit the economy and society. And all this involves costs that are borne by the final consumer, the population.

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MEASURES TO PREVENT THE RISK OF LENDING TO IMPROVE THE FINANCIAL PERFORMANCE. ANALYSIS OF THE CREDIT RISK SITUATION WITHIN BRD - GROUPE SOCIÉTÉ GÉNÉRALE S.A.

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Abstract: Risk management within BRD is based on an integrated concept that takes into account statutory and regulatory standards as defined and provided by the NBR and the European Supervisory Authorities, Société Générale risk management standards and generally accepted banking practices. The purpose of the research is to analyse the global exposure of the bank to credit risk, quantified by weighted and relative indicators, deepened by studying the risk at the segments of the clientele, by sectors of activity, by seniority groups of overdue loans, of not impaired loans and without arrears, as well as the coverage of credits with guarantees, and it is relevant to corroborate it with the indicators that express the financial performance of the credit institution.

Keywords: risk, credit, bank, indicators.

JEL classification: G21, G32.

1. Introduction

Credit risk is defined as the loss incurred by the bank if a client fails to meet the obligations stipulated in the contract, as is traditional banking products (credits and letters of credit), but also financial-futures contracts of the type of derivatives.

The Bank's credit policy is based on the principle that the approval of any loan must be based on a solid knowledge of customers, the purpose and structure of the transactions and sources of credit repayment. The Bank expects the debt to be reimbursed primarily from the future cash flows for legal entities and incomes for individuals.

BRD is part of the international network of Société Générale, managed by the International Banking and Financial Services (IBFS), which offers a wide range of products and services specific to lending to customers, individuals and businesses.

The bank's strategy on the bank risk management has as its central pillar the management of the credit risk.

Reducing the risk of loss in case of customers' inability to pay is the main concern of the bank in the process of approving the loans. Thus, the quality of the client portfolio is assessed through an internal rating system, as part of an expert analysis.

2. Credit risk management

Credit risk is managed in accordance with domestic, local and European regulations, the Société Générale Group's policy and the bank's best practices for the risk management.

The most important principles underlying the credit risk management used by BRD are as follows:

- Prudent standards in credit analysis in terms of assumed risk;

- Appropriate criteria for granting credits according to the client typologies that require careful knowledge of them, as to the purpose of the funding, the sources of reimbursement and the risk reduction by concluding the actual or personal guarantee contracts;
- Well-grounded procedures for approving credits, which provide for a clear delimitation of skills and individual credit approval limits, depending on the level of experience and training;
- Applying a rating system, established by internal bank rules, in the analysis of credit applications for the non-retail segment;
- Providing a diversified loan portfolio, with the setting of individual, regional, geographical, transactional limits of the bank's attitude towards the risk;
- Determining clearly the responsibilities of the front office and back office staff;
- Allocation of duties on decisions to launch new products and services on the market, as well as the modification of the ones offered to the executive management;
- Permanent monitoring of the individual exposure or customer segments to the credit risk;
- Quantification of the credit risk arising from non-performing loans, which involves the periodic calculation of objective indicators;
- Assessment of the quality of the credits granted by the bank and its reporting on a hierarchical level, to the Bank's management;
- Quarterly, half-yearly and annual reporting to the Board of Directors of the Bank of the results of the credit risk management activity;
- Auditing the lending activity by the department invested in these tasks.

The three main business activities of the bank: commercial, transactional and treasury are the source of the credit risk exposure.

3. Credit risk mitigation techniques

BRD's lending policy is based on cash flows, so the bank expects repayment of loans to be made from future receipts realized by entities and incomes made by individuals. Also, internal rules provide concluding thereal or personal guarantee contracts to reduce the exposure of the bank to credit risk.

The typology of acceptable guarantees by BRD is the following:

- Real financial guarantees (cash, debt securities, shares, certificates of deposit);
- Real non-financial guarantees (real estate and movable assets: machinery and equipment, intangible assets, stocks, payment instruments, claims).
- Personal guarantees (fiduciary, guarantee letters, financial guarantees provided by guarantee funds, state guarantees, and non-payment risk).

Real estate guarantees are most often used, but for loans with special destination other guarantees are accepted. However, the structure of guarantees is diversified according to the type of financing (for example, guarantees for stocks and claims are accepted to finance the current activity).

These guarantees are periodically evaluated in accordance with procedures approved by the Risk Department. Real estate guarantees, for example, are assessed by certified, internal or external assessors, in line with the International Valuation Standards and ANEVAR.

Market and income approach are methods of real estate valuation. The periodicity of the revaluations is given by the destination of the real estate, thus, for residential purposes is 3 years, respectively 1 year for commercial, agricultural or industrial ones. The rule changes in the context of a declining real estate market, making it more frequently

reevaluation in this case. The valuation of guarantees is monitored permanently in the Bank's internal audit.

The Romanian State is the main guarantor for the bank's clients, who intervenes in the national programs through the Guarantee Funds (FNGCIMM or FGCR) or Eximbank, in order to support lending activity, the most eloquent example being the First Home.

Commercial banks also guarantee for BRD customers by issuing bank guarantee letters.

The residual risk is managed by the bank by revaluation of guarantees, being evaluated by the calculation of specific risk indicators.

4. Calculation of global credit risk indicators

In order to be able to carry out a proper analysis of BRD on the credit risk exposure and to take appropriate measures to mitigate this risk, we used a specific indicator system. From the Directors' Annual Reports in 2015, 2016 and 2017, we extracted the data for the calculation of the following global credit risk indicators, which quantifies the bank's overall exposure to credit risk:

D) *Indicators of structure or share*

1) *The ratio of the credits granted to total assets*, the higher the share in the total assets, the more the banking activity is perceived as more risky.

$$R_{CvAt} = \frac{Crt}{At} \times 100 \quad (1)$$

Throughout the time horizon analysed there is a constant, slightly increasing trend from one year to the next, the increase of the credits granted being more pronounced than that of the total assets (Table no.1).

Table no. 1. Credits granted in relation to total assets 2015-2017

- thousand lei -

31.12.2015	31.12.2016	31.12.2017
(26376425 / 49192866) x 100 = 53.62%	(27384110 / 50657583) x 100 = 54.06%	(29011925 / 53490923) x 100 = 54.24%

Source:BRD

2) *The rate of overdue loans*, reports the overdue loans of BRD in the total credits granted by the bank. In order for the bank's portfolio to be managed as effectively as possible in terms of the credit risk, the value of this ratio should be as small as possible.

$$R_{acer} = \frac{Crr}{Crt} \times 100 \quad (2)$$

The rate of non-performing loans, as defined by the European Banking Authority, fell from 20.7% by the end of 2014 to 13.5% by the end of 2015, 9.5% by the end of 2016, to 6.4% at the end of the year 2017, supported by balance sheet clearing operations (Table no. 2).

Table no. 2. Rate of overdue loans, 2015-2017

- thousand lei -

31.12.2015	31.12.2016	31.12.2017
(3059174 / 26376425) x 100 = 11.60%	(3185078 / 27384110) x 100 = 11.63%	(3126514 / 29011925) x 100 = 10.77%

Source: BRD

This indicator can also be determined by the structure of the overdue loan portfolio as follows:

2.1) Rate of overdue loans to legal entities:

$$R_{CPJr} = \frac{CrrPJ}{CrtPJ} \times 100 \quad (3)$$

The dynamics of this indicator experienced an upward trend with a peak reached in 2016, after which it fell significantly in 2017 as a result of the decrease in the value of the overdue loans to legal entities (Table no.3).

Table no. 3. Rate of overdue loans to legal entities, 2015-2017

- thousand lei -

31.12.2015	31.12.2016	31.12.2017
(380607 / 8625214) x 100 = 4.41%	(543579 / 8684715) x 100 = 6.26%	(339109 / 8753027) x 100 = 3.87%

Source: BRD

2.2) Rate of overdue loans to individuals:

$$R_{CPFt} = \frac{CrrPF}{CrtPF} \times 100 \quad (4)$$

In the case of this indicator, the evolution was clearly decreasing, also influenced by the global tendency of decreasing the overdue loans, due to the recovery of claims (Table no.4).

Table nr. 4. Rate of overdue loans to individuals, 2015-2017

- thousand lei -

31.12.2015	31.12.2016	31.12.2017
(2678567 / 17751211) x 100 = 15.09%	(2641498 / 18699395) x 100 = 14.12%	(2787405 / 20258898) x 100 = 13.76%

Source: BRD

3) Structure indicators of the loan portfolio according to the duration of the credit contract:

3.1) Rate of short-term loans in total loans:

$$R_{Cts/tC} = \frac{Crts}{Crt} \times 100 \quad (5)$$

Short-term loans declined in 2016 compared to 2015 in favour of long-term loans, then they saw a slight increase in 2017, to the detriment of these (Table no. 5 and Table no. 6).

Table no. 5. Short-term loans in total loans, 2015-2017

- thousand lei -

31.12.2015	31.12.2016	31.12.2017
$(6363858 / 26376425) \times 100 = \mathbf{24.13\%}$	$(6000391 / 27384110) \times 100 = \mathbf{21.91\%}$	$(6374457 / 29011925) \times 100 = \mathbf{21.97\%}$

Source: BRD

3.2) Rate of medium and long term loans in total loans:

$$R_{Ctm/TC} = \frac{Crtm}{Crt} \times 100 \quad (6)$$

Table no. 6. Medium and long term loans in total loans, 2015-2017

- thousand lei -

31.12.2015	31.12.2016	31.12.2017
$20012567 / 26376425) \times 100 = \mathbf{75.87\%}$	$(21383719 / 27384110) \times 100 = \mathbf{78.09\%}$	$(22637468 / 29011925) \times 100 = \mathbf{78.03\%}$

Source: BRD

II) *Relative indicators*, correlation of bank assets with capital and bank funds, are important to be followed because they give a quantitative expression of the relationship between the exposure to risk and the source of funding for this exposure. They can be used as indicators:

1) *The net profit attributable to credit portfolio losses*, which takes into account that net profit is the main source of loss financing, and their coverage is not the only destination. Calculated in this form, the indicator is most often greater than one. It can also be calculated in reverse, but then it is obviously below then one. It is important that the resources cover the losses from the lending activity:

$$R_{PRn/Pic} = \frac{PRn}{Pic} \times 100 \quad (7)$$

We considered that the loss on the credit portfolio was due to the net cost of the risk. For the year 2017, this indicator cannot be calculated because this cost has been negative, due to the resumption of credit recovery, the recognition of compensation received from insurances, and the earnings on sales of non-recoverable claims.

As a result, the bank did not record any loss with non-performing loans, on the contrary, it recorded profits of 376 million lei, compared to 461 million lei losses accounted for in 2016.

Which means that many of the losses in the non-performing loans anticipated in 2016 in the form of provisions have not been confirmed, so the bank has managed to recover a large part of these loans which it believed would no longer be paid by customers, especially by firms.

As it can be noticed, due to the decrease of the cost of the risk on the one hand and the increase of the net profit, on the other hand, the indicator evolved in 2016 becoming greater than one, which shows a solid financial position of the bank to cover these losses (Table no. 7).

Table no. 7. Net profit reported to the net cost of risk, 2015-2017

- thousand lei -

31.12.2015	31.12.2016	31.12.2017
(445422 / 631149) x 100 = 70.57%	(728281 / 461176) x 100 = 157.92%	-

Source: BRD

2) Even more edifying is *the ratio between the reserve fund and the losses recorded on the loan portfolio*. This ratio must be greater than 1 in order to be able to appreciate that the bank's management is prudent.

For both 2015 and 2016 this indicator is greater than one, underlining the prudential nature of management (Table no. 8).

$$R_{Fr/Pic} = \frac{Fr}{Pic} \times 100 \quad (8)$$

Table no. 8. Reserve fund related to the net cost of risk, 2015-2017

- thousand lei -

31.12.2015	31.12.2016	31.12.2017
(3465567 / 631149) x 100 = 549.09%	(3851561 / 461176) x 100 = 835.16%	-

Source: BRD

3) *The share of credits granted to customers in total attracted and borrowed resources, which report loans to customers at attracted and borrowed sources, dimensioned according to the bank's own equity.*

$$Cr_{Cl/Sai} = \frac{Crcl}{TP-Cp} \times 100 \quad (9)$$

Throughout the period, there is an upward trend in this indicator from one year to the next, the increase of the credits granted to customers being accentuated. Total attracted resources resulted from the difference between total liabilities and equity (Table no. 9).

Table no. 9. Credits granted to customers in total attracted resources, 2015-2017

- thousand lei -

31.12.2015	31.12.2016	31.12.2017
[26376425 / (49192866-5981189)] x 100 = 61.04%	[27384110 / (50657583-6367183)] x 100 = 61.83%	[29011925 / (53490923-7028387)] x 100 = 62.44%

Source: BRD

4) *Share of loans and investments to banks in total assets:*

$$Cr_{bc/TA} = \frac{Crbc}{TA} \times 100 \quad (10)$$

For this indicator, there was a decrease in 2016 compared to 2015, followed by a more pronounced increase in 2017, which means that lending activity was more risky in this last year of analysis (Table no. 10).

Table no. 10. Share of loans and investments to banks in total assets, 2015-2017

- thousand lei -

31.12.2015	31.12.2016	31.12.2017
$(2287837 / 49192866) \times 100$ = 4.65%	$(1971333 / 50657583) \times 100$ = 3.89%	$(2530468 / 53490923) \times 100$ = 4.73%

Source: BRD

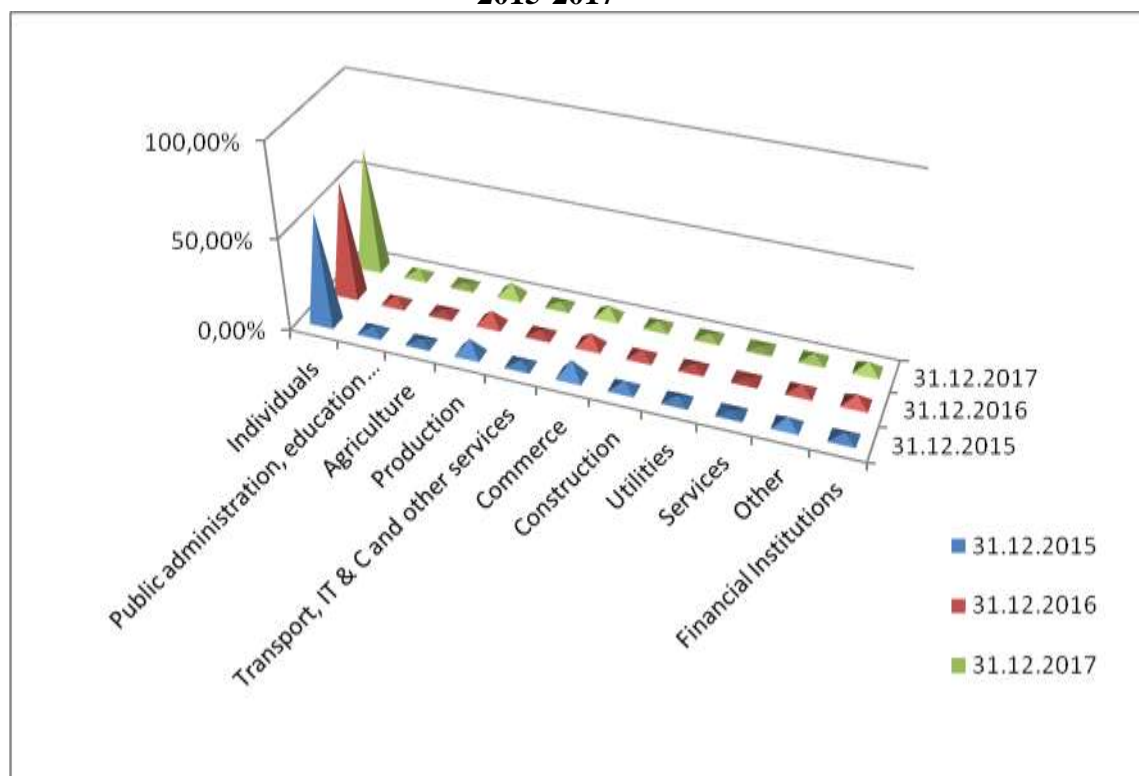
For this indicator, there was a decrease in 2016 compared to 2015, followed by a more pronounced increase in 2017.

III. Other indicators calculated in the credit risk analysis at BRD

❖ Analysis of the sectoral structure of the credits granted

As shown in the chart below, risk exposures on the credits granted to the legal entities decreased as a result of the increase in the share of credits granted to individuals to the detriment of loans to other sectors of activity (Chart no. 1)

Chart no. 1. Chart of the structure by sectors of credits granted in the period 2015-2017

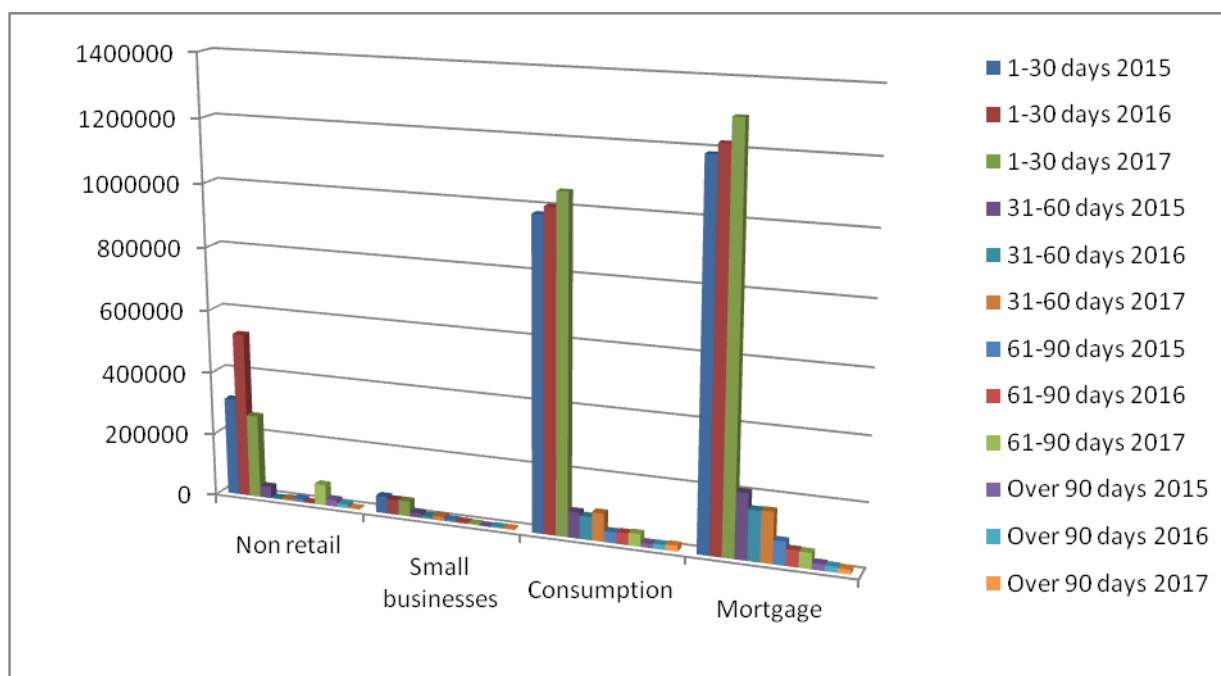


Source: BRD

❖ Analysis of seniority of overdue loans, but not impaired, by types of credit

As we can see, the share for all types of overdue loans is those with delays of up to 30 days, which is encouraging, the chances of these arrears being recovered are very high. The amount of loans with delays up to one month decreased overall and for non-retail, but increased for other types of loans.

Chart no. 2. Overdue loans, but not impaired, by seniority groups and types of credit 2015-2017



Source: BRD

It also increased the value of loans with a maturity between 31-60 days for all types of credit, but the spectacular and unfavourable increase was recorded for loans with overdue between 61-90 days as a whole and for non-retail and consumer loans and for the other two types, small businesses and mortgages, with a declining trend.

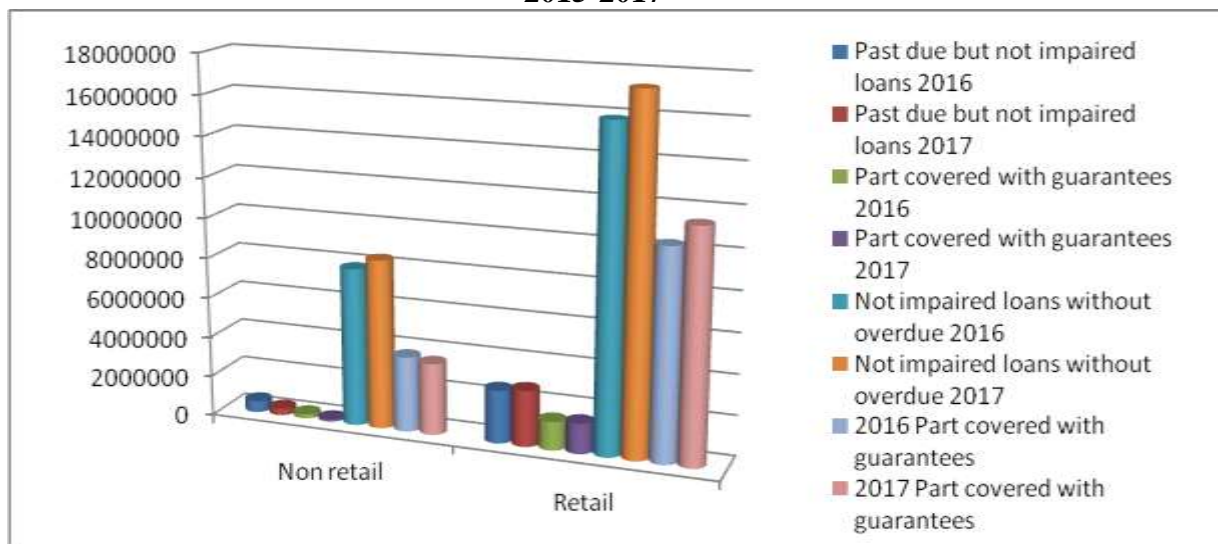
Gratifying aspect is given by the evolution of overdue loans over 90 days, which are not performing, the amount of which decreased overall and in the case of non-retail and mortgage loans, for the other two, consumption and small enterprises, the evolution being ascendant.

There is a downward trend in both overdue loans and non-retail loans in 2017 as compared to 2016. Unfortunately, for the other types, there was an increase.

❖ Analysis of guarantees coverage of credits granted to individuals and legal entities

By decreasing the amount of overdue loans, but not impaired, there is a decreasing of a part of the guarantees coverage, while it is registering at the same time an increasing of the part of the guarantees coverage for the overdue loans, but not impaired, which had an ascending evolution (Chart no. 3).

**Chart no. 3. Guarantee coverage of credits granted to retail and non-retail customers
2015-2017**

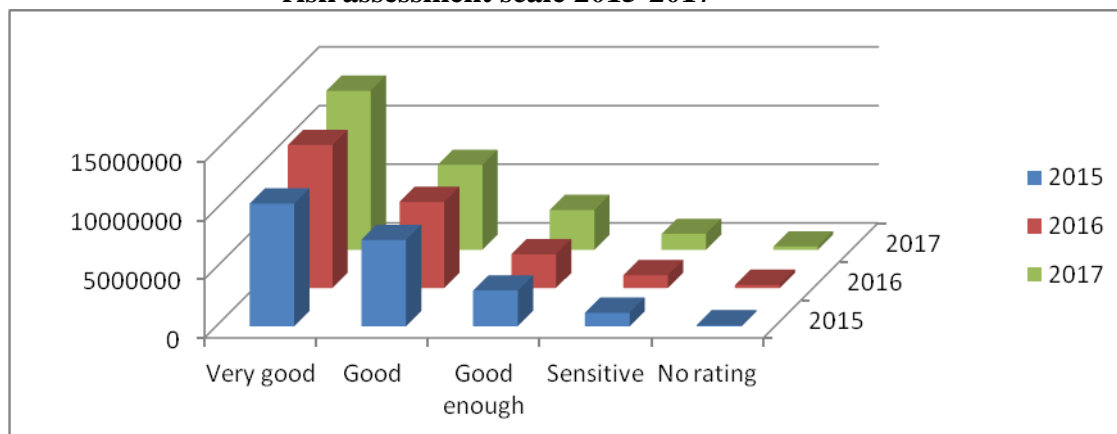


Source: BRD

- ❖ Analysis of not impaired loans and unpaid according to the credit risk assessment scale

Credits and advances granted to customers include municipal bonds, worth 82.268 million lei on December 31, 2015, 257311 million lei on December 31, 2017, respectively 263728 on December 31, 2016 and are presented in the line "Not Rated" (Chart no. 4).

Chart no. 4. Analysis of not impaired loans and unpaid according to the credit risk assessment scale 2015-2017



Source: BRD

There is an increase in loans appreciated with the „very good” rating, and a decrease in loans appreciated with good rating, which shows an improvement of the state of loans without arrears. Trends of the other rating were also increased, which can also be attributed to the increase in the volume of credits granted from one year to the next.

4. Conclusions

BRD is one of the most powerful banks in Romania, initially maintaining second place after BCR, and then third in the top of these institutions.

Solidity lies both in the adopted banking policy, the competitive management, the varied commercial offer oriented to customer and in the well trained human resources efficiently managed.

In 2016, credits granted to individuals increased by 4.5% compared to 2015, their growth being driven by the real estate and consumer loans. Amounts allocated to the „First House” governmental program have made a solid contribution to the increases in mortgage loans, while the promulgation of the law on putting into payment caused a decrease in demand for this category of loans due to the increase of the requested advance. Credits granted to the legal entities have declined, despite the favourable interest rates and a strong increase of the economic activity. The balance of gross loans decreased by 1.7% due to due to the write-off and sale of the impaired loans.

The year 2017 was characterized by a strong increase in lending to retail segments and large corporations. Credits granted to individuals were the main growth factor + 6.6% compared to the end of 2016, due to housing and consumer loans, while loans to companies increased slightly by only + 0.9% comparative with the same year.

The bank’s lending activity involves the credit risk that directly influences the bank’s profitability through the very elements of anticipation on which is based the lending decision and the measurement of this risk.

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INNOVATIVE AND EFFICIENT INITIATIVES OF THE LOCAL PUBLIC ADMINISTRATION, THE REPUBLIC OF MOLDOVA

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Abstract: *The local public administration of the Republic of Moldova evolves with the political, economic, social changes, implementing new management principles, performing management technologies, thus ensuring the irreversibility of democratic processes in society. In this article we propose to present some reflections on the efficiency of the way of provision of services by the local public administration of the citizens and to identify the theoretical-methodological and applicative content of the process of continuous modernization of the local public administration in the Republic of Moldova in the context of European integrationist processes.*

Keywords: *local public administration, principles of public administration, modernization, innovation, efficiency, citizen.*

JEL Classification: *H70.*

1. Introduction

Public services are in the middle of local and regional development strategies. Therefore, innovative public services can represent the basis for competitiveness, based on investment in education, health and social welfare, citizen's safety and good infrastructure in transport, communications and clean environment.

In the Republic of Moldova a current problem is the quality of public services. The issue of increasing quality and access to public services is topical along with two other major objectives: increasing the autonomy of local communities by transferring new decision-making responsibilities, financial and patrimonial resources, respecting the principle of subsidiarity and restructuring of local public administration through measures to increase institutional efficiency, administrative simplification and increased transparency in relation to citizens. For this reason, local public authorities need to modernize in order to be able to improve the services they offer.

The modernization of public services becomes a matter of particular importance in the perspective of European integration. All the treaties of establishment the European Union, as well as the Association Agreement between the Republic of Moldova and the European Union (Acordul de Asociere între Republica Moldova, pe de o parte, și Uniunea Europeană și Comunitatea Europeană a Energiei Atomice și statele membre ale acestora, pe de altă parte, ratificat prin Legea Republicii Moldova nr.112 din 02.07.2014), include provisions on public services. It is clear from the text itself that the Agreement will directly affect various services that currently fall under the notion of "public services" in the Republic of Moldova - expressly in the Agreement are included provisions regarding transport and communications, health services, educational services, licensing, etc. Obviously, European integration will generate some changes in their existing situation. As a result, we can develop various scenarios for the evolution of public services - from maintaining the existing situation in some of them to demonopolizing others or delegating them to entities in the European Union. Therefore, we consider that at least the text of the Agreement results in certain changes in both the public service mission and the final user's interest.

2. Promotion and strengthening good governance at local level

Local public authorities are the most important pillars, because they represent the closest level to the citizens. In the Republic of Moldova, Local Public Authorities are even more important as they contribute to the promotion of democracy. Mayors are the ones who have to come up with initiatives to promote and consolidate democratic matters at the local level.

Good governance at local level not only involves implementing the legal, political and institutional adopted framework. There is also the issue of strengthening the capacity of local public administration actively - including understanding, competence, as well as capacity and willingness to learn. The framework and the capacity are two inseparable elements.

Good local administration provides a common set of priorities, ensures the coordination of actions and resources to maximize efficacy, stimulates activities and arouses the accountability of authorities to citizens. To come up with creative and innovative solutions in the Local Public Authorities, is needed (Legea Republicii Moldova privind descentralizarea administrativă nr. 435-XVI din 28.12.2006):

- to strengthen administrative capacities by identifying and recognizing practices initiated and implemented by Local Public Authorities;
- to improve public services and to encourage the application of quality standards in the delivery of public services, including the implementation of means of technological modernization of the public sector;
- to strengthen local autonomy and to encourage local initiative;
- to promote the territorial cooperation and consolidation of the administrative-territorial units;
- to achieve the exchange of ideas, experiences and best practices between Local Public Authorities, as well as creating a national network of local leaders;
- to strengthen the relationship with the Central Public Administration to support initiatives at local level.

3. Improvement of the public services through quality standards

Improving public services and encouraging the implementation of quality standards in the delivery of public services, including the implementation of technological modernization tools for Local Public Authorities in the Republic of Moldova, is achieved by applying e-government to local public administration in the Republic of Moldova and has a legal basis.

One of the basic principles of local public administration, stipulated in the Local Public Administration Act (Legea Republicii Moldova privind administrația publică locală, nr. 436-XVI din 28.12.2006), provides for citizens to be consulted on matters of local interest. These consultations may be conducted through a local referendum organized under the Electoral Code on issues of major concern. In matters of local interest which concern only a part of the population of the administrative-territorial unit or when examining the draft decisions of the local council, the Local Public Authority may organize, with this part, various forms of public consultations, public hearings and talks, according to the law.

Electronic governance of localities involves multiple stages of development, the final stage meaning integration of services across administrative boundaries. Namely, an effective operation of transforming local governance to better respond to citizens' needs and to contribute to community welfare.

Electronic governance fits perfectly into the concept of a contemporary local public administration. It is represented by the so - called *convenience of efficiency* and focuses on

the resource and time economy for both public institutions and citizens who do not have to move from one institution to another to solve their problems (Taranu and Clipa, 2019).

Among the advantages of e-Governance in the local public administration we can mention the improvement of access to public information and services of the central public administration authorities, the removal of bureaucratic procedures and the simplification of working methodologies, the improvement of the information exchange and services between the central public administration authorities and the improvement of the public services quality.

However, the application of e-Governance also involves a number of risks. To be successful, e-Governance projects need to gain the trust of authorities, public associations and citizens.

4. Promotion of the territorial cooperation and consolidation of the administrative-territorial units

Making local economic development means raising the economic competitiveness of a community in order to improve its economic future.

The success of local economic development depends on the collective effort of the public, business and non-governmental sectors. This would move from the stage when policy decisions are often adopted without taking into account the implementation or the economic, social and environmental consequences or accurate population data in that evidence-based policy-making.

For this purpose, a community begins the process of strategic planning by identifying individuals, public institutions, economic agents, civic organizations, private professional organizations, educational institutions and other groups with a clear interest in the local economy.

In recent years, public-private partnership (Hotărârea Guvernului Republicii Moldova cu privire la parteneriatul public-privat pentru prestarea unor servicii de sănătate nr. 1116 din 06.12.2010) has gained more and more ground in the Republic of Moldova, being an effective method of involving and attracting private capital in the realization of projects of public interest. Among the advantages of this investment attraction tool can be listed the transfer of risks to the private sector, access to investment and know-how private technology, including management. Public-private partnerships serve as support and offer the possibility of involvement, especially of Local Public Authorities, in solving problems related to the construction / modernization of infrastructure, the improvement of public services, etc.

Public-private partnerships increase the quality of service offered, providing flexibility and creativity. All institutions involved in the partnership contribute with complementary expertise and financial resources, helping to improve the service offered. Such a partnership brings novelty, expertise and complementarity to tasks.

Complementarity in service provision means that the state brings long-term sustainability, and the non-governmental organization brings innovation and expertise. For example, the Water Treatment System in Balti, almost 40 years old, has been modernized thanks to a public-private partnership between the city hall and the company "Glorin Engineering". Thus, the three pumping stations were repaired, the collection tray was built, a new pressure collector was installed over a 1 km length and the secondary decanter was repaired. Sewerage services benefit 33 thousand individuals and 1250 economic agents, who pay 3.90 lei and 21 lei / cubic meter respectively (Împreună pentru performanțe în guvernarea locală 2014–2015, p.12).

In addition to promoting public sector efficiency through risk-sharing and benefiting from private sector expertise, public-private partnership can release immediate

pressure on public finances by providing additional capital. At the same time, the public-private partnership actively contributes to ensuring greater transparency in the use of local public finances and the establishment of investment policy fairness, thereby enhancing the governance system and the local development process.

Inter-community cooperation is an advanced tool for decentralization, regional and local development. It provides real opportunities for local authorities to streamline their work and to improve the quality of services provided by bringing together the efforts of several communities (Bulat, 2015, p.152). Last but not least, through the cooperation of the territorial-administrative units in the organization and delivery of public services, it contributes to balancing the level of development of the localities. For example, the villages Ermoclia, Popeasca and Festelita in Ștefan Vodă district have become brighter thanks to an inter-communal public lighting service. The length of the lighting network in the village of Ermoclia is 7.5 km, while in Festelita village it is 7 km, and in Popeasca the lighting network has a length of 6.5 km. As a result, the electricity consumption has been reduced and the degree of security and comfort has been increased within these localities (Împreună pentru performanțe în guvernarea locală 2014–2015, p.13).

The municipal enterprise “Lumen-Ermoclia” was created for the management and maintenance of the street lighting service. “Lumen-Ermoclia” enterprise provides services for maintaining and servicing public lighting networks, maintaining electrical networks within public institutions and serving the citizens of the three localities at home. There are 854 households, 32 economic agents and 16 public institutions that pay 4 lei per month but no more than 12 lei per household and 150 lei for legal persons (Împreună pentru performanțe în guvernarea locală 2014–2015, p.14).

In conclusion, we can say that inter-community cooperation can provide an improved quality of public services provided to citizens from local member communities. Such an instrument aims to compensate the insufficiency of funds available to the local government, the lack of specialized personnel able to attract funding, to remove problems caused by environmental conditions and to meet the conditions imposed by the regional and local development operational programs.

5. Achieving the exchange of ideas, experiences and good practices between local public authorities, as well as creating a national network of local leaders

In several Moldovan administrative-territorial units the Leader approach has been implemented, which for more than 20 years is an efficient rural development tool in several European countries.

In the Administrative-Territorial Unit Gagauzia and Taraclia district, through the program “Supporting Agriculture and Rural Development in ATU Gagauzia and Taraclia” (SARD) with the financial support of the European Union, were signed in 2016, the first four Accordance Agreements for the formation of LAGs were signed by 21 localities in ATU Gagauzia and Taraclia district, who decided to apply the Leader concept in the region.

LAG (Local Action Group) is the officially-appointed partnership of representatives of local public authorities, the business community and civil society in the cooperating villages. The LAG area must cover the territories of neighboring rural city halls with at least 10 000 to 100 000 inhabitants.

The Leader methodology is a real chance for the rural development of the Republic of Moldova. This view is made by the representatives of the civil society and the relevant institutions from Hungary, Romania and Lithuania, who shared the experience and the results obtained by their countries as a result of the implementation of this concept for the inhabitants of Gagauzia and Taralia.

In 2018, about 110 LEADER local projects were carried out in ATU Gagauzia, Taraclia and neighboring communities under the LEADER initiative (Shahwan, 2019, p.3).

The enormous interest and energy of the 23 rural development initiatives of local action groups that were identified in 2018 reveal that rural communities are willing to make significant changes to social and economic development in Moldova. A common goal of territorial cooperation is to strengthen local culture. Each locality is distinguished by a mixture of different cultures (Shahwan, 2019, pp.2-3).

It is not an exaggeration to say that the adoption and application of the LEADER approach is an important innovation in Moldovan rural communities. The method put the local development opportunities in a new light and brought together new partners. It is an important basis for innovation in the future.

6. Conclusions

Ensuring a certain level of innovation and efficiency of the local public administration activity should be based on the following premises: the resources spent must find the best use, to respond to long-term needs, to strengthen the administrative capacity, analyzing, monitoring and evaluating public policies, to depoliticize the public function.

The reality demonstrates that a continuation of the management and execution processes within the local public administration, in the context of good European practices, will contribute to the achievement of the new objectives of the public management in the Republic of Moldova.

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IDENTIFYING RISKS IN EDUCATIONAL ORGANIZATIONS

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Abstract: Risk management within educational organization is an important activity which must integrate recognition of risk, risk assessment, developing strategies to manage it, and mitigation of risk using managerial tools. Objective of risk management is to reduce different risks related to a pre-selected domain to an acceptable. It may refer to numerous types of threats caused by environment, technology, humans, organizations and politics. The process of risk identification within educational organizations is the most important in the process of risk management. If a risk is not identified correctly, then the risk manager will not be able to quantify it and find the proper method of counteracting the significant results of risk exposures. The paper describes the different risk identification tools and techniques in the risk management process, which methods are used in the different steps in order to risk identification, and provides some examples for risk in educational area.

Keywords: Risk management, educational, risk identification, identification tools and techniques, risk in educational organizations.

JEL Classification: I21, I28.

1. Introduction

Risk management is a proactive, continuous and systematic process of identifying, evaluating and managing the risks incurred by organizations in order to ensure a reasonable level of assurance of increasing the probability of achieving the objectives in an efficient and effective manner.

In school organizations, the risk management process is, at the same time, a component of an internal control system, with which the directors or responsible officers in this field manage the significant risks identified within the organization, the ultimate goal of the process maintaining these risks to an acceptable level. From this point of view, the risk management system needs to be integrated into the management organization of the school organization and use techniques, methods and working tools, communication channels and specific procedures adapted and correlated with the other elements of the management system.

2. Conceptual delimitation of risk within an organization

"Risk is defined as an uncertain, but possibly permanent, occurrence in the process of technical, human, social, political events, reflecting variations in the distribution of possible outcomes, probability of occurrence with subjective and objective values, potentially damaging and irreversible effects" (Oprean and Paraipan, 2008, p.8).

The process of identifying risks or analyzing the future of an organization is the first step in risk management activity that is achieved by discovering all achievable sources that can generate risks in order to eliminate or mitigate the effects they can produce through the impact that have on the achievement of the general and specific objectives set by the organization. Regardless of the mission, vision, goals, general or specific objectives, values or standards of systems or organizations, the risk can be identified in each process.

"The organization is a structured ensemble of human resources and articulated and mobilized materials converged by their capitalization in structured and systematic social activities, consciously directed towards reaching some previously established, rigorously scientific goals" (Taciuc and Bocoș, 2015, p.37).

The risk-generating events occur as a result of the influence of internal factors (the nature of the institution's activity, the organizational structure, the human factor, changes in the organization, the inadequate performance of internal activities, etc.) and external

factors (economic conditions, technological progress, the legislation, the use of techniques and advanced equipment, changes in the financial environment) that may affect the achievement of the objectives of the educational institution.

The primary objective of risk identification is to avoid the circumstances in which the director of the institution may be surprised by an unexpected event, which generally adversely affects the projects or activities in progress of the educational establishment.

Risk in general can be considered as any threat, vulnerability, action, event, inside or outside an organization that can be assessed for the likelihood of occurrence and its effects, which is likely to bring about positive or negative deviations, or even results against objectives set by the organization.

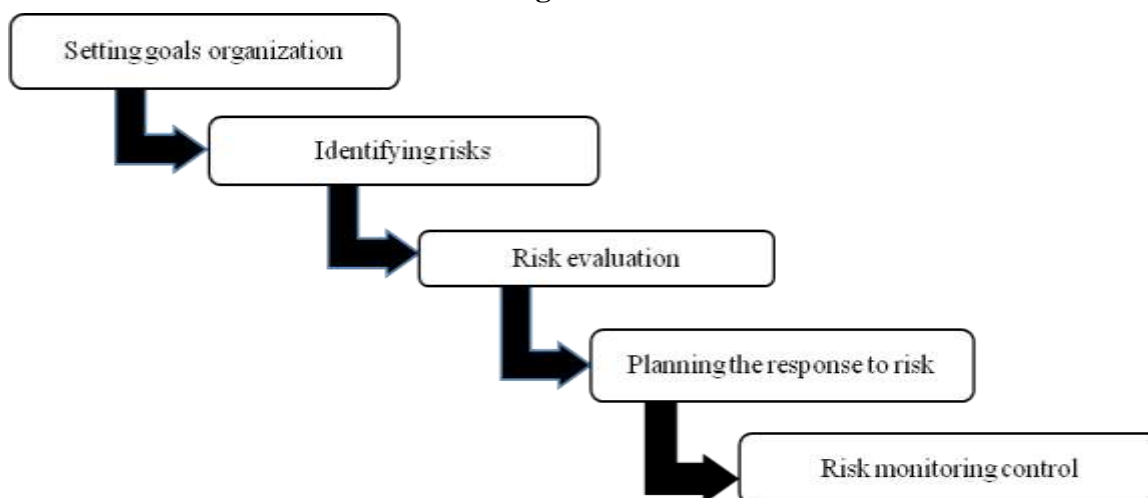
3. The risk within the educational organization

Within educational organizations, risks are identified and defined in relation to the general and specific objectives set, the realization of which is affected by their materialization. The existence of a system of clearly defined objectives within the educational structure is the key prerequisite for identifying and defining risks, and if the situation so requires, certain activities/tasks that play a decisive role in achieving the objectives can be further detailed to the required limit a sufficiently distinctive identification and evaluation of the risks. The number of risks increases in proportion to the complexity of the educational organization and the number of activities carried out within the structure compartments to achieve the established objectives.

In the context of the risk management process in the school identification organization the events that generate risks involve, on the one hand, highlighting opportunities (circumstances that benefit the organization) as well as some threats with dangerous effects from which it results the possibility of suffering losses in the activities that will take place.

The process of identifying risks within educational organizations begins with formulating objectives and setting out the activities necessary to meet them (Figure no. 1).

Figure no. 1. Structure of the risk management proceses at the level of the school organization



Source: Risk Management Methodology, Selected Project within the Program Operational Capacity Administrative co-funded by the European Union.

Objectives can be expressed in general terms but, at operational level, objectives are precisely defined through measurable results indicators. That is why objectives are the results to be achieved at the level of the organization and at the level of each structural component within it. The general objectives of the educational institution are found in manager plans, are the major intentions that the organization wishes to achieve in the future and are formulated in close coordination with the vision and mission of the organization and whose achievement is carried out in terms of efficiency, effectiveness and economy. In turn, the general objectives of the organizational structure are translated into specific objectives that associate the allocated resources, delivery deadlines, expected results and performance indicators, which are then communicated to field managers and to all teaching staff. The organization's specific objectives must be defined to meet the SMART (S-specific, M-measurement, A-achievable R-relevant, T-timely) requirements package, the objectives must be:

- a) specific - are directly related to the conditions that the organization seeks to achieve, transform or change;
- b) measurable - be quantifiable as they are more accurate and allow statistical analysis of the data;
- c) achievable/applicable - the objective can be achieved under the given conditions by the organization or the person responsible for its realization at reasonable costs;
- d) relevant/significant - the achievement of the objective must directly contribute to achieving a more important, more general objective, it must aim at a certain impact and address important and relevant issues;
- e) timely accessibility - timely achievement of objectives and usually use questions such as: During what period? When? Until?

After developing the specific objectives and activities, the director of the institution will proceed to the next step, identifying the vulnerabilities (internal weaknesses that can generate the risks) and threats (coming from outside the organization). Vulnerabilities are state of affairs, phenomena or processes inside the organization that diminish the ability to react to existing or potential risks or favor their appearance and evolution. Vulnerabilities usually play a dual role in diminishing the organization's ability to react to existing or potential risks and act as if it were a catalyst for the active manifestation of risks and threats.

Threats to the interests of meeting the general and specific objectives are the negative aspects of overburdening the organization's resources, or because of the limitations imposed on it by a changing external environment.

In a generic vision, the main general institutional objectives concern the following:

- a) the formation and preservation of a positive image of the educational unit by valorizing the components of the organizational culture;
- b) continuous improvement of educational management at the institutional level;
- c) centering the didactic activities on the beneficiaries;
- d) empowerment of teachers in order to fulfill certain managerial roles at the level of the institution and its structures;
- e) establishing a culture of education in the competitive context of the education system.

The risk management proctor at the level of the school organization is a continuous one that allows the public entity to be connected to the process of change and adaptation, and its effectiveness is mainly achieved by:

- a) identifying the threats / vulnerabilities present in the current activities of the public entity that could lead to the commission of corruption and fraud;

- b) risk assessment by measuring the likelihood of occurrence and the impact on the objectives if they materialize;
- c) risk hierarchy and prioritization based on risk tolerance set by entity management;
- d) establishing the most appropriate risk management modalities so that they fall within the limits of established risk tolerance and delegating risk management accountability to the most appropriate decision-making levels;
- e) monitoring the implementation of control measures as well as their effectiveness;
- f) periodic review and reporting of the risk situation.

Generally, regardless of the organization's specificity, risk identification can be made by formulating the answer to the following question: What would be the consequences of inappropriate implementation or misallocation of this activity or task?

The identified risk is expressed in a comprehensible and concise form with the help of a formula that has to capture the essential elements.

Specific to the risk identification process are the following determinations:

- a) risk is an uncertainty, contains a possibility and is not a fulfilled fact;
- b) the difficult issues identified are treated as lessons learned and in the same circumstances are considered as risks;
- c) situations and events with zero probability of occurrence are not considered as risks;
- d) the causes, but also the effects of the risks identified on the objectives, are highlighted;
- e) the identified risks are ordered by the nature of the consequences and priorities;
- f) risks are not defined by their impact on objectives because the impact is not a risk but a consequence of how the materialization of a risk affects those objectives;
- g) risks are not defined by denying objectives;
- h) no risks that do not affect the objectives are identified.

In school organizations, the risk identification phase is a participatory complex process which implies:

- a) drawing up a list of possible risks and a risk profile;
- b) risk assessment based on lessons learned;
- c) the comparative analysis between the established risks and those from the activities carried out by the previous organization;
- d) determining the risks that may arise during the performance of activities to achieve the objectives and which may affect the human, material, financial and informational resources of the school organization.

At the risk identification stage in the school organization, the director together with the field manager aims to discover all possible sources of risk in order to eliminate or mitigate the effects they may produce. Following the risk identification process, the director of the institution can quantify these risks and establish ways to address them in order to avoid situations where the organization is surprised by unknown events.

Methods of collecting data for the risk identification process according to the organization's specificities can be: a) questionnaire b) brainstorming c) the risk register.

- **The questionnaire** is a research tool used by executives or managers of institutions to collect the data needed to reach the research goal at the organization level to identify risks. The questionnaire used for risk identification has three important objectives: transforming the data, information and knowledge the director needs in a set of questions to which the subjects respond, encouraging and motivating respondents to engage in communication and cooperating, and minimizing the risk of errors occurring. The elaboration of a questionnaire for the identification of the risks involves the following steps: questioning, question

validation, ordering and grouping the questions, formulating the questionnaire and pretesting the questionnaire.

- **Brainstorming.** Using questionnaires helps decision makers identify one or more risks, but cannot tell them precisely what the source of those risks is and cannot indicate how this source affects the conduct of activities or the achievement of goals. These disadvantages can be solved in brainstorming sessions organized by decision-makers at the organization level. Participants, using the brainstorming method, channel their efforts towards all the sources of risk that may affect the performance of the activities, starting from the specific objectives of the organization. In this respect, the participants ask themselves "What do you think can happen during the activities of the managerial plan?" And each comes with the most diverse ideas. During the meeting, nobody should criticize the ideas of others to encourage the continuous flow of contributions. As a risk is identified, it is recorded, and at the end of the storm of ideas the risks will be read, analyzed and used in the preparation of risk alert forms according to internal procedures.
- **The Risk Register** is a document developed at the level of the institution which is regularly updated throughout the conduct of the activities included in the managerial plan. It becomes a component part of the risk management process specific documents and includes previous records that will be used to carry out future risk identification activities. The risk register may include: the list of risks, the list of risk responses, the main causes of the occurrence of the risks and the updated risk categories.

4. Conclusions:

Risk management is a process that involves identifying and assessing risks, identifying and establishing the response to risk to reduce the probability of occurrence of risks as well as mitigating the consequences resulting from their materialization.

Although the risks cannot be entirely eliminated, most can be anticipated and managed effectively and efficiently. For managers and managers of educational organizations the correct and timely identification of the risks associated with the specific objectives is the result of a complex of managerial experience factors, certified and proven skills, and a special ability to successfully combine specific methods, techniques and tools to identify risks, but also lessons learned.

Risk identification must be a dynamic, continuous process integrated into the management process of the school organization that contributes to the achievement of the goals planned by the organization.

The application of the risk identification process in educational organizations, though hardly accepted by the teaching staff and the auxiliary teaching staff, led the managers to reflect on the functional organization of the institution they represent, and establish with greater responsibility the general and specific objectives, develop procedures and identify the risks that may affect the achievement of the objectives. Although the impact of the implementation process of risk management is limited, it can be said that there is an increasing interest of managers and teachers in knowing the general requirements for meeting the standards set by the legislation in force.

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PERSONAL DEVELOPMENT - A DRIVING FORCE OF CHANGING THE EDUCATIONAL ORGANIZATION

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***Abstract:** This paper presents the role and importance of personal development of human resources in the context of organizational change in the pre-university education system. Personal development is essential to all actors involved in the educational act and causes changes from the individual level to the organizational level. The teacher has to cope with all the confrontations that take place in the process of change at the organizational and educational level, but also in the relationships with others as well as with oneself.*

***Keywords:** personal development, educational system, organization, changing, teaching career.*

***JEL Classification:** I21.*

1. Introduction

In educational organizations, the process of change is required at each component level. In the broad sense, organizational change is being undertaken "to improve the performance of the organization, a change that takes place through a large and complex process that involves successive scrutiny of stages" (Brăduțanu, 2012, p.27).

In a narrow sense, the changing occurs at every person's level. People are the engine of any organization, and their personality influences its change.

The personal development of the organization's members means "the ability to invite other people together to advance towards a vision" (Szekely, 2013).

Thus, the person is personally transformed, being a circle of influence for herself and for others. This is most often reflected in the educational organization. Teachers are constantly exposed to the change process, being aware of the responsibility that arises during their teaching career.

2. Aspects of personal and professional development in the teaching career

Concerns about the study of the concept of personal development have been manifested since antiquity, by theologians, philosophers and psychologists, and later influenced by Oriental and Western religions. Today, many concepts and theories of personal development are used, tested and researched in the clinical psychology, cognitive and neuroscience.

Apart from scientific research, personal development has begun to emerge as a practical science accessible to anyone because people have become aware of the fact that it is in their power and it is up to them alone to improve their health, quality of life, relationships, level of spirituality including their own career.

For a teacher, the importance of development has become an axiom. Primarily, the teaching profession involves a permanent formation and development of the teaching staff, so that it engages in a process of changing that will periodically develop the didactic career until the end of it. He constantly improves his / her theoretical and practical knowledge in order to be as good as possible, adds new skills and qualifications.

The requirements of the educational system are, as a rule, constantly changing, there are always new things the teacher needs to be aware of in order to remain

competitive. This continuous training process is part of the professional development of each teacher.

Professional and personal development are two notions that, although different, are inseparable in the current context of the education system. They lead to continuous actions of change. But some efforts are needed to realize what needs to be improved, what new skills and behaviors must be learned in order for personal and professional life to follow the desired trajectory. Professional development is indispensable for those who aim at success in teaching and is closely linked to personal development if it is to achieve the proposed personal and organizational goals.

Personal development is a key element in the development of human resources by M. Armstrong (2005, p. 17) and represents "increasing the ability of an individual and harnessing his potential through life and education experiences".

Today, the idea of personal development is becoming more and more popular, especially among teachers. Regardless of the professional competencies acquired in the context of initial training or within the teaching staff, either formally or informally, we can not minimize the importance of the personal development of the teaching staff.

3. The importance of personal development in the context of changing the educational organization

Prior to addressing the importance of personal development in the context of changing the educational organization, it is imperative to define key concepts.

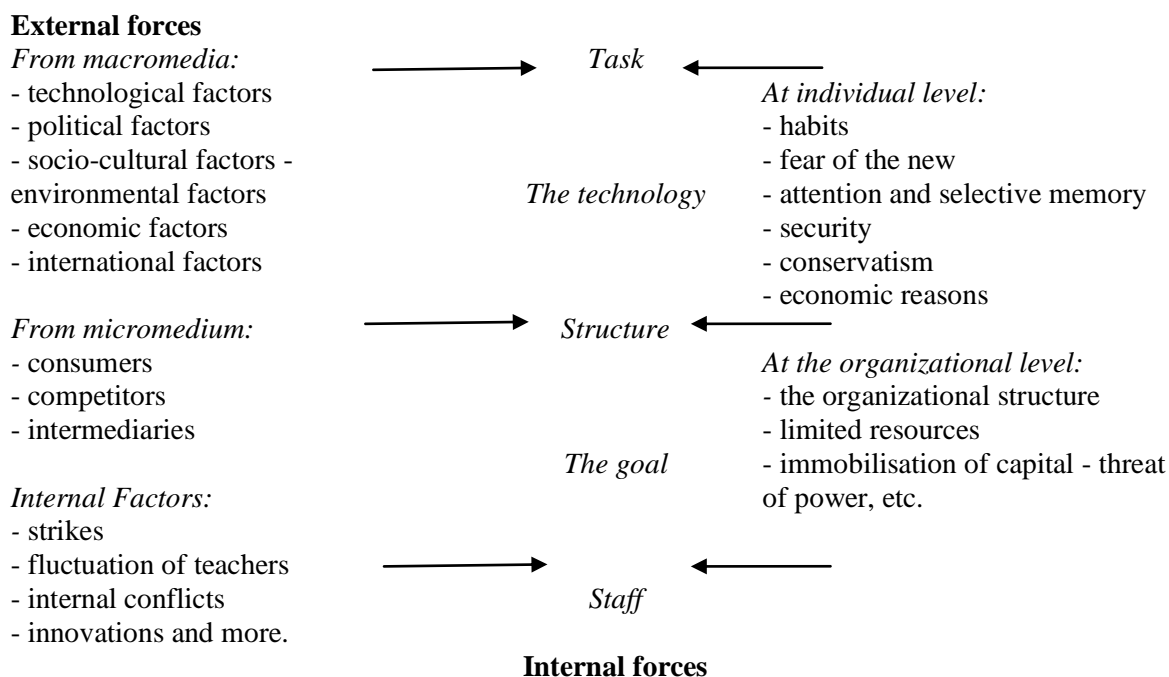
To change, according to DEX, is to replace one thing with another or someone with someone else (of the same nature), to give something of another form, another aspect; modify, transform, move; (about people) to change their appearance, nature, conduct etc. (The Explanatory Dictionary of the Romanian Language, 2009, p.959).

The organization is a collectivity of people who work together to achieve a common goal, untouchable for an individual.

"Inside, the organization can be perceived as having four components in interaction: organizational tasks, structures and systems, culture and people" (Repanovici, 2007, p.34). People come into an organization with their different skills, knowledge, experiences, personalities, values, attitudes and behaviors. It is necessary for their organization to adopt changes in order to survive in an increasingly unpredictable environment. The organization must consider the changing as a good opportunity, because it helps to grow and thrive. Changes can provide opportunities for people involved: increasing professional satisfaction, improving working conditions, improving adopted practices, increasing efficiency etc.

M. Şendrea asserts that change is "a process that includes a sequence of steps of a generally valid nature: the action of internal and external forces that demand a change in the organization", as shown in Figure no. 1.

Figure no. 1. The dynamic balance of change



Source: Şendrea, M., 2017. Drivers of Organizational Changes. *Economica*, 2(100), pp.16-23.

All internal and external forces, listed above, are reasons why organizational changes are inevitable, concluding that "only the organization can produce change within" (Şendrea, 2017, p.18).

M. Predișcan (2001, p. 14) states that "... *the organizational changing* is the action, a set of actions, a process that seeks to modify, partially or totally transform an organization, its component elements or the processes that have place here, allowing the transition, from the present state to a desired future state, which differs quantitatively and / or qualitatively from the first. The objective of organizational change is to establish a new state instead of the existing one".

In the conception of E. Mare (2006), organizational changing is the process of adapting an organization to the requirements of the environment in which it operates, through the partial or total transformation of internal processes and available or attracted resources, based on the anticipation of future reactions and the legal and effective management of the potential risks associated with the business environment.

Within the educational organization, the changing occurs imminently - it results from legislative, methodological, curricular changes, but the perception of change always relates to the actors involved in it - human resources.

As every ever-expanding organization, *the educational organization* is in a position of permanent adaptation to external requirements, to strategically improve the training arrangements, to give its members the certainty of continuous professional and personal development.

In any educational organization, staff development is currently a very important issue. Executives are permanently interested in working with specialized staff who has the knowledge, skills, abilities and attitudes necessary to professionally perform their job duties.

A brief review of the regulatory framework governing the work of the pre-university education staff indicates that a teacher should have multiple general and specialist knowledge, a range of skills and, above all, an extensive range of professional attitudes.

The question we ask is: does the teacher have the capacities to adapt to the changes in the educational environment as a result of the successive reforms of the last 30 years? Which personal skills have a greater influence on organizational change?

A possible answer can be found at I.R. Herman (2018), who presents besides the personal skills necessary for the individual development of the didactic framework, advantages and limits of his personal development. By actively engaging in their own personal development process, teachers can acquire "the necessary skills to adequately support their pupils' development needs." Recent research studies (Deni Sipler, 2006; Herman, 2018, pp.701-702) suggest that a personal development program for teachers is more likely to be successful when it includes: a management team of the organization that appreciates the importance of personal development:

- A global approach involving the entire organization;
- Positive relationships between staff and students;
- Promoting a positive environment in the educational organization and in the classroom;
- Teaching strategies that promote active participation and independent learning among pupils;
- A school curriculum containing concepts such as risk and protection factors, life skills, connectivity and adaptability.

Starting from the supposition that a teacher should be a good psycho-pedagogue to give birth to an interactive and formative universe for his students, the author (Herman, 2018) presents, on the one hand, a number of advantages of personal development of teachers, as well as its limits, which we synthesize in Table no. 1.

Table no. 1. Advantages and limits of the personal development of teachers

Advantages of personal development of teachers	Limits of personal development of teachers
<ul style="list-style-type: none"> • Better adaptation to the requirements of the school and social environment; • Reducing the phenomenon of burn-out; • Increasing self-esteem; • Welfare consolidation and management of negative emotions; • Reducing stress and acquiring stress management techniques; • Developing the ability to creatively solve various problems; • Optimization of communication skills; 	<ul style="list-style-type: none"> • The specific age of the adult and the social implications of the different roles played by the teachers; • Diminishing curiosity, which requires a restructuring of information according to the needs and interests of the teacher; the memory capacity of the adult is smaller, which implies an optimal logical and psycho-pedagogical structure of the volume of information; • Reforming or shaping the personality of teachers is often difficult because the adult is sometimes characterized by conservatism, stiffness and increased resistance to change; • The need to constantly duplicate the theoretical discourse with examples of real practical relevance;

<ul style="list-style-type: none">• Improve interactions with other educational actors (students, students, parents, work colleagues).	<ul style="list-style-type: none">• Decrease in teacher authority, on the one hand, due to the often small age gap between educator and educated and, on the other hand, because social roles deeply mark the personality of adults.
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Source: Herman, I.R., 2018. Teacher's and students personal development needs-Theoretical perspectives. *The European Proceedings of Social & Behavioural Sciences*, pp. 701-702. [online] Available at: <https://www.researchgate.net/publication/326044262_Teacher's_And_Students_Personal_Development_Needs_-_Theoretical_Perspectives> [Accessed 04.04.2019].

4. Conclusions

One of the priorities of today's knowledge-based society is to create a flexible workforce capable of keeping pace with permanent change through good management of personal development with a focus on personal development.

At present, this is a desideratum designed to help the teacher meet both the demands of the educational organization he is part of and the personal satisfaction in the current context of change. In this respect, personal development helps teachers to cope with all the confrontations that take place in the process of change at organizational and educational level, but also in relationships with others and with oneself.

Once the teacher has reached an optimal level of personal and professional development, he becomes a facilitator of change in his organization, his teaching activity having an impact on all the educational actors he will interact with.

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SOVEREIGN EXTERNAL DEBT MANAGEMENT IN THE REPUBLIC OF MOLDOVA – CHALLENGES AND SOLUTIONS

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Abstract: *One of the major international problems continues to be considered the sovereign external debt. A lot of countries use external loans when domestic savings are insufficient to finance consumption and national investment. Each state, as a debtor, is required to manage correctly and maintain the sustainability of the sovereign external debt. Excessive and inappropriate external indebtedness will generate sovereign risk, which negatively affects future economic policy. In addition, fiscal, monetary, currency and trade policies directly influence the volume of contracted loans. In order to successfully avoid the difficulties created by external debt, policies must be chosen so that key economic variables, such as interest rate, exchange rate of the national currency, international reserves to express real costs for decision-making authorities, and governments to accompany their public investment programs with efficient measures to capture budget resources and mobilize domestic and attracted savings. The scope of this work paper is to determine the sustainability of the sovereign external debt of the Republic of Moldova, the efficiency of its management and the impact on the national and world economy.*

Key words: *sovereign external debt, sovereign defaults, real exchange rate, external borrowing, internal savings, financial assistance.*

JEL Classification: *E43; F34; G12.*

1. Introduction

The external debt is currently the major component of the country's total public debt. In the Republic of Moldova, in recent years have been appeared differences of opinion on state indebtedness. Some consider that external debt is the indispensable tool for sustainable economic development under the current conditions of global capital markets that can provide advantageous sources of funding, for example, relatively easier access, with lower costs than in previous years, as well as the possibility to better adapt to circumstantial risks by recourse to new financial instruments. Others affirm that the country is indebted, and the growing of the sovereign external debt increases the country's risk, the loss of sovereignty over time, and national financial stability may become vulnerable due to a deterioration in the balance of payments, a situation generated by reimbursement schemes with significant negative budgetary effects. They propose the use of domestic loans, contrary to the current trends, which provide for limiting to expensive internal sources. They believe that the lending capacity of financial institutions is decreasing and interest rates will increase, increasing the external debt service.

The purpose of this article is to determine the sustainability of the sovereign external debt of the Republic of Moldova, the efficiency of its management and the impact on the national and world economy.

The object of the research is the sovereign external debt, the legislative and theoretical aspects, the possibility to apply in practice the requirements demanded by the specialized institutions in view of the decrease of the debt.

The subject of the research is the sustainability of the sovereign external debt of the country during the period 1992-2018, legislative, theoretical and practical aspects.

2. Theoretical approaches to the management of sovereign external debt

Some authors treat the sovereign external debt as the total of loans or credits received by a country or private economic agents in international realities, as well as other financial obligations resulting from the context of the integration of the world economy (Cocioc, 2001).

According to the Law of the Republic of Moldova "On Public Debt, State Guarantees and State Accreditation" the sovereign external state debt is an integral part of the state debt representing the total amounts of the outstanding obligations and of the interest owed and outstanding, contracts on behalf of the Republic of Moldova, by the government, through the Ministry of Finance, from non-residents of the Republic of Moldova. In the context of the present law, state securities issued for placing on the international financial markets, which are purchased by residents of the Republic of Moldova, are attributable to external state debt.

In accordance with the Law on the State Debt and the State Guarantees, in the Republic of Moldova, instruments generating external state debt are:

- a) state securities, representing a loan agreement with the value expressed in any equal
- b) currency, with the exception of the national currency;
- c) loans from governments of other states and government agencies of other states;
- d) loans from foreign financial institutions and international financial organizations;
- e) other bilateral or multilateral loans.

Sovereign external debt is a complex notion that cannot be only analyzed and appreciated in the economic context of each country. Increasing in absolute figures of the volume of external sovereign debt and external debt service does not, necessarily and always, mean greater difficulties for the indebted country. At the same time, the volume of a country's external debt does not make sense unless if it relates to the country's economic potential, the potential to obtain export earnings in convertible currency.

The lack of internal financial resources of a country determines the need to appeal to external financing sources by contracting foreign loans. The sovereign external debt allows a country to invest and consume more than it would allow by the current domestic production limits, and actually, to fund capital formation not only by mobilizing domestic savings but also by attracting savings from countries with surplus capital.

In conjunction with internal accumulation, the external borrowing contributes to the financing of a larger volume of more important investments and ensures mobilization of the resources available to the country and improves its use.

The external loans can also be used in financing the temporary balances of payments, thus exempting the authorities of taking drastic measures that may compromise the country's reform program.

Accumulating a large volume of external public debt emphasizes the need to substantiate a policy of external public indebtedness as appropriate as possible to the needs of restructuring of the national economy.

In the short term, it may be considered that the external borrowing volume should be determined so that the external financial flows in addition to the internal ones correspond to the global demand that is compatible with the internal and external balance.

In the long-term, the problem consists in determining the most efficient way of using external borrowers for ensuring the promotion of the high and stable economic growth rates. Using this way, the external loans make sure in the future real external resource flows, necessary to pay the external public debt service.

On the other hand, one of the main strategic objectives is to act in such a way that the increase of the public external debt falls within the limits that do not exceed the country's capacity to provide its service, so that foreign loans be compatible with the achievement of a balance of payment position which can be sustained on medium and long term.

Excessive and inadequate external indebtedness will generate high levels of debt service that will negatively impact future economic policy and, implicitly, the economic growth. Management of the sovereign external debt has influences on many areas of economic policy. In addition, currency and commercial policy, as well as monetary and budgetary policies, directly influence the volume of external borrowing required to be contracted. It is very important that the factors involved in debt management know which the expected evolution of the macroeconomic situation will be, and the decision-makers in the economic policy have a very clear idea of the volume of the new borrowing requirement and of the total amount of payments in the debt service. The existence of a good communication system between those responsible for debt management, reserve managers, planners and monetary and budgetary policy makers is essential to achieve a healthy macroeconomic management.

At governmental level, external financing must be seen in the broader set of macroeconomic policy decisions. The major dilemmas generated by external sovereign debt can be successfully avoided when economic policies are so chosen that the key economic variables - especially interest rate and the exchange rate of the national currency - to express real costs for decision-makers, and governments join their public investment programs with effective measures of capture of the budget resources and mobilize the internal economies.

The Sovereign external debt problems rarely arise when macroeconomic policies are chosen so that the key economic variables (especially interest rates and exchange rates) deliver the real economic costs to decision-makers, and governments bring public investment programs with effective stringency of internal savings. But, as the debt crises show, countries can at a certain time realize that they have been overwhelmed by economic deterioration, and that they have become vulnerable to deflationary pressures and slowdown economic growth.

The program of the external borrowing contracted by a government represent a fundamental political and economic decision. The decision on the volume of external borrowing attracted to any country is determined by two factors (Ciobu and Luchian, 2010):

- what volume of external capital the country can absorb effectively;
- what volume of external debt the country can serve without the risk of debt servicing problems.

Each factor is determined by the management quality at micro and macroeconomic level. The interaction between the ability to cover the service of debt, the type of financing available and the decision to contract a loan increases in the complexity of the increase in the number of credits that form the external debt and the diversification of the sources of financing which these credits represent.

The Ministry of Finance elaborates the Annual State Debt Program, which includes all internal and external state borrowings that will be contracted as well as those that have been contracted in the past and are in force at the time of the drafting of the Program.

Decisions on the approval of external state borrowings adopted by the Parliament on the basis of the external state borrowing contracts submitted by the Ministry of Finance and approved by the Government.

There are several reasons why, both a developed country and a developing one, appeal to debt restructuring (Mărgineanu, 2009):

- reducing the burden of external debt service by reimbursement an expensive loan in advance and contracting for another one that is cheaper;
- decrease of the total value of the portfolio;
- if the borrower faces by payment arrears or too much debt service, the restructuring will help him to re-plan his payments;
- improving the structure of the loan portfolio, including their terms (maturities, currencies, etc.).

The most common forms of debt restructuring are:

- The partial or total cancellation of the principal payment and / or related interest on a loan or part of the total debt;
- The replenishment of the payment scheme, respectively of the terms relating to principal and interest;
- The refinancing or contracting of a new loan in order to pay part of the already existing debt;
- The debt conversion, which means converting debt types into other titles such as stocks, bonds, etc. Conversion may also include the consolidation of short-term loans in medium and long-term loans;
- The redemption / reduction of the debt through the early payment of a part or of all of the actual debt (for example the total draws, less the total depreciation of these loans) at the full or discount price, according to the contract between the partners.

The restructuring modalities, shown in the figure below, involve a number of risks such as: country borrower risk; the adjustment program involves the implementation of austerity policies; the risk that the rescheduled debt need to be fully reimbursed.

3. The analysis of the evolution of the sovereign external debt structure

The evolution of the sovereign external debt of the Republic of Moldova from its beginning in 1991 to the present was determined by the succession of several phases of different character.

In the first phase the sovereign external debt was mainly accrued. The structural changes that took place in the early years of independence have hit hard those economies that were dependent on economic relations with Ukraine, and the Russian Federation especially Armenia, Azerbaijan, Georgia, Moldova and Tajikistan. Arrears accumulated on the base of energy payments have made that the external debt accumulate at an accelerated pace in these states. Ideally, debt accumulating with higher GDP growth rates would not create problems that it created in its absence.

The regional crisis, the internal debt moratorium in the Russian Federation, the restructuring of Ukraine's external debt, and the devaluation of national currencies in CIS countries marked the beginning of the second phase. Currency depreciation, which naturally affects the budget revenues, has accentuated the complicated nature of external debt service payments and has stamped its stock for successive years.

In the current phase, against the backdrop of economic recovery, the external debt represents one of the biggest problems with which the governance is faced now. It is clear the need to restructure a considerable part of the debt in order to reduce the burden it exerts on the budget and gross domestic product and on the long-term rebuilding of credibility of the country.

Among the factors that have influenced the evolution of the sovereign external debt, we can mention:

- Declining the country's rating by international rating agencies as a result of the

- worsening of the economic situation caused by the political instability and the slow pace or even the stopping of the implementation of the structural reforms;
- Exceeding the volume of payments to cover the external debt, direct and guaranteed public debt, compared to the drawdown;
- A factor for the growth of the external debt (ED) stock is the perfecting on the securities of a part of the debt of the Republic of Moldova for energy resources. Thus, at the beginning of 2000, bills were issued in favor of JSC "Gazprom" from Russian Federation in the amount of 90 million USD, which has contributed to a considerable increase in the external debt stock, while also reducing the debt stock of other sectors for energy resources.

The first foreign loan of 10.1 million USD was taken by the Republic of Moldova in 1991 from Romania for the import of consumer goods. In 1992, the following credits were contracted: European Community - 31.59 million USD for import of cereals, medicines, baby food; US - 9,854 million USD for import of cereals; China - 3,758 million USD for the import of baby goods.

Starting with 1991, when the first foreign credits were granted to Moldova, and till now a rapid increase of external debt has been registered, accompanied by a slower increase in foreign exchange reserves, which has caused a significant increase in foreign debt. Thus, on 30.09.2015 the external debt of the state constituted 6498.39 million USD compared to 2523.78 million USD on 31.12.2006.

The Republic of Moldova's gross external debt declined by 304.98 million USD (-14.11%) in the 2016 and amounted of 6 193.38 million USD. Compared to 2018, the gross external debt registered an increase of 234.81 million USD or 12.26%, as the main causes are the evolution towards a market economy, the liberalization of trade and the attraction of direct investments through different fiscal facilities, the implementation of the Strategy of Attracting Investment and Export Promotion for 2006-2011 and various projects.

According to ED of 6498.39 million USD, on 30 September 2015, the Republic of Moldova ranked on the 109th in the world ranking of countries with external debt. The most indebted being the US - 15 trillion USD, followed by the United Kingdom with 8,981 billion USD, Germany with 4,713 billion USD. One point that need to be mentioning is that China was on the 18th position and is preceded by Greece with a volume of gross of the sovereign ED of 532 billion USD, which in terms of GDP are at different extremes. Romania at the end of last year reached the gross of the sovereign ED of 98 billion USD.

In 2009 and 2010, according to the value of this indicator, the Republic of Moldova has been categorized as a heavily indebted country, registering just over 80%, rising by 14% compared to 2008. This increase was driven by the GDP-driven decline influenced by the systemic and specific economic factors, as well as the further increase of the sovereign ED in the favor of public debt, a result of the change in governmental decision-makers and political upheaval in the Republic of Moldova, which recourse to new credits for covering the state expenditures.

In the period of 1998 till 2003, the indicator ratio reached the highest levels, to 131%, as a result of GDP decreased, influenced by two absolutely devastating crises in 1998-2000: a financial one that came from the Russian Federation and destroyed the economy of the Republic of Moldova, which began to rise in 1997, and the second crisis was constitutional, because a president at a certain moment wanted to transform the Republic of Moldova into a presidential republic.

Analyzing the growth rate of ED and GDP, we see a direct and not proportional influence. The 66% increase of the sovereign ED in 2000 was the lever of the national economy claim. Accelerated rhythm from the year 2009 till 2014 than from the year 2016 till 2018 generated a more accelerated growth and of GDP.

From the table 1 we can see that the sovereign ED share in the export of goods and services exceeds the 220% threshold since 2006, according to the World Bank methodology, of the Republic of Moldova is a part of the heavily indebted countries group. At the end of 2011, it recorded 236%, decreasing by 54%, due to the 40% increase in the export level and the inverse influence of the ED rhythm of 13.9%, which would mean that the ED coverage through exports is theoretically achieved in 2.5 years as an alarming signal and at the end of 2015 reached the level of 330.4%. The maximum level of this indicator was 358% in the year 2000 due to the considerable increase in nominal values of external debt.

Table 1. The evolution of indebtedness indicators during the period 1992 - 2017 (some selected years, stock at the end of the year)

Year	$R_{\frac{1}{0}}^{ED}$ %	Share of the sovereign external debt in GDP			Share of the sovereign external debt in export			The sovereign external debt per capita		
		GDP, \$	DW _G DP %	$R_{\frac{1}{0}}^{GDP}$ %	Export, thousands \$	DW _X %	$R_{\frac{1}{0}}^X$ %	Population, capita	DW _{cap} %	Δ, +/-
1992		2 319 243 407	1,7		-	-	-	3 709 000	10	
1997	27,7	1 930 071 445	55,6	13,9	875 000	122,7	10,1	3 659 655	293	+
1998	-1,2	1 639 497 207	64,7	-15,1	630 000	168,5	-28,0	3 652 771	291	-
1999	-4,1	1 170 785 048	86,9	-28,6	465 000	218,9	-26,2	3 646 999	279	-
2000	66,0	1 288 420 223	131, 2	10,0	472 000	358,0	1,5	3 639 588	464	+
2001	-3,1	1 480 656 884	110, 6	14,9	568 000	288,4	20,3	3 631 460	451	+
2002	10,0	1 661 818 168	108, 4	12,2	644 000	279,8	13,4	3 623 059	497	+
2003	7,6	1 980 901 554	97,9	19,2	790 000	245,4	22,7	3 612 869	537	+
2007	33,3	4 402 495 921	75,3	29,2	1 341 798	247,2	27,6	3 576 904	927	+
2008	23,0	6 054 806 101	67,4	37,5	1 591 416	256,4	18,6	3 570 107	1143	+
2009	6,8	5 439 439 764	80,1	-10,2	1 287 571	338,5	-19,1	3 565 603	1222	+
2010	9,8	5 808 796 184	82,4	6,8	1 582 109	302,6	22,9	3 562 000	1344	+
2011	13,9	7 001 270 000	77,9	20,5	2 216 815	246,0	40,1	3 559 500	1532	+
2012	9,7	7 284 225 800	82,1	4,0	2 228 060	268,6	0,5	3 548 300	1686	+
2015	-90,39	6 513 000 000	99,7	-4,4	1 966 837	330,4	-5,27	3 555 200	1828	+
2016	-20,30	6 796 000 000	91,1	24,0	2 044 611	314,9	26,3	3 553 100	1743	-

2017	9,03	8 130 000 000	85,7	6,09	2 424 972	287,2	6,37	3 550 900	1961	+
2018	30,65	11 206 000 000	64,2	3,64	-	-	-	3 547 500	2029	+

Source: prepared by the authors based on the data of the National Bank of Moldova, the World Bank and the National Bureau of Statistics [online]. Available: < www.bnm.md/md/external_debt>, <<http://databank.worldbank.org>> and <<http://www.statistica.md/category.php?l=ro&idc=336>>.

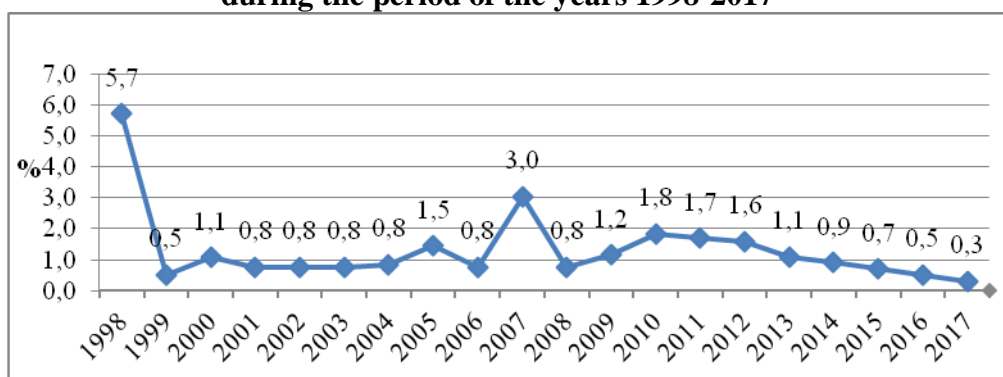
We observe that in 2009 the value of this indicator compared to 2008 increased by about 100 percentage points, to 338,5% as a result of the sovereign ED growth and 19.1% foreign trade decrease as a result of lower purchasing power of foreign markets.

As an evolution, over the past three years, the upward trend in external debt per capita has been observed, so at the end of 2017 it reached 1961 USD, rising by about 218 USD compared to the previous year, and in 2018 – 2029 USD, - compared to 2017 with 68 USD. In fact, the population of the Republic of Moldova has remained at about the same level, but every citizen of the Republic of Moldova has become 4,5 times more indebted than in 2000.

For comparisons, we highlighted the volume of sovereign ED per capita in a number of countries, such as: Luxembourg - 3 696 457 USD, Germany - 57 755 USD, United Kingdom - 144 388 USD, US - 47 568 USD, Romania - 5 082, 421 USD, China - 396 USD, Ethiopia - 51 USD, Taiwan - 0 USD. I can say that \$ 1500 is a bearable ED, but in relation to the economic situation of the Republic of Moldova, with a high credit risk and other factors, it is a burden.

The high values of this rate in the period of 1998 indicate a situation characterized by excessive consumption and low return on investments in that period but also determined by the high interest rate on loans previously contracted (Figure 1).

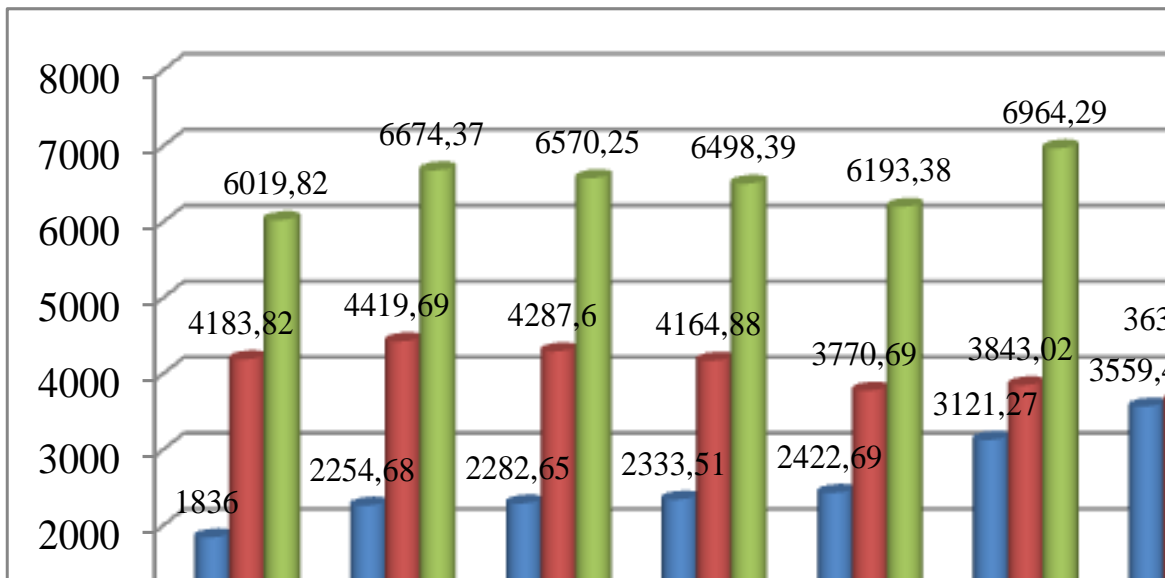
Figure 1. The evolution of the average interest rates on new contracted loans during the period of the years 1998-2017



Source: prepared by authors based on the data of the World Bank [online]. Available: < <http://databank.worldbank.org>>.

From the above figure we observe an increase in the interest rate, which indicates a possible decrease in creditors' confidence, a higher country risk, but it can also be caused by the increasing of demand.

Figure 2. The diagram of the sovereign external debt dynamics on maturity



Source: prepared by authors based on the data of Annual Report of the NBM 2012-2018 [online]. Available: < www.bnm.md/md/external_debt >.

Due to the access to loans with a low interest rate after 1999, the interest rate registered a slower growth rate compared to the previous years, thus compared to 1999, the sovereign ED increased about 5 times, while the interest rate by 2 times.

The dynamics of the external debt on maturities can be presented in figure 2.

It is noted that the rhythm of the partial reduction of the long-term external debt led to a decrease from 3843.02 million USD to 3639.68 million USD in the third quarter of 2018, but the results at the end of 2018 can make a difference.

At the same time, we can observe an increase in the short-term external debt, which has increased from 3121.27 million USD to 3559.42 million USD in the same third quarter of 2018.

In addition to the aforementioned causes that influenced the evolution of the external debt, we can also mention such reasons as:

- Accumulation of the external debt remains a fiscal problem because the budget deficit and the continuing increase in energy sector debt exert increasing pressure on the Government's need to finance from the external credits.
- Underdevelopment of the national capital market;
- The low level of budget revenues and high budget expenditures are major problems of the fiscal budget;
- The noncompetitive export structure and the regional financial crisis.

Reducing the sovereign external debt burden in total debt, reducing the sovereign external debt in GDP, benefiting from more concessional loans, increasing the maturities on loans contracted, reducing the interest rate on loans contracted by the beginning of the 21st century, are part of the efforts of improving the external debt management in the Republic of Moldova.

And the fact that debt has increased by 4 times in the last 10 years, demonstrates the fragility of the national economy, the high degree in which the sustainable development of the country depends on the external sources of financing.

4. Sovereign external debt management in the Republic of Moldova

From the point of view of the institutional framework, the Republic of Moldova has adapted it according to the best practices, so the internal and external public debt is managed by the Ministry of Finance as the public debt has budgetary implications and the coordination between budget and debt development facilitates the efficient debt management and the fiscal deficit, and the private one by the National Bank of Moldova.

In the case of the Republic of Moldova, it is necessary to organize the external debt management activity in an efficient framework, under a well-defined indebtedness strategy, integrated into the country's economic and social development program. This is because external loans do not contribute to the economic growth as the condition as the condition they are used to finance non-productive activities or to counterbalance excessive capital exports; in fact, in this case, these loans could even exacerbate the pressures on the balance of payments.

To deal with this potential risk, the government has to make the right decisions and also to make the right strategy:

- facilitating the purchase of state securities by international investors;
- revision of the rights and obligations of primary dealers, as well as performance evaluation criteria for primary dealerships;
- enhancing communication, including conducting frequent meetings with state securities market participants to regularly assess investment needs at market level as well as market expectations;
- ensuring further transparency and predictability of the state securities market by regularly publishing on the Ministry of Finance website information related to transactions: timing and placement announcements, auction results, interest rate information for marketed SSs;
- identifying the opportunity of evaluating the country rating of the Republic of Moldova by international rating agencies (other than Moody's).

In order to deal with the problem of official exchange rate depreciation in relation with the main currencies in which the external debt is denominated, the government has to increase the share of net financing in national currency, which would facilitate the reduction of foreign exchange exposure, while taking into account the absorption capacity of the domestic market and, in general, the demand for debt instruments, expressed in MDL. The government has also to apply provisions to the estimate of the government debt balance and its service costs in the event of significant fluctuations in the official currency of the domestic currency.

The monetary policy response is especially important in this context. As long as monetary policy is in the position to stabilize cyclical fluctuations, demand shocks and thus also changes in government spending will hardly affect production. If, for example, the central bank reacts to a rise in government spending by raising interest rates, then the additional government demand will be compensated for through a dampening of aggregate demand; there will be no multiplier effect. The more stabilization through monetary policy is supported by changes in the exchange rate, the more effective it will be. In a regime of fixed exchange rates, monetary policy has to act within tight constraints.

There are also other methods and innovations that can help Republic of Moldova to diminish the debt burden. One of the main risks that can affect the national economy is the operational risk. The country has to be ready and to implement changes and also to make contingent strategies in order to deal with it. In our case, the government has to:

- developing an operational risk management plan;
- use the possibilities of the updated version of the DMFAS 6.1 debt management information system for periodic validation of the database;

- ensuring data security by keeping children of the information system in a safe location, which would facilitate the continuity of work in case of unforeseen situations;
- further elaborating and guiding the activity according to the Risk Register related to the achievement of the objectives, with a clear establishment of the control activities necessary for the efficient management of the risks related to the debt field;
- continuous improvement of staff capabilities.

5. Conclusions and recommendations

The Republic of Moldova compliant with the best practices, managed to reduce the operational risk of management, adopting different laws on debt regulation, a suitable institutional framework, but a shortcoming in the management of Moldova's external debt is the lack of a management strategy and determining the evolution of the external debt. The impediments to the development of a strategy are both objective and unfounded as political instability, lack of knowledge, motivation to carry out this analytical exercise.

The development of government debt has to be viewed in conjunction with the development of government assets, which do not chart in government debt-to-GDP ratio. Of course, the relationship between government assets and government debt cannot be compared to the balance of private assets and private debt, problems of measurement being just one of the reasons. At the same time, both are connected through the public sector investment activity, and borrowing for asset building should be viewed more favorably than borrowing for consumption. In addition, the sustainability of government debt also depends on the level of implicit debt as well as the covert government debt outsourced to funds and other. Finally, the potential impact of demographic developments on economic growth also influences debt sustainability.

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DEVELOPMENT AND PERSPECTIVES OF SMEs IN THE EUROPEAN UNION

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Abstract: The article includes a brief overview of SME development in the EU, in the context of their sustainable development. Following the financial crisis of 2007-2008, SMEs in the EU-28 have contributed significantly to the recovery and further expansion of its economy. This contribution of SMEs to the European economy has exceeded expectations, the number of newly established SMEs has far outstripped the growth of already existing SMEs. New and expanded businesses have benefited from economic growth, especially for fast-growing businesses, based on innovative products and a growth strategy. In the years 2008-2018 it was intended to improve the entrepreneurship approach in Europe, to impose regulatory and SME policy and to remove remaining barriers to their development. Also, the article proposes solutions for improving the activity of SMEs by implementing the circular model and their transition from the linear economy to the circular economy.

Key words: development SMEs, efficiency, sustainability, tranzition, circular economy.

JEL Classification: L1, O12, O52.

1. Introduction

SMEs are the ideal actors in the free market economy because they are private enterprises with decentralized management; are motivated, flexible and adaptable and represent the most dynamic segment.

They also have a rapid response to consumers' needs and are fast-tracking niche markets, supporting both the competitive mechanism and their large number, and contribute significantly to GDP formation, with a significant share in the structure of exports.

Through paid taxes they have an important role to play in taxing, creating national budgets, creating most jobs, both directly and indirect, forming the "backbone" not only of the economy but also of society:

At European level, the contribution of small and medium-sized enterprises to job creation, growth, social stability and innovation is officially recognized and appreciated as essential to boost competitiveness.

The official definition (Recommendation 2003/361/EC) of SMEs takes into account three different factors (employment level, turnover level and balance sheet size).

SMEs comprise three different categories of businesses: micro, small and medium-sized enterprises (Table1).

Tabel no. 1. Categories of SMEs

Categories of SMEs	Employees	Turnover	Total balance sheet
Micro-enterprises	< 10	< €2 million	< €2 million
Small businesses	< 50	< €10 million	< €10 million
Medium enterprises	<250	< €50 million	< €43 million

Source: Commission Recommendation of 6 May 2003 concerning the definition of micro, small, and medium-sized enterprises (2003/361/EC), Official Journal of the European Union, L 124/36, 20 May 2003

The Small Business Act for Europe adopted in June 2008 reflects the political will of the European Commission to recognize the central role of small businesses and to codify it in a coherent framework for the EU and its Member States.

Its aim is to improve the fundamental approach of entrepreneurship in our society and to anchor the Think Small First principle in European policy and administration.

European SMEs should benefit from greater and better targeted support, so that in the long term they maximize their potential to create sustainable growth and more jobs.

The Small Business Act (SBA), adopted in June 2008 and revised in February 2011 (Commission of the European Communities, 2008; European Commission, 2011e), applies to all SMEs and includes the following ten principles and a variety of measures, including facilitating them to turn environmental challenges into opportunities:

1. Create an environment where entrepreneurs and family businesses can thrive and entrepreneurship is rewarded. Entrepreneurship should be encouraged, especially among young people and women.

2. Ensure a second chance for entrepreneurs who have faced bankruptcy, promoting a positive attitude in society.

3. Design rules according to the Think Small First principle.

4. Increase the responsiveness of public administrations to the needs of SMEs.

5. Adapting public policy tools to the needs of SMEs and facilitating their participation in public procurement processes and more effective use of state aid opportunities.

6. Facilitating SMEs' access to finance and developing a legal and business environment to support the timely payment of commercial transactions.

7. Support SMEs to take advantage of the opportunities offered by the Single Market.

8. Promote the improvement of AIMM's skills and all forms of innovation.

9. Support SMEs to turn environmental challenges into opportunities.

10. Encourage and support SMEs to take advantage of market growth.

According to the EC, SMEs are the backbone of the European economy, in 2017, non-financial SMEs in the EU-28 were:

- 99.8% of all non-financial enterprises in EU-28;

- 56.8% of total EU employment;

- 28% of the added value generated by the non-financial business sector.

2. The role of SMEs in ensuring economic growth in the EU

Following the financial funding of 2017-2018, EU-28 SMEs have made a significant contribution to the recovery and further expansion of its economy, accounting for 47% of the total increase in 2008-2017, the gross added value generated by them increased cumulatively by 14, 3%, and employment among SMEs increased by 2.5%.

This contribution of SMEs to the European economy has exceeded expectations, increasing by 13.8% between 2008 and 2017. The number of SMEs already outstripped the growth of already existing SMEs.

The overall economy generated a cumulative increase of 16.5% in added value and 1.8% in terms of employment.

Small micro-enterprises are the most common types of SMEs, accounting for 93.1% of all enterprises and 93.3% of all non-financial SMEs (Table 2).

Table 2. Number of SMEs and large enterprises in the EU-28 non-financial business sector in 2017, added value and employment

	Micro	Small businesses	Medium enterprises	Total SMEs	Large enterprises	Total Enterprises
Number of SMEs	22,830,944	1,420,693	231,857	24,483,496	46,547	24,530,050
%	93.1%	5.8%	0.9%	99.8%	0.2%	100.0%
Added value € (trillion)	1,525.6	1,292.1	1,343.0	4,160.7	3,167.9	7,328.1
%	20.8%	17.6%	18.3%	56.8%	43.2%	100.0%
Employment	41,980,528	28,582,254	24,201,840	94,764,624	47,933,208	142,697,824
%	29.4%	20.0%	17.0%	66.4%	33.6%	100.0%

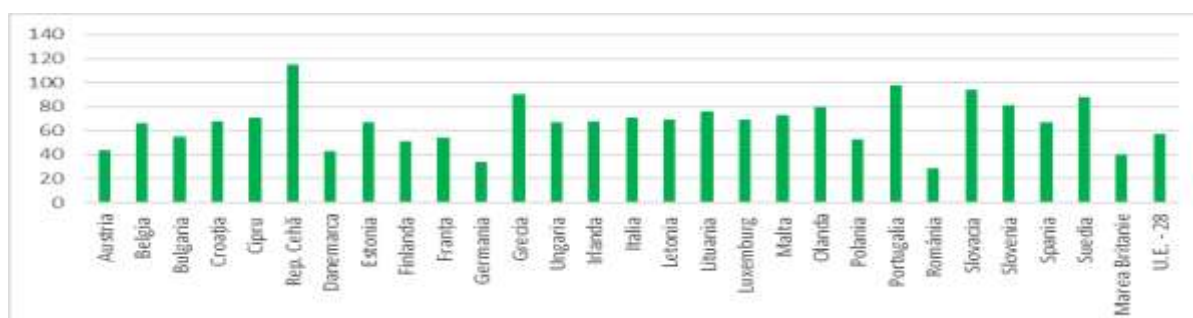
Source: Eurostat, 2017, National Statistical Offices, DIW Econ

However, small SMEs accounted for only 29.4% of total employment in the non-financial sector, while small and medium-sized SMEs accounted for 20.0% and 17.0% respectively of total employment for work.

Unlike the uneven distribution of the number of enterprises and jobs in the three SME size classes, their contribution is generally equal in terms of value added, ranging from 17.6% (small SMEs) to 20.8% (microenterprises).

The prevalence of SMEs varies greatly in the EU-28. Although in 2017 there were 57 SMEs per 1000 inhabitants in the EU-28 economy, with the exception of Germany and Romania with 34 or 29 SMEs (Figure 1).

Figure 1: Number of SMEs per 1,000 inhabitants in the non-financial business sector in EU-28 and Member States in 2017

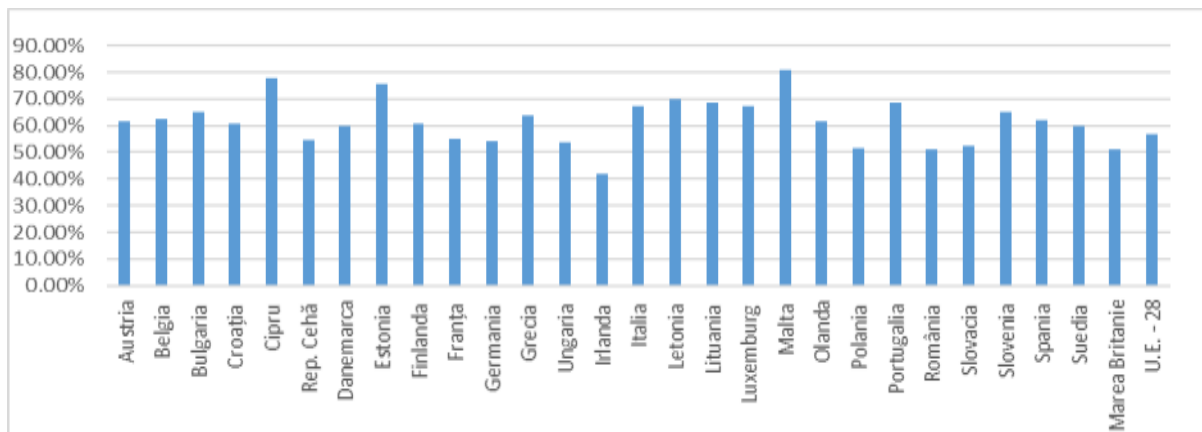


Surce: Eurostat, 2017, National Statistical Offices, DIW Econ

The differences in the prevalence of SMEs in the EU-28 reflect almost entirely the very wide range of small and medium-sized micro-enterprises in the 28 EU Member States, as the number of small and medium-sized SMEs varies relatively little among EU Member States.

This significant variation in the number of small and medium sized micro-businesses per 1,000 inhabitants reflects a whole range of different causes, such as the industrial structure of the economy, the adoption and promotion of public policies that encourage self-employment and business creation, especially micro- level of entrepreneurship and general economic conditions (Figure 2).

Figure 2: Contribution of SMEs to the non-financial business sector in Member States in 2017 - share of value added of SMEs in total added value

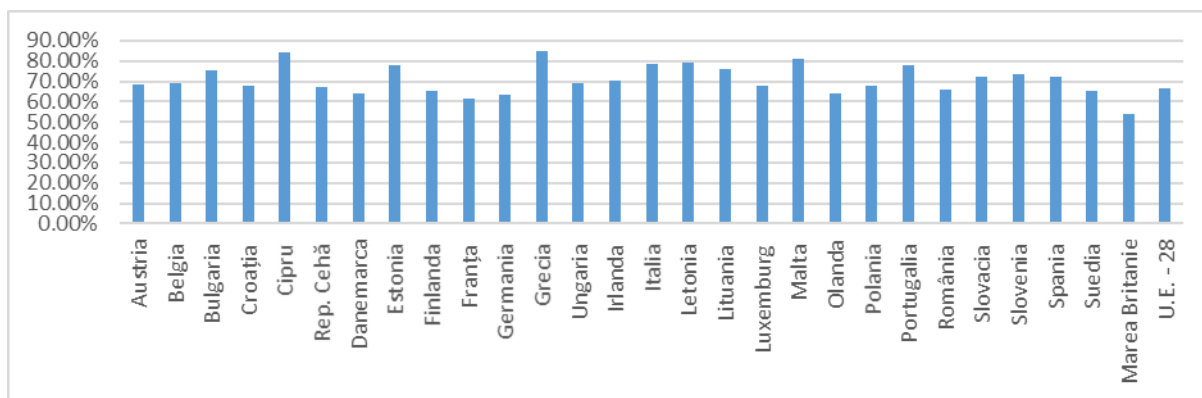


Source: Eurostat, 2017, National Statistical Offices, DIW Econ

The contribution of SMEs to the economies of the EU-28 Member States also varies greatly. For example, in Cyprus, Estonia, Malta and Latvia, SMEs accounted for 70% or more of total value added in the non-financial business sector in 2017, while in Ireland the share of SMEs in the added value generated by the sector non-financial was below 42%.

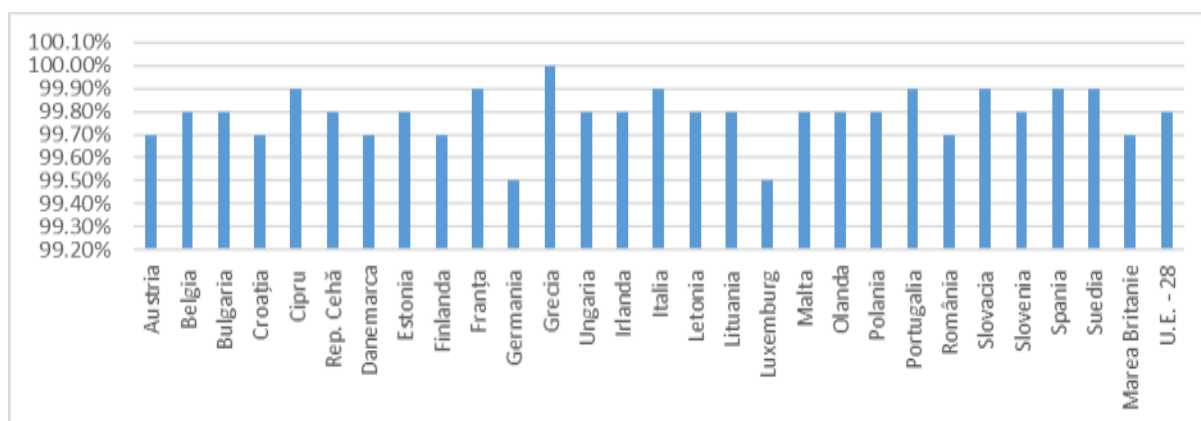
In the case of employment, SMEs in three Member States: Cyprus, Greece and Malta) accounted for around 80% or more of total employment in the non-financial sector in 2017, while in five Member States, the SME occupancy rate in the non-financial sector in 2017 was less than 65%. (Figure 3, 4)

Figure 3. Contribution of SMEs to the non-financial business sector in Member States in 2017 - SME employment share in employment



Source: Eurostat, 2017, National Statistical Offices, DIW Econ

Figure 4. Contribution of SMEs to the non-financial business sector in Member States in 2017 - share of SME enterprises in the number of enterprises in the non-financial sector



Source: Eurostat, 2017, National Statistical Offices, DIW Econ

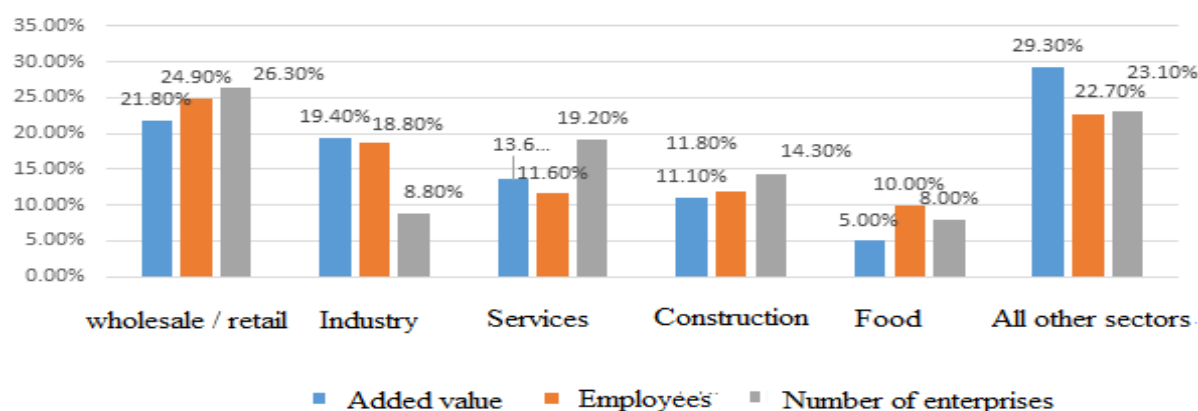
In most Member States, the share of small and medium sized enterprises is between 30% and 40%.

The share of SME added value of small SMEs shows much lower variations in all 28 EU Member States, ranging from 21% for Ireland to 35% for Croatia. On the other hand, the share of SMEs in the value added of medium-sized SMEs shows much greater variations, ranging from 19% for Ireland to 42% for Luxembourg.

The share of the different size classes of SMEs in the non-financial SME sector shows a somewhat larger dispersion in 2017, ranging from 27% in Luxembourg to 67% in Greece for small SMEs, 19% in Poland to 36% in Germany for small SMEs and 13% in Greece to 37% in Luxembourg for medium-sized SMEs.

EU-28 non-financial business SMEs are strongly concentrated in 5 sectors, namely "accommodation and food services", "business services", "construction", "production" and "wholesale and retail". Together, in 2017, they accounted for 71% of the total added value of SMEs generated by the EU-28 non-financial business sector and 77% of employment among SMEs and SMEs in the sector as a whole. Of these five sectors, the 'wholesale and retail' sector accounted for a total of approximately ¼ of the total added value of SMEs, employment and SMEs as a whole in the EU-28 non-financial business sector 2017 (Fig. 5).

Figure 5. Share of SME added value, employment and number of SMEs in the EU-28 non-financial business sector in 2017 represented by the 5 major SME economic sectors



Source: Eurostat, 2017, National Statistical Offices, DIW Econ

There is a great political interest in encouraging SMEs to become more innovative and export, as many SMEs are currently operating in characterized sectors, either with low levels of knowledge or technological intensity or with low export intensities: about 2/3 of SMEs (in terms of the number of SMEs in the EU-28 non-financial business sector) were active either in knowledge-intensive industries or in low- of technology. The concentration of SMEs in these two industrial groups is mainly due to the large presence of small and small SMEs (Table 3).

Table 3. Distribution of the added value of EU-28 SMEs, employment and the number of enterprises in each of the three SME size ranges

The size of the SME	Added value			No. of Employees			No. of SME		
	M	S	M-S	M	S	M-S	M	S	M-S
Services that do not require knowledge	20.8%	16.3%	14.3%	27.4%	17.5%	11.9%	56.3%	3.5%	0.5%
Services requiring knowledge	10.9%	7.4%	7.7%	10.7%	5.3%	5.4%	28.0%	1.0%	0.2%
Low-tech industries	1.6%	2.6%	3.7%	2.8%	3.2%	3.5%	4.8%	0.6%	0.1%
Medium technology industries	1.4%	2.8%	3.7%	1.8%	2.6%	3.0%	3.2%	0.5%	0.1%
High-tech industries	0.6%	1.9%	4.3%	0.6%	1.4%	2.8%	0.9%	0.2%	0.1%

Note: M = micro-enterprises; S = small enterprises; M-S = medium-sized enterprises

Source: Eurostat, 2017, National Statistical Offices, DIW Econ

Similarly, 93% of SMEs are active in industries characterized by very low or low export intensities, again reflecting the concentration of microenterprises and small enterprises in these two industrial clusters.

3. Transition of SMEs towards the circular economy

In the process of achieving a European circular economy, SMEs and social enterprises have been recognized as particularly important, particularly in terms of their contribution to activities such as recycling, repair and innovation (European Commission, 2014, 2015a). Due to the high share of costs associated with raw materials and energy consumption, the European Commission has initiated actions to closely monitor the

difficulties SMEs encounter in addressing the environmental challenges of opportunities. These efforts have resulted in finalizing an action plan on the concrete ways in which the European Union and the Member States intend to support SMEs in exploiting the opportunities for moving to a green economy (European Commission, 2014).

In addition to European initiatives in the field of green jobs, increasing resource efficiency and circulating economy, the European Commission proposed in 2014 a document to support green economy-specific actions implemented by SMEs.

The Green Paper on Small and Medium-Sized Enterprises aims at a more efficient use of all resources and aims to contribute through a series of measures to improving the efficiency of resource use, to encourage entrepreneurial initiative in all types of activities specific to green economy and specific to exploit the opportunities of value-added chains of environmental protection and, last but not least, to support the access of green SMEs to the market.

In the category of circular economy facilitators: developing innovative business models (incorporating the principles of circular economy with lasting effects on the economic system); developing policies to support eco initiatives in product design so as to extend the life of products resulting from the productive process; recycling and reuse of products; prevention and optimization of waste management.

A series of empirical studies refers to facilitators such as organizational culture on environmental protection, the interest of circular economy management, government support for the implementation of circular economy activities, recognition by consumers and suppliers of efforts made for the adoption of business models specific to the circular economy, low financial risk for switching from a linear business model to a circular one, adherence to networks where the concept of business sustainability is being promoted.

4. Conclusions

Given that in Europe small and medium-sized enterprises generate most jobs and VABs, their structural flexibility and the ability to develop niche products and services, often in untested markets, SMEs could receive consistent financial support to develop solutions, products and services that play an important role in achieving global goals and enabling the European economy to fully exploit the opportunities offered by the transition to the circular economy.

At the same time, it is acknowledged that the impact that SMEs have on the environment is less well known. Recognizing the role of SMEs has resulted in a series of European initiatives to support their work, so a formal definition of them has been the natural consequence but also a necessary tool to help SMEs identify themselves and then be able benefit from European measures and programs defined to support their development.

According to this definition (European Commission, 2003), an enterprise must simultaneously meet conditions for the number of employees (less than 250 employees), turnover (EUR 50 million), total balance sheet value (43 million euro) and access to significant additional resources to be included in the category of small and medium-sized enterprises.

In the process of achieving a European circular economy, SMEs and social enterprises have been recognized as particularly important, especially as regards their contribution to activities such as recycling, repair and innovation (European Commission, 2014, 2015a).

Due to the high share of raw material costs and energy consumption, the European Commission has initiated actions to closely monitor the difficulties SMEs encounter in addressing environmental challenges related to opportunities. These efforts have led to the

finalization of an action plan on concrete ways in which the European Union and the Member States intend to support SMEs in exploiting opportunities for moving to a green economy (European Commission, 2014).

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The Green Paper on Small and Medium-Sized Enterprises aims at a more efficient use of all resources and seeks to contribute through a series of measures to improve the efficiency of resource use, to encourage entrepreneurship in all types of green economy-specific activities and exploit the opportunities of added value of environmental protection and, last but not least, supporting the access of green SMEs to the market.

The Europe 2020 strategy addresses the development of SMEs, growth and jobs, with three flagship priorities:

(1) Intelligent growth (Innovation Union, Youth on the Move, Digital Agenda for Europe);

(2) Sustainable growth (resource-efficient Europe, an industrial policy geared to the globalization era);

(3) Inclusive Growth (An Agenda for New Skills and New Jobs, European Platform against Poverty).

În anul 2014 sub denumirea de „O Uniune a inovării”, a fost lansat noul program de cercetare - Orizont 2020, sumele disponibile pentru acesta sunt de 80 mld. euro.

Printre obiectivele acestui program se regăsește inovarea industrială care include sijn pentru IMM-uri, cu o finanțare de 17 mld. euro.

O altă inițiativă este „O politică industrială adaptată erei globalizării” care are în centru activității sale furnizarea sprijinului necesar IMM-urilor, asigurându-le suport în procesul de adaptare la fenomenul de globalizare prin simplificarea procedurilor administrative sau facilitarea accesului la credite.

In 2014, under the name of "Innovation Union", the new research program - Horizon 2020 was launched, the amounts available for it amount to € 80 billion.

Among the objectives of this program are industrial innovation, which also includes SMEs for SMEs, with a budget of € 17 billion.

"An industrial policy geared to the globalization era" is initiative which is at the heart of its work to provide the necessary support to SMEs by providing them with support in adapting to the globalization phenomenon by simplifying administrative procedures or facilitating access to credit.

Another initiative adopted is the Enterprise Start-up and Enlargement Initiative, which aims to boost innovative entrepreneurs across the EU by focusing on "risk-capital investments, legislation on insolvency, taxation and intellectual property" (European Commission, 2017h).

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ECONOMIC GLOBALIZATION VERSUS SUSTAINABLE DEVELOPMENT

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***Abstract:** The obvious achievements in the development of the world economy were accompanied by the increased concern of politicians, businessmen, scientists and elites, fear of risks of further prospects for the development of destructive processes in national economies, industries and entities. The pursuit of profit forces resource users to save on costs in the performance of two fundamentally important economic functions related to nature: the extraction of resources, which leads to its excessive destruction, and the disposal of waste of the production cycle, which leads to pollution. At the same time, the effect of these functions leads to a further decrease in the ecological capacity of the planet. Globalization has shown that the idea of a high degree of environmental development of the West is a myth that allows a certain country to solve environmental problems safely only on its territory. "Prosperous countries" solve the problems of their "dirty economy" at the expense of the periphery of developing countries. Polluting enterprises of fuel and energy, agriculture, forestry, fisheries, industrial, energy and other sectors of the economy were brought to the periphery of the world market economy. Therefore, the scale of global problems, from which it is impossible to hide behind national borders, is increasing.*

***Keywords:** economic globalization, innovations, sustainable development, global issues.*

***JEL Classification:** O3, F02, Q01.*

1. Introduction

In the transition to a new way of life and sustainable development of the world system, no country can stay aside, although some countries have abandoned the old patterns of development. The development processes of the world market, the internationalization of the economy such as an increase in the interconnection and interdependence of the national and global economy are objectively historical and reflect the trends that were revealed at the beginning of the last century in the works of J. Hobson, R. Gilferding and others. On the one hand, technical and scientific progress has greatly strengthened the industrial, technological and technical-military potential of humankind and, on the other hand, it makes humanity invoke the issues of sustainable development and global threats. The economic interests often prevail over those of sustainable development. As a result, the evolution of globalization, initiated by post-industrial states, by international organizations, contributes to the transition of the community towards the information society or sustainable knowledge. Particular attention in open and closed projects is given to humanitarian and social disasters, which have complex properties and are caused by certain reasons, existing in a certain country, economic, political, social and spiritual, and which underlie any catastrophe. The suggested models seek to characterize the issue of sustainable development in the age of globalization, where it is emphasized that the transition to sustainable development is only possible in the case of a fundamental change in value orientations and co-evolutionary noospheric formation of consciousness. The priority status of these transformations may be the emergence of a new noospheric education system as a model of education in the 21st century.

The aim of the study is to evaluate the relationship between globalization and sustainable development in the global economy.

The methodology of research includes historical, comparative, statistical, induction and deductive methods based on the ideas of system dynamics and on the first global models of J. Forrester, D. Meadows, models and concepts of social development by M. Mesarovich and E. Pestel, the theory of simplification, homeostasis and convergence used

in D. Meadows' report, and the principles of planetary interdependence, humanitarian social order and planning presented in reports to the Club of Rome. In the process of forming the information society and the society of knowledge, the globalization of cognitive activity and its results take place in different forms of knowledge, such as their transfer and integration, developing a kind of global knowledge system that can be called as the global world of knowledge. Of course, we are primarily concerned with ensuring free access to knowledge, which would become the basis for the transition to a knowledge society (IMF, 2019). According to German scientists N. Shter and U. Ufer, this process is very complicated in a market economy; therefore, the development of a global knowledge society proves to be very challenging.

2. Results and analysis

The adoption of the sustainable development goals by the United Nations provides an opportunity for the OSCE to assess and strengthen its role in advancing the global sustainable development agenda. All these activities provide a link between security and the environment and, together, contribute to the achievement of sustainable development goals. The purpose of the world summits is to guide the world on the path of sustainable development, in other words, on the path of comprehensive and sustainable growth. It means the growth that raises the average standard of living; benefits all segments of society, not just the rich; protects, but does not destroy the environment. The world economy is doing well enough to achieve economic growth, but it has failed to achieve prosperity that is environmentally sustainable and fairly distributed. The reason is simple: the world's largest companies are relentlessly seeking profit, being very successful in this, all too often at the expense of economic justice and nature. Profit maximization does not guarantee a reasonable distribution of income on the safe planet. On the contrary, the global economy does not take into account the great number of people, including in the richest countries. The planet Earth itself is under unprecedented threat because of climate change caused by human activity, pollution, depletion of water resources, and the disappearance of countless species of living organisms. The aim of the study is to determine the correlation between global economic innovation and sustainable development.

The knowledge society is the one whose source of development is its own diversity and ability. Every company has its own advantages in the field of knowledge. Therefore, we must strive to link the knowledge that some societies already possess with new forms of creation, acquisition and dissemination of knowledge that is used in the model of knowledge economy. According to the author's research, there is a radical change of social status in the society. In appliance with the research, in the system of factors of production, the traditional factors "land, labor and capital" are being degraded and information and knowledge are placed in the foreground, replacing labor and capital. In the report published by UNESCO under the illustrative title "Towards Knowledge Societies", which states that "today it is generally accepted that knowledge has become a subject of great economic, political and cultural interest, which can serve to determine the qualitative state of the society whose outlines are just starting to emerge in front of us" (UNESCO, 2019). By the notion of sustainable development, we understand the development that provides a balanced solution of social-economic and environmental protection issues that contribute to the evolution of economic processes, human resources, natural resources, and human values, to meet the needs of current and future generations (Brandt, 1980). Contradictions, which turn into economic and political differences that arise between the structures of society, lead to ecological, social and technological disasters (Braun, 1994). In the context of globalization, this issue has begun to acquire a great planetary value that new applied

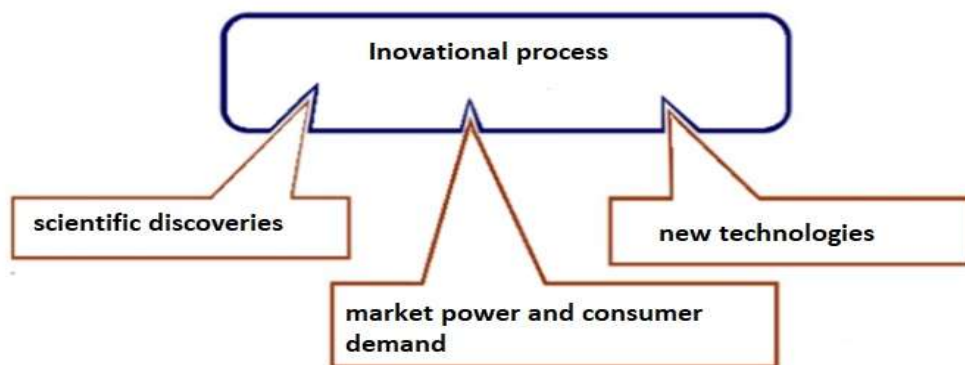
sciences have emerged such as crisis management, disaster medicine, catastrophic sociology, stress psychology, crisis management, and so on. It is unacceptable that the "bottom billion" of the world's population remain outside the process of globalization. Supporting this, we do not only respect the dignity of our fellow men, and do not only understand that any of us may be in such conditions. Globalization in the interest of all segments of the population is in everyone's interest. Poverty is a ground of growth for instability, disease, exhaustion of our common resources and the environment. Poverty can destroy societies, creating favorable conditions for those who seek to destroy, migrate, and endanger human lives. On the other hand, new horizons, opportunities for creativity and innovation are opening up (Gribincea, 2017). Change is the essence of innovation. Innovative work consists in transforming the technical-scientific potential into real activity, materialized in new products and technologies. It is known that the main task of science is a prognostic function, a prediction of what will happen. This was achieved by ancient sciences (astrology, metaphysics etc.). Every scientist knows the limits of his/her competence, and there is a known forecast horizon for traditional science (for example, a meteorological forecast by traditional methods). We understand that the possibilities of classical science are limited, especially in the social and economic sphere. The outcome of the innovation activity is materialized in the form of:

- new or restored product;
- new or restored technological process;
- new or restored managerial process;
- new social services.

In the form of innovative criteria, we distinguish:

- novelty and the use of original decisions;
- practical realization;
- efficiency.

Figure no. 1. External Factors Influencing the Innovation Process

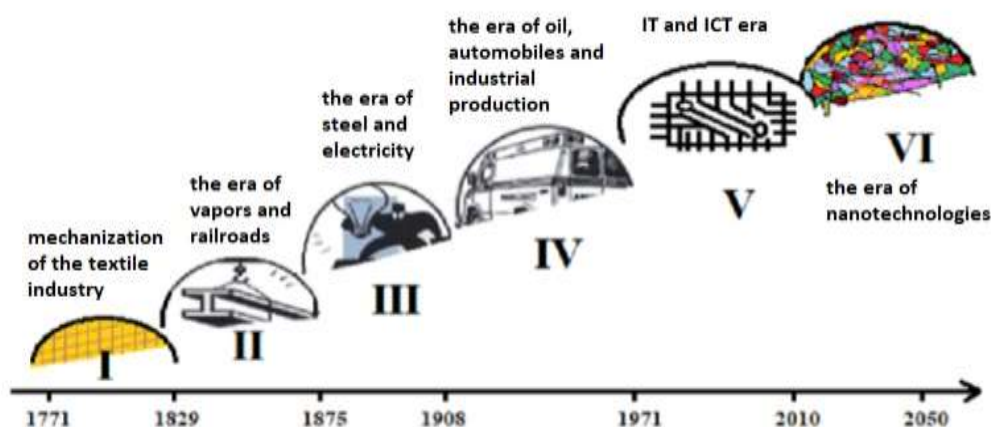


Source: author's research

The process of globalization of the economy is not complicated, with good and bad consequences. Along with the benefits, globalization is full of very serious dangers and traps. The industry has been and still is the main engine of the international labor division and, ultimately, the globalization of the economy. We owe it an arbitrary assortment of various products and services. This industry makes manufacturers look for markets around the world, involving a growing circle of countries in the spheres of trade, production and financial relations. Globalization offers the opportunity to continually improve the standard of living of industrialized countries (which, by the way, encourages other countries to develop their own industry and move from the lowest stages of industrialization to the

highest) (NKJ, 2019). Throughout the historical process, the main driving force of globalization is technological and intellectual innovations. These innovations have reduced transport and communication costs, thus increasing the opportunities for profitable economic exchanges at a greater distance. In the long term, such opportunities will be realized (Figure 2).

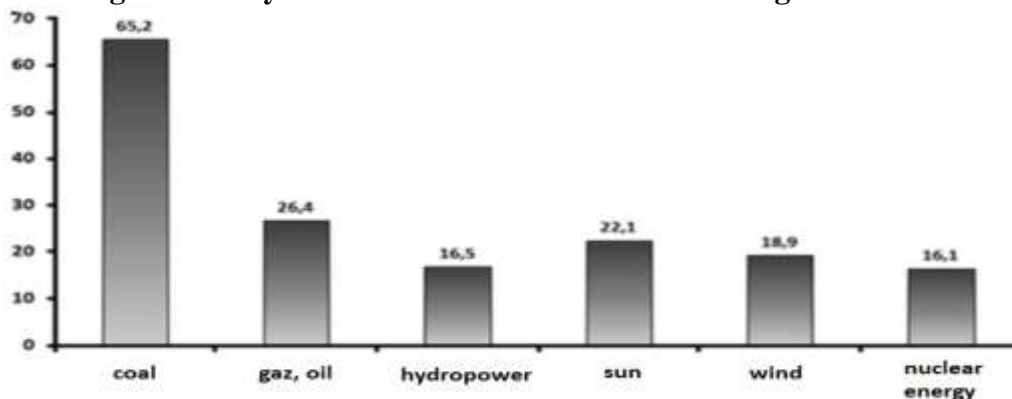
Figure no. 2. The Stages of the Evolution Process of Informational and Technological Development Cycles



Source: author's research

For the first time in history, an integrated world economy unites the processes that occur in several independent countries, which have a common purpose - the achievement of well-being. The attitude of both specialists and all the inhabitants of our planet towards the globalization is very ambiguous and sometimes diametrically opposed. This is linked to different views on the consequences of globalization processes, where some people see a serious threat to the world economic system, while others see a means of further economic progress. Undoubtedly, the consequences of globalization can be both positive and negative, but there is no alternative to them, and therefore the author of this contribution focuses on studying the dangers (threats) of these processes, opportunities and benefits arising from the globalization process.

Fig. 3. Gravity of Harmful Factors on Human-beings and the Environment



Source: Danilov-Daniylan, 2003; Gribincea, 2017; ZDG, 2019.

The age of globalization causes rapid changes in the economic activity. If in 1990 the share of countries with high incomes in world production, calculated at purchasing power parity, was 70%, 28% for the European Union and 25% for the US. According to the IMF, by 2019 this cumulative value will fall to 46%. During the same period, China's share is expected to increase from 4% to 18%, and for India - from 3% to 7%. The rapid growth of the most successful emerging markets countries that brought this change would not have happened without the access to trade and technology provided by globalization. In addition, there is some convergence of living standards. This is a remarkable result from any point of view. China has become a country with a middle income, whose GDP per capita in PPP by 2019 is projected to be higher than in Brazil.

At the summit in Rio de Janeiro (179 countries), the world community has reached a universal understanding of the need to change the nature of mankind's economic development, otherwise it will be destroyed (News, 2019; Braun, 1994).

The expectation that globalization will be a salvation during the processes in the twentieth century was not met, which led to the uneven development of states, peoples, society, etc. As a result of globalization, we are confronted with the ignorance and violation of human rights in a favorable environment, civilized human relations, respect for the right to security, resources, work, sustainable development. Unfortunately, there are contradictions in the North-South relationship, underdeveloped countries, energy issues, food, etc. Globalization brings major challenges in terms of climate change, ozone layer integrity, pollution of global ocean and water systems, atmospheric pollution, deforestation, desertification, loss of biodiversity etc. The humanity has indeed reached a critical point. According to the author's research, the so-called environmental footprint left by one person when using land and water production resources for his/her needs (food, water, housing, transport, commerce, waste disposal etc.) is about 1 ha in poor countries and 10 ha in developed economies. On average, each person on the Earth has 2.2 ha of ecological space. The author's calculations show that, to achieve the level of consumption on Earth as in the US, a surface of several planets like the Earth is required (ZDG, 2019). Moldova has serious environmental problems such as massive deforestation or waste. The main problem is soil and water. Among the European countries, the Republic of Moldova is among the countries with the least woodlands. The natural resources of the Republic of Moldova are in danger, and the environmental problems faced by the country are mainly caused by the irrational use of these resources. The lack of water calls into question the very existence of the Moldovan population. Because of the lack of water, the great cities of human civilization have disappeared. The entire nation was forced to leave prosperous settlements with historic buildings and monuments of high civilization, living in the place where there was access to drinking water. The water quality depends on its chemical composition, in other words, the ratio of the dissolved substance concentrations in it. The first thing we consider is the existence of harmful substances (ZDG, 2019). We are constantly looking for more advanced technologies and methods for filtering and purifying water. The most difficult problems are waste management, green areas, construction occupations, air pollution, traffic jams (only in Chisinau the number of cars is 583,000 units, which exceeds the number of apartments) (Autoblog, 2019). In 2004, over 400,000 cars were registered in Moldova, and this is twice as low as now. In 2004, there were twice as few sources of pollution and, consequently, the volume of pollutants in the air was twice as low. Today there are 941,808 cars, and some simple calculations indicate that their number will reach one million in 2020. Of these, 581,695, more than half, are over 15 years old (gasoline - 483073, diesel - 342553, liquefied gas - 110382, hybrid - 5114, electromobile - 54), 359485 - up to 15 years.

The Court of Accounts investigated the state of the air (30.11.2017), making negative conclusions, and the measures taken to manage air quality are ineffective (CCRM, 2019).

Table 1. Limit Values of Atmospheric Pollutants established for the Republic of Moldova

No.	Pollutant name	Limit values according to European directives	Limit values set in the Republic of Moldova
1.	Sulfur dioxide SO (1 hour)	350 µ/m ³	CMA – 500 µg/m ³
2.	Arsenic As (1 calendar year)	-	CMA – 3000 ng/m ³
3.	Nichel Ni (1 an calendaristic)	-	CMA – 1000 ng/m ³
4.	Cadmium Cd (1 calendar year)	-	CMA – 3000 ng/m ³
5.	Benz pyrene C ₂₀ H ₁₂	-	CMA – 1 ng/m ³
6.	Nitrogen dioxide NO ₂ (1 hour)	200 µg/m ³	CMA – 85 µg/m ³
7.	Carbon monoxide CO	10 mg/m ³	CMA – 5,0 mg/m ³
8.	Lead Pb	0,5 µ/m ³	CMA – 500 µg/m ³
9.	PM ₁₀ (1 calendar year)	40 µg/m ³	There are no norms in Moldova
10.	PM _{2,5} (1 calendar year)	25 µg/m ³	There are no norms in Moldova

Source: author's research

Sometimes decisions made are paradoxical. India, where half of the children suffer from malnutrition, set a mission to Mars. The number of people in India living under the poverty line is 21.9%, the number of poor being about 250 million people. In 1990, despite the bad harvests, the Sudanese government sold the EU countries 400,000 tonnes of sorghum, the main food of Sudan. The same year, the government of Sudan paid China \$ 60 million to buy weapons, which were then used against the local population in the south of the country. But in 1991 the country suffered from famine (the number of inhabitants in Sudan is 43,228,531, the approximate life expectancy is 24-27 years). The world civilization has started a fierce struggle for existence the as reserves of natural resources, fuel, hydrocarbons are significantly diminishing, and the Earth's population has increased exponentially, reaching more than 8 billion inhabitants (Danilov-Daniylan, 2003). The survival of many poor countries will be put to the test. At present, about 80% of new technologies are created by transnational corporations, whose revenues in some cases exceed the GDP of relatively large countries. TNCs are ranked 51 in the list of the top 100 economies in the world (Gribincea, 2017). It should be noted that the major part of their work is related to the development of hyper technologies (or meta-technologies), which include advanced technologies, IT, ICT, the latest computer programs, public technology, media and others.

3. Conclusions

The main idea of capitalism pursues the goal that each person should realize his/her own interests working for the benefit of the whole society. The New World Architecture is influenced by the evolution of the political-social, economic, cultural and demographic world. However, the problem is anchored in people's instincts, which focus

on improving their own well-being. This is particularly noticeable in the transnational network strategy, the Internet, the free movement of citizens, the exchange of students and professional staff, the services sector, environmental organizations and the human rights movement - creating a truly global cultural and economic system. More than half of national revenue comes from financial, technical and scientific cooperation and international trade. The expansion of the external market spheres leads to increased manufacturing of goods, providing services and growth of their export, increasing the number of jobs and welfare of the population, specialization in areas of relative and absolute advantages, increasing the efficiency of production and trade. With globalization facilities for travel and tourism appear, there is exchange of human resources, student mobility and exchange of ideas, opinions, know-how, experience increase, broadening the cultural horizon. IT and ICT have allowed expanded access to information and knowledge across the globe, enhancing innovation. Globalization has reduced the scarcity of millions of people, accelerating economic advancement. However, globalization envelops the world's countries not only with advantages. Increasingly, there is a discrepancy between the rich and the poor, job losses, fraud and financial exodus in offshore areas, neglecting justice, loss of national identity, and degradation of the living environment. Globalization leads to the unlimited consumption of natural resources, the destruction of the ecological balance, the degradation of the atmosphere, the soil, the oceans, without leaving any chance to future generations. Small countries like the Republic of Moldova could benefit from the benefits of globalization through investment strategy, cooperation in production sphere, exchange of students and qualified staff (without brain exodus), outsourcing, etc. Examples can be inspired from Singapore, South Korea, Switzerland, etc. It is important where we stand. Those who are under the "wave" are covered by the water and destroyed, the others standing on the wave - the waters lift them up and take them away. What is important is what policy the government adopts: the development or the expectation of aid (undeserved) from someone.

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ENHANCING CAPACITY OF GREEN ECONOMY BY EDUCATION

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Abstract: *The country's ability to pass to a green economy model depends on the volume of resources, competence and the knowledge it holds. In adopting "green" development practices, it is important to study the possibilities and the limits of the implementation of green business models, which can be achieved by establishing and calculating the performance indicators of the green economy in the main sectors of the economy. This article presented the theoretical analysis of the "green" economy concept and analyzed the performance indicators of the "green" economy in education. The research approach was inductive using traditional methods: bibliographic research, systemic observation, statistical and comparative analysis. The study is focused on education data from the Republic of Moldova. Period for calculating the indicators included study years 2013-2018. The results showed that education indicators in the Republic of Moldova are decreasing. In conclusion, the development of human capital must be a real priority for the Republic of Moldova, as this is one of the main factors that can positively influence the long-term development of the country. For this, increased efforts are needed, especially at the regulatory level.*

Key words: *green economy, education, green growth indicators.*

JEL Classification: *I 25, Q01.*

1. Introduction

The transition from the traditional economic development model to a “green economy” is a global trend that determines the sustainability of the development not only of national economies but also of the entire planet, and the promotion of a “green economy” is the only right way of development.

The development of the economy in a new environment-oriented dimension has become a goal of the international community at the end of the nineteenth century. Earlier, researchers have realized that the continuation of the technical way of producing and the maintaining of the post-war economic development course is damaging the right of future generations for a better live. On a normative level, the recognition of the problem came in 1972, when the first UN Development Conference was held in Stockholm. There was discussed the eco-development of the world. In the same year, the Club of Rome Report, entitled “Growth Limits”, warned the world that economic growth depends on environmental pollution, resource depletion, explosive population growth, etc. The importance of this approach was enhanced by the Bhopal catastrophe (1984) and the Chernobyl accident (1986). As a result of these events, a new attitude towards eco-development issues was created and the World Commission on Environment and Development was established. Already in 1987, report of the Commission entitled “Our Common Future”, set the objectives of sustainable development. The aim of the report was to find “a way of development that supports human progress ... for the whole planet and for a far future” (Pohoata, 2018, pp.21-22).

2. Literature review

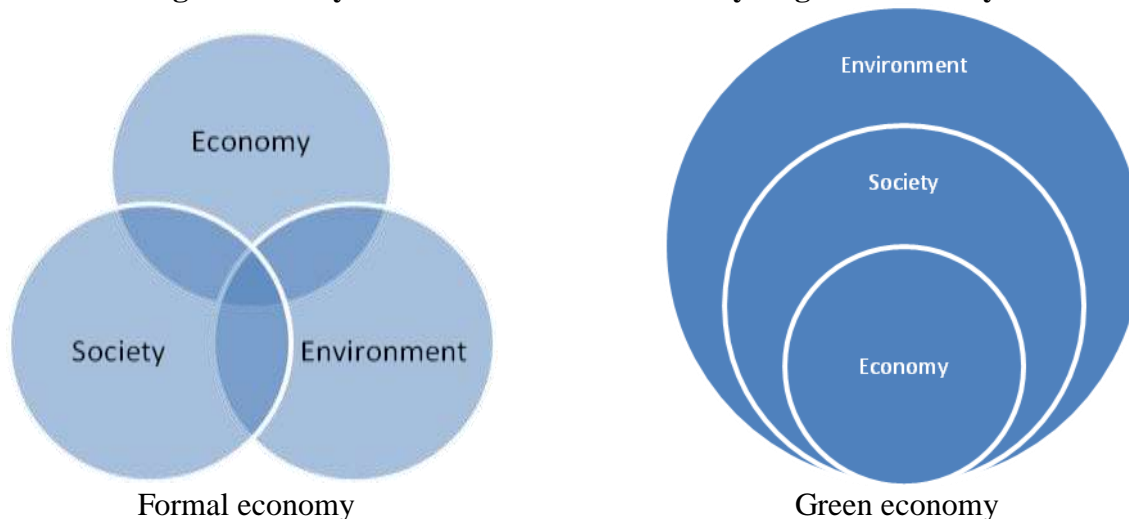
After the report of the World Commission on Environment and Development on the future of the planet in a sustainable development perspective, avalanche of research and publications has appeared on this subject. The term “green economy” was introduced in 1989 by David W. Pearce, Anil Markandya and Edward B. Barbier in Blueprint for a Green Economy (Barbier and Markandya, 2007).

The theories on the subject of green economy have their roots in the post-war period, especially in the decades of second half. Economic growth based on labor, capital and their derivatives: technical progress, technical-scientific revolution, innovation have put a heavy burden on natural resources and the environment. The risk of over-exploitation of the planet's resources by economic operators and the awareness of the scarcity of these resources has brought the need for change in the pattern of economic growth. Romanian scientist Nicolae Georgescu-Roegen in his paper "Analytical Economics: Issues and Problems", published in 1966, has grounded the idea that economic growth has consequences for ecology and society and affects the future of humanity. In his work published in 1971, "The Entropy Law and Economic Process", he demonstrated how in the economic process also takes place a degradation of materia that can no longer be used in future economic activities (Dobrota, 2010).

Another theory related to development in the parameters of the green economy was formulated by Richard Douthwait in 1992 in his first book entitled "The Growth Illusion: How Economic Growth Enriched the Few, Impoverished the Many and Endangered the Planet" (Douthwait, 1992). He considered that economic growth is an illusion that has generated, besides benefits, a lot of negative consequences on the quality of life such as air pollution, human health affecting, decreasing skills, reducing wages and stress levels increasing, etc.

The fundamental research of Jonathon Porritt (Porritt, 2006) on sustainability has led to the formulation of a green economy paradigm that is illustrated in Figure 1:

Figure 1. Tricyclic model of formal economy vs green economy



Source: Cato, 2009, p. 37.

In formal vision, the economy, environment and society interact, but are not interdependent. They are represented as equal and identical dimensions of importance, although the economy has more influence in decision-making that affects society, while the environment has the most to pay for these decisions. Therefore, a new paradigm of a sustainable world has been built, which is also the reflection of the green economy. It demonstrates that economic activities influence people's lives and society together with production activities have a major impact on the environment. On the other hand, society fits into the environment, and the economy is a part of society. In this sense, both society and the economy depend on the environment.

The transition to a green economy requires policy-making to promote the new development direction. It also presupposes the formation of a green-oriented society that knows about saving natural resources and protecting the environment. In order to achieve these objectives, state authorities must have information on the current situation, perspectives and possible risks. This information can be obtained on the basis of specific indicators for each sector of interest.

The purpose of this paper is to analyze the possible indicators of the green economy, especially those related to education and communication. This will help us to demonstrate our research hypothesis that education and communication have an important role to play in promoting the green economy.

3. Methods and data sources used

Traditional research methods were used to achieve the aim of this study: bibliographic research, systemic observation, statistical and comparative analysis. The study is not just a simple reflection of reality; it is a product of the author's understanding based on epistemological stages. The obtained results were based on practical observation, determination of regularities and establishment of the research hypothesis and all of it reflects the inductive approach of research.

In this paper were used experts' studies from international organizations World Bank, OECD, UNEP, UNCTAD, International Chamber of Commerce, etc. Data analysis in the field of education was conducted in accordance with the International Standard Classification of Education (ISCED).

The calculations were based on the official statistical data from the Republic of Moldova. The period of analysis of indicators in the field of education referred to the last 5 years of study (2013-2019).

The usefulness of this study is emphasized by the fact that the methodological basis of the green economy has not yet been substantiate. Thus, the theoretical research and the analysis of the scientific theories related to this subject will contribute to the development of the new current in the economy, namely the “green economy”.

4. Results

4.1. Conceptual analysis of green economy

Literature review has shown that currently, there is no widely accepted interpretation of the term “green economy”. Experts from United Nations Environmental Protection (UNEP) provide the broadest definition of this concept, considering the green economy as “an economic activity that enhances people's welfare and ensures social equity, significantly reducing environmental risks and degradation of nature”. This treatment is one of the most widely recognized (Tereshina, 2012).

Experts believe that the concept of green economy does not replace the concept of sustainable development (Yashalova, 2013) but is clearly aware that sustainability can only be ensured by greening the economy.

The priority directions for green economy development, according to UNEP, are:

- efficient use of natural resources;
- saving and enhancing natural capital;
- reducing natural gas consumption;
- reducing greenhouse gas emissions;
- preventing loss of ecosystem services and biodiversity;
- increasing income and employment of the population.

The new direction for economic development proposes to mobilize and restructure the world economy to increase investment in clean technologies and natural infrastructure,

stimulating the greening of the economy and avoiding the catastrophic effects of global climate change. Introducing the new eco-development course involves minimization of depletion of resources to produce electricity through renewable energy investments and energy-saving commitments (ISD, 2012).

At the conceptual level, there are two development-related terms in an ecological context: green economy and green growth. These concepts have been studied by international experts and international organizations such as World Bank, OECD, UNEP, UNCTAD, International Chamber of Commerce, etc. Thus, green economy is a system of economic activities that provides a better quality of life for all within the ecological limits of the planet. Green growth is a new development paradigm about making growth process resource-efficient, cleaner and more resilient without necessarily slowing them.

4.2. Education as an indicator of green economy

In order to ensure a transition to green economy it is necessary to provide special policies and mechanisms at the level of each state, but also at international level. These policies should include indicators to quantify the effects, risks and limits of this transition.

Strategies aimed at promoting green growth should be based on a deep understanding of the factors that shape this growth and the challenges associated with it. For their determination, relevant information and indicators capable of delivering clear signals at both regulatory and societal level are needed. Indicators should be integrated into a conceptual framework, selected according to clearly defined criteria and based on comparable international data.

The importance of education is also confirmed by the latest EBRD elaborations that calculate a country's new performance index, namely the knowledge-based economy (KE). The index is part of the EBRD's new approach to measuring countries' progress in terms of the six qualities of a sustainable market economy: competitive, strength, green, integrated, well-governed and inclusive. This approach contains a set of 38 indicators grouped into four pillars. It is considered that data on how countries evolve in skills, technology and infrastructure development provides important guidance for decision-makers as well as for investors.

In the present research we intend to analyze the performance indicators of the green economy, especially those related to education and communication. The selection of this field was determined by the importance of creating a society aware of the impact of human activity on the environment and of the need to change the development paradigm towards environmentally friendly economic sectors. At the same time, in order to promote "green" economic activities, is necessary qualified staff that is able to work in an ecologically oriented economic system. These can be achieved through educational programs and information channels that will help to strengthen human capital through education and skills development.

The development of human capital through education and training is particularly important. Young people who are enrolled in secondary education (UNESCO, 2011) have fewer difficulties in finding jobs and in engaging in environmental-oriented sectors. Thus, the educational level has an enormous impact on the employability and on the increase of the qualification of the personnel employed in the activities of green economy.

In the list of green growth indicators developed by the OECD, education is a part of the compartment entitled "Labor Market, Education and Incomes" and includes "learning outcomes: level and access to education". In the National Report based on the OECD set of indicators of green growth, indicators on education are the "degree of involvement of pupils/students in the educational process".

Level of education - is determined as a graduation rate for men and women in tertiary programs. Input rates estimate the proportion of people entering the tertiary program during their lifetime. It also indicates the accessibility of tertiary education and shows the extent to which population acquires high-level skills and knowledge on the labor market. The high level of graduation and participation in tertiary education involve the formation and maintenance of a highly skilled labor force, because tertiary programs are designed to provide sufficient qualifications to enter advanced research programs and highly skilled jobs.

Access to education is an indicator of a country's investment in human capital, measured by enrollment of students to university studies and the graduation rate of students in tertiary education programs. Developing human capital through education induces behavioral change and enhances skills, including adopting and adapting environment-friendly processes, products and technologies.

Degree of involvement in the educational process refers to the rate of enrollment of pupils/students in the educational process. This indicator shows the total number of children /students enrolled in all levels of education, regardless of age, as a percentage of the total population of all ages that corresponds to all levels of education (usually 3-23 years).

Gross enrollment rate at all levels of education

$$RBC^t = \frac{E_t}{P_{tv}} \times 100 \quad (1)$$

where:

RBC_t - the gross enrollment rate at all educational levels in a school year t ;

E_t - the total number of pupils and students enrolled in all educational levels, regardless of age, in a school t ;

P_{tv} - the total population of the age group v , corresponding to all educational levels (3-23 years), in a school year t .

Net enrollment rate at all levels of education

$$RNC^t = \frac{E_{tv}}{P_{tv}} \times 100 \quad (2)$$

where:

RNC_t - the net enrollment rate for all levels of education in the school year t ;

E_{tv} - number of children / pupils / students of school age (3-23 years old) enrolled in all levels of education in the school year t ;

P_{tv} - the total population of the age group v (3-23 years) in the school year t .

Degree of school enrollment by age is the total number of pupils regardless of the level of education they are enrolled as a percentage of the total population of the same age.

$$GC_{tv} = \frac{E_{tv}}{P_{tv}} \times 100 \quad (3)$$

where:

GC_{tv} - the degree of enrollment for an age v in the school year t ;

E_{tv} - population of age v enrolled in the education system, regardless of the level of education, in the school year t ;

P_{tv} - the total population of age v , in the school year t .

Analyzing the indicators which describe the level and capacity of education, we conclude that the most recommended indicator of "green" growth in education is the rate of school enrollment or degree of involvement in the educational process.

4.3. Fostering green economy in the Republic of Moldova

A development priority for the Republic of Moldova is the promotion of an economy that is resource-efficient, socially inclusive and minimally offensive for environment and health. An economic and social development in a sustainable system will bring growth, welfare and continuity for next generations.

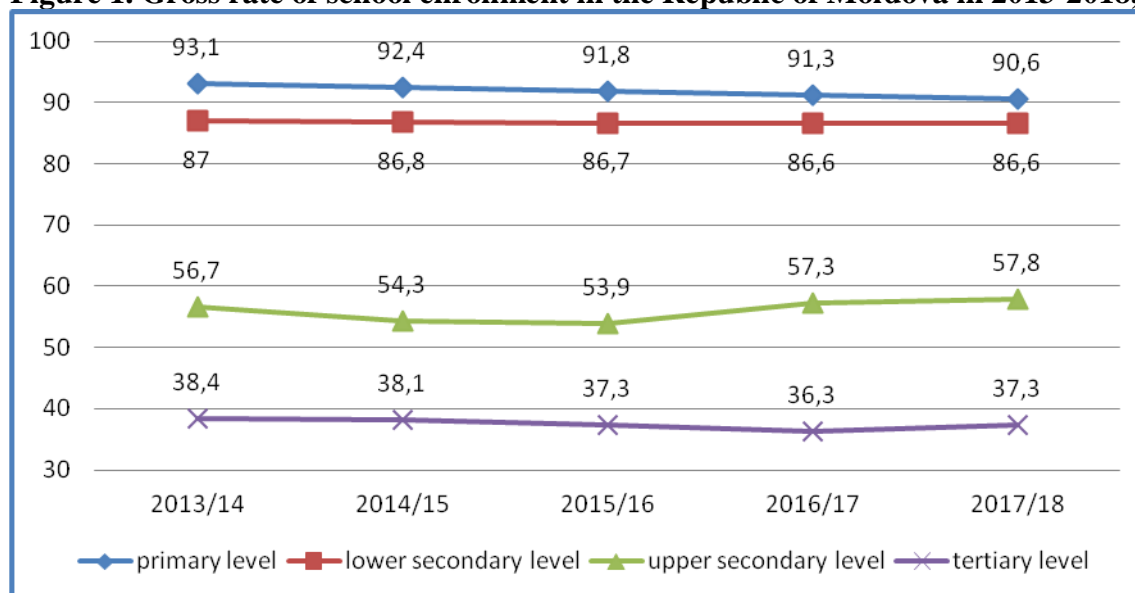
The importance of fostering green economy was recognized by the Moldovan authorities. As evidence of this, the main principles of sustainable economic development are included in the main policy documents of the Government. At the same time, the signing of the Association Agreement of the Republic of Moldova with the European Union, as well as other agreements signed with the external partners, foresee the promotion of environmental protection, rational use of resources and energy efficiency in all sectors of national economy and social life.

On the wave of promoting the green economy, the Republic of Moldova has joined international green programs and platforms such as the “Greening the Economy in the Eastern Neighborhood” Program, Green EaP Green Program, Green Industry Platform and others. These programs include, among other, green growth indicators at national level. These indicators are intended to serve as the basis for policy development and monitoring of the country's performance in green economic development.

4.4. Indicators of education in the Republic of Moldova

Using the set of indicators described in section 4.2. of this paper, we present in Figure 1 the results obtained from the calculation of the gross enrollment rate in education in the Republic of Moldova.

Figure 1. Gross rate of school enrollment in the Republic of Moldova in 2013-2018, %



Source: developed by author based on data from National Bureau of Statistics of the Republic of Moldova

The enrollment rate in education is the highest in the primary cycle, about 90%, moderately decreasing over the last 5 years. The lowest rate is recorded in tertiary education, reaching 37.3% in the 2017/18 study year.

The analysis of the gross enrollment rate in education in the Republic of Moldova denotes the fact that children aged 7-15 years old are the most involvement in educational

system. This leads us to the conclusion that the primary focus in the education of a society with new visions, aimed at saving natural resources, preserving ecosystems and reducing environmentally-polluting activities, should be put on primary and secondary education programs.

In the Republic of Moldova the number of pupils/students is decreasing. The school age population (7-23 years) gradually decreased during the period 2006-2017. On 01.01.2017 this population amounts 704.7 thousand persons, about 30% lowest compared to 2006 (MECR, 2018). This was caused by low birth rates and rising numbers of family emigration.

In higher education in the Republic of Moldova, which is the main segment of human capital formation and qualified labor force formation, inclusively in the field of green economy, there is no university programs fully focused on the green economy. There are related specialties such as ecology, environmental protection, engineering and energy.

Statistical data on graduates of higher education institutions indicates that out of 13421 graduates of the first cycle of university studies, 105 obtained a specialty in environmental sciences and 1099 in engineering and engineering activities. In the top of the most demanded specialties in the Republic of Moldova remain the economic sciences with 3686 graduates, law with 2205 graduates and the education science with 2097 graduates. This trend is not only valid for the year 2017/2018, but it remains the same in the last 5-10 years.

4.5. Problems and solutions

Educational indicators relate to quantitative aspects and do not fully reflect the qualitative changes in the sector. Namely in the quality of education in the Republic of Moldova there are large reserves. Among the main challenges and problems we have identified in this study are:

- 1) population migration which reduces the number of potential students;
- 2) the education system is not adapted to market needs;
- 3) the inflexibility of study programs in relation to the economic and social evolution and progress;
- 4) lack of attractiveness of study programs leads some of the students to leave the education system before graduation;
- 5) disequilibrium between demand and supply of qualified labor.

This disequilibrium generates significant problems for the local labor market because higher education graduates are employed in jobs which require much lower qualifications. By this way they hold the jobs of tertiary segment graduates. At the same time, the population who does not have a qualification or whose skills are no longer required on the labor market works on unskilled jobs and can not contribute to increasing productivity. According to NBS data, the proportion of the population that has the highest qualifications is 19.2% of the total occupied population in 2016. The share of people with lower qualifications than is required at their workplace is 21.6%.

Performance in education can be achieved by implementation of national policies. One of the steps taken in this direction was the endorsement of the Strategy for Education Development 2014-2020 “Education-2020”. The strategy contains a new funding policy for educational institutions, but also opts for a stronger correlation between the labor market and the education system. By implementing these policies, a greater impact on economic growth can be achieved. The updating of educational supply and correlating them with the principles of environmental protection and resource conservation will contribute to developing the green economy.

Another important policy document is the Environmental Strategy for 2014-2023 setting out national and sectoral priorities for promoting the green economy and defining the framework for further integration of the green economy in agriculture, transport, energy, industry, construction, development regional, education and procurement.

5. Conclusions

The concept of green economy is still underdeveloped, because it appeared just a few decades ago. However, the importance of the green economy has generated avalanche of research in this area and became clearly that is necessary to elaborate a theoretical and methodological fundament that will be recognized by all scientists. The main research efforts were aimed at determining the set of indicators that would scale the limits and outline the perspectives of the main economic sectors in transition to a green economy. These studies were important to start fostering a "green" economy at the policy level.

Green transformation is not a question of money. The rich countries squander a lot of money on subsidising life-destroying industries year by year. It is a question of political vision and people's education.

The development of human capital should remain a priority for the Republic of Moldova, as this is one of the factors that can influence the country's development in a sustainable way. Policies geared to human capital development should not only be limited to developing strategies but should contain concrete actions. In order to achieve this, it would be appropriate to take the following measures:

- 1) Remodeling study programs and orienting them to current global and regional trends
- 2) Introduction in the primary and secondary education programs the disciplines related to environmental protection and greening of economic processes
- 3) Enhancing the quality of specialized education and encouraging adult education
- 4) Increasing budget allocations to support and develop education
- 5) Elaboration of special study programs in the field of ecological education and sustainable development for tertiary and university education
- 6) Organization of environmental education training for employees in any field. Elaboration of digital textbooks on ecological education and sustainable development
- 7) Organization of information and promotion events for ecological education and for green economy
- 8) Supporting and expanding research and innovation activities in the green economy

These actions will allow people to adapt to the new labor market conditions and to apply green jobs. Partnerships between the education system and the labor market will lead to the generation of educational offers that will meet the quantitative, qualitative and structural requirements for the labor force for the needs of the green economy.

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VIRTUAL CURRENCIES, A NEW BUSINESS DEVELOPMENT MODEL

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Abstract: *On the background of the development and maturity of virtual currency markets a new type of business or company emerged. The classic method by which a company becomes public by winning funds from individual investors is by selling shares in an initial public offering. What is called "initial coin offering" is in the area of cryptocurrency equivalent to an initial public offering in the world of the main investments, the initial offer of the currency acting as a collector of funds. Most often, initial coin offerings are used by new companies to circumvent the rigorous and regulated process of capital increase demanded by investment funds or banks. The paper aims to analyse how virtual currency work, what their characteristics are, and whether they can be an economic development factor.*

Key words: *virtual currency; initial coin offerings; business model.*

JEL Classification: *E40, M13, O16.*

1. Virtual currency

Shortly after the collapse of the American bank Lehman Brothers, which triggered the financial crisis of 2008, a new, it appeared a previously unknown economic phenomenon called the "virtual currency". The term "phenomenon" is not exaggerated because the existence of virtual coins implies a new environment, exclusively virtual with specific rules of issuing, holding and trading of the currency. The first virtual currency was the bitcoin, and his architect has remained so far shrouded in mystery, giving rise to many speculations about the intention behind the creation and development of virtual coins. Even though at the beginning the Bitcoin has lived in almost anonymously, its popularity has begun to grow slowly. Then, many other virtual coins appeared, so that after 10 years on the trading platforms over 1600 virtual coins were registered, many of them trying to attract investors' attention through new features different from others.

Since virtual currency demand has steadily increased since the emergence of bitcoin in 2009, concerns have arisen that the use of virtual coins unregulated in the global economy can become a threat to society, crypto coins being compared to pyramid schemes and economic bubbles. Transactions that occur through the use and exchange of these instruments are independent of the official banking systems and therefore simplify tax evasion as well as the financing of illegal activities. It has been said that the use of virtual coins is an index of money laundering and that it shows how large is the money laundering demand in the world.

As bitcoin is the best known virtual currency, the most transacted one, we will explain the features of the virtual currencies analysing the bitcoin. It was the first such currency, the subsequent ones having, more or less, similar features.

Created rather recently, in 2009, bitcoin is a decentralized electronic payment currency, without a financial institution or central bank, and without being regulated; its purpose is to ensure the financing and protection of business and investments without any constraint.

At the same time, the use of bitcoin term also refers to the distributive, peer-to-peer sending of data, and to the open source operation program, available to anyone.

The asymmetric cryptography, thus called because it uses two different encrypting keys, plays an important role in setting the basic functions of the bitcoin currency, ensuring its security of possession and spending (for instance, the bitcoin can be used only by the rightful holders and spent just once). Public and private, at the same time, the asymmetric cryptography uses the pair of asymmetric keys both for encrypting and for decrypting.

Bitcoin encrypting is done using the public key, but decrypting is done only using the private key that corresponds to the public key. The private key also provides, besides decrypting the text, a digital signature which allows checking by anyone, by access to the corresponding public key.

Cryptography makes the bitcoin anonymous, confidential for holding and transacting. It is deposited in the computer of a holder in a money purse file; it can be sent to any holder of a bitcoin address. The amounts are transferred between the public accounts through the public cryptographic keys; the transactions are confirmed, which prevents the repeated spending of bitcoins.

The incapacity of a central authority to manipulate the bitcoin, for instance to create more bitcoins than produced and held in the peer-to-peer network, averts the bitcoin from inflation.

Nevertheless, the bitcoin is highly volatile, which is why even the websites that accept bitcoin payments, actually accept this currency only for the transfer of funds at the current rate.

The long-term holders evaluate the bitcoin as a currency that will take the place of the other currencies, but the short-term holders consider the bitcoin just a speculative investment.

Furthermore, next to the disadvantage of a high volatility, the bitcoin has a rather slow system of processing and confirming transactions compared to the Master Card and Visa systems.

It seems that the underground, illegal, black and grey economy, seem to use rather well the bitcoin for transactions of guns, drugs, traffic of people, etc. however, the legal business also seem to need the bitcoin for a rather cheaper transfer between incompatible information and financial systems; for instance, the transfer between two currencies can be done, under particular circumstances, easier through the cryptocurrency (in countries such as Russia, India, China etc.).

Although the bitcoin requires important computing resources, the cost of each transaction is below 5 cents per transaction.

The bitcoin relies on the concept of blockchain, a network of knots (each knot being a computer, implicitly an internet used that validates and retransmits the transactions). Each knot receives a copy of the blockchain, each modification being perceived instantly by the knot, as it is connected to the network.

Blockchain decentralisation is relevant because, being a digital registry, it encrypts the information in mathematical formulations on the basis of other encrypted data, forming a network. Besides checking the authenticity of transactions at any moment, the knots also compete in solving computing problems and earning bitcoins.

In the case of the bitcoin, the blockchain contains data referring to transactions (receiver, sender and number of bitcoins). The blockchain has some kind of unique fingerprint, hash, which identifies a block and its content. The hash function is a mathematical function which, when applied on the input data, produces output data of a pre-set size. The blockchain hash is calculated once a block appears in the chain and the hash changes at the first transaction within the block. Besides, the blockchain also contains the hash of the previous block.

Every bitcoin holder has available a copy of the blockchain; at each newly created block, each of the network participants receives the block which, after being checked by all the network participants, and after the unanimous validation, can be introduced within the chain.

Those who participate in encrypting the data within the blockchain are called miners, because the bitcoin was designed as a limited resource (similar to the gold), whose

exploitation is done with great effort and consumption of energy. The terms mining and miner, although used both in English and in Romanian, in the field of cryptocurrencies, are somehow improper; I think that the terms of encrypting and encrypter define better the activity of encrypted writing of the transactions within the blockchain, and the person doing this. In order to have success in mining, which presumes competition, only the first one that is successful in registering in the blockchain, the miners pool their computing capacity, and in case of success, each participant in the pool is rewarded proportionally to the percent of the total computing power cumulated for the accomplishment of that blockchain.

2. Initial coin offering (ICO)

For the traditional companies, there are some ways to raise the funds necessary for development and expanding.

A company can start only with the funds brought by the company founders, and grow as its profit allow, remaining only at the company owners, but they have to wait for the funds to accumulate.

Another way, is that the company turns public, raising funds from individual investors, by selling shares in an initial public offering (IPO).

The initial coin offering (ICO) is, in the field of cryptocurrencies, the equivalent of IPO in the mainstream investment world. The initial offering (IO) acts as fundraiser. A company that wants to create a new coin, an application, a good or a service, launches an ICO.

The investors purchase the offering either with fiat coin, or with tokens (particularly bitcoin or ethereum). In exchange for their support, the investors receive a new symbol of the cryptocurrency specific to ICO. The investors hope that the token will work in the future, providing a good return on their investments.

The company that has the ICO uses the funds from the investors as means to continue its goals, to launch the product, service or digital coin.

The ICO are used by new enterprises in order to avoid the rigorous and regulated process of increasing their capital, demanded by the investment funds or by the banks.

The investors purchase the tokens launched by the ICO hoping for a fast and strong return for their investments. The most successful ICO of the recent years give the investors reasons to maintain this hope, because of the huge profits, in some cases. However, this enthusiasm of the investors may also cause losses. Because most of them are not regulated, the ICO became a space for fraud, where some issuers are trying to deceive the over trusting and uninformed investors.

When a company wants to raise funds by an initial coin offering, it develops a business plan that describes the project, as clear as possible, what need will the project ultimately fulfil, how much money it has for this project, what type of money it accepts and how long will the ICO company function. During the ICO campaign, the investors and supporters of company initiative buy some of the cryptocurrency distributed against fiat money or virtual coin. These coins are called tokens, and are similar to the shares of a company sold to the investors in IPO transactions.

If the collected money is not enough for the minimal funds required by the company, the supporters are refunded, and the ICO is considered a failure. If the money requirement is raised within the specified term, the collected money is used either to start the new system, or to complete it.

The ICO are similar to the initial public offering and with the crowdfunding. As with the initial public offering (IPO), a part of the start-up of company is sold to make money for the operations of the entity during an ICO operation. However, while the initial public

offering gathers investors, the ICO gathers supporters who want to invest in a new project, similar to a crowdfunding event.

There are structural differences between the ICO and IPO. The ICO are decentralized (no governing authority), the ICO are largely unregulated, which means that the governmental bodies do not monitor them, and the ICO are laxer in terms of structure, than the IPO, due to the decentralization and lack of regulation.

The ICO can be organised in several ways. In some cases, a company sets a specific purpose or limit for its funding, which means that each token sold within the ICO has a pre-set price and that the offer of the total token is static. In other cases, there is a static offer of ICO tokens, but a dynamic objective of funding, which means that the distribution of tokens by the investors will depend on the received funds (and that the higher are the funds received within the ICO, the higher will be the value of the token). Some ICO have a dynamic offer which is determined by the value of the received funding. In these cases, the price of a token is static, but there is no limit to the total number of tokens, except for some parameters, such as the length of ICO period.

In an IPO, the investor receives shares of a company in exchange for his/her investment. In the case of ICO, there is no share to talk about. For ICO, in most cases, the investors pay in a popular token, such as the bitcoin or ethereum, and receive in exchange a corresponding number of tokens.

The initial coin offering usually has three stages of token purchasing and reaching the targeted level of capitalisation.

There are two levels of the capital collected by an initial coin offering. The minimal level of capital, which most ICO reach easily (the softcap), and the targeted level of capital (the hardcap). The first stage – “private sales”. Negotiations take place between the team launching the virtual coin and specific investors that can receive preferential prices. The second stage is the “pre-sales” stage, in which any natural person or company can reserve a specific number of coins, in an escrow account. The third stage, the actual sale, also called Crowdsale, in which anyone can buy tokens; this is the moment when the ICO is actually launched.

Usually, the investments in the initial coin offerings are done in other virtual coins, most often bitcoin or ethereum. There are few ICO that allow investments directly in fiat coin. The ICO function on smart contract basis for the ethereum, which means that when the coin is launched, the investors from the first two stages automatically receive tokens of the newly launched coin, in exchange for the invested amounts.

Between the launch of a virtual coin and its listing on the exchange platforms, there is a period necessary for the growth of that coin. For most investors, the ICO proved to be the most profitable ways of investing in the cryptocurrency market.

According to statistics, the ethereum was launched at a price of 0.314 USD, the yield of the investment reaching 340,000% two years later. NEO, another cryptocurrency, was launched at the price of 0.03 USD, reaching a yield of 425,000%.

The investors in ICO operations before the launch of the coin are motivated to buy tokens in the hope that the virtual coin will be successful after its launching. If this happens, the value of the tokens bought during the ICO will go higher than the price set during the launching of the coin and will therefore get higher gains.

This is the main benefit of an ICO: the potential for huge profits. Thus, in 2017, there were 435 successful ICO, each of them gathering in average 12.7 million USD. The total amount for 2017 was 5.6 billion USD, the biggest 10 projects taking 25% of this total. Furthermore, the token purchased during the initial offering returned, in average, 12.8 times the initial investment, in terms of USD. In the first quarter of 2018, ICO brought funds worth of 6.3 billion USD, already exceeding the total amount of 2017.

Are the Initial Coin Offerings legal?

In the United States, there are no specific regulations for the ICO; however, according to the classification of the digital currency, it may fall under the jurisdiction of the Securities and Exchange Commission (SEC). The regulatory authority has to monitor the transactions with various financial products. If SEC considers that, a currency is the equivalent of a security, then the company behind it might have to register with the regulatory authority.

In Europe, the European Securities and Markets Authority (ESMA) launched, last year, directions regarding the ICO. The regulatory authority said that the initial offerings that qualify as financial instruments might fall under the incidence of the relevant laws regarding money laundering or investments.

Last year, the People's Bank of China declared the ICO illegal, warning the people against the risks of investing in them. Shortly after, South Korea followed, by banning fundraising through virtual currencies.

3. Frauds and dangers of the ICO

„ICO actually are start-ups; exactly as in the real world, 18 out of 20 will fail.¹”

Investing in ICO is a risky business for several reasons. Often, people invest money in products that do not yet exist. Although this would not seem different from investing in other start-ups, the people betting on ICO usually are simple investors.

These projects also have high rates of failure. Already, hundreds of coins “passed away”, which means that the projects behind them were scams, or did not materialise. Dead Coins is a website presenting all the cryptocurrencies that fall within this category, counting until now, over 800 digital tokens which it considers “dead” (see the name of the website).

Because of the lack of regulation, the frauds are rather spread within the industry. This opens widely the gate for the Ponzi schemes and cheatings, phantom companies appear and ask money from users seeking substantial gains. Recently, SEC, the institution regulating the US capital market, announced that it identified such an operation, which gathered, fraudulently, 600 million USD.

One of the problems of the system is exactly the ease of creating new tokens. There are online services that allow the generation of cryptocurrency tokens in a few seconds. ICO administrators generate tokens in agreement with ICO terms, receive them and distribute them as they please, transferring them to the individual investors.

4. Conclusions

There are many companies that have succeeded to launch goods and services through the initial currency offer. However, the easiness with which anyone can create a coin (tokens), makes many of the ICO to be thought as scams from the very beginning. That's why in order that this kind of fund-raising that is conducive to business and economy development to be successful, it would be necessary to have methods and authorities to monitor companies, to analyse companies' guarantees for launching an ICO and underwriting for it.

Even if crypto coins would disappear, technological gain is considerable for mankind. If we take into account that thousands of IT, banking, capital market specialists have been involved in the creation of thousands of virtual coins, we can assume that some of the innovations of the crypto currencies' environment will be taken over by other areas, creating points of technological inflection, the rapid development of some domains and

¹ <https://www.businessmagazin.ro/cover-story/tehnologia-care-ar-putea-schimba-lumea-16977439>

implicitly material well-being. (I would mention only two examples of the "smart contract" automated technology developed for the ethereum currency and the transfer technology of the ripple coin that is so fast and it allows large volumes of data so that Western Union wants to take it over).

As a first step, the regulation of crypto coins and their classification as securities represent an important step in reducing their volatility, but an international effort is needed to find all the legal levers to bring to light the role, purpose and their operation mechanism.

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CONFLICT MANAGEMENT REGARDING STUDENTS, TEACHERS AND PARENTS. THE IMPORTANCE OF CONFLICT MANAGEMENT WITHIN THE PROCESS OF IMPROVING THE QUALITY OF THE SECONDARY EDUCATIONAL SYSTEM

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***Abstract:** Conflict is a three-dimensional psychosocial phenomenon that involves 3 components, one that refers to thinking, perception of a conflict situation, another one that refers to emotions and feelings and a behavioral component, one regarding actions and communication. Managing conflicts between students, teachers and parents has its importance in order to increase the quality of the secondary education system. Quality in education refers to a complex of principles and practices that crosses the entire educational environment, in all its components, oriented towards obtaining superior results, related to standards and meeting the needs and expectations of the primary beneficiaries of education. This article aims to establish the main principles and best practices regarding conflict management within the secondary education system.*

***Keywords:** conflict, conflict management, quality in education, secondary education.*

***JEL Classification:** I21, I25, I29, D74.*

1. Introduction

The literature regarding the behavioral changes in the management of classrooms in schools, implies from behalf of the teacher a set of behaviors through which:

- he/she can promote and stimulate the appropriate behaviors from his students;
- he/she can reduce the frequency and the probability of the occurrence of maladaptive behaviors;
- he/she can facilitate interpersonal relationships and a positive socio-emotional climate in the classroom.

In order to prevent disruptive behaviors in the student classroom, the teacher must be aware of his role in determining the classroom climate and interpersonal relationships.

In order to define a high quality school, it is necessary to study: the school's climate, the physical environment, the curriculum, relationships between teachers, students and the community. In this way, a "school of high quality" aims at achieving a set of targets, not just at delivering lessons, or programs. Going through a circle of high quality standards requires an approach to quality in education starting from the implementation of the circle of quality at the level of the teaching process, as the first link (stage) of its achievement. Therefore, teachers need to constructively address conflicts, using them as real learning and development opportunities.

2. Literature review

The present article starts by underlying the conceptual basis regarding conflict resolution, and by point out the main differences between the traditional approach towards conflict management and the new approach towards conflict management, as it has been underlined by authors such as Ulrich, Barron or Drumitru. Further on, the article focuses on presenting the main types of conflicts within the secondary educational system. Literature regarding these 4 types of conflicts expresses many of the causes of these conflicts, however the main obstacles that prevent from resolving these conflicts in the secondary education system are just pointed out by authors such as Iucu (2006) and Bowling (2012). They express the "necessity of identifying the main obstacles in resolving

conflicts in the secondary education system”, and thus the research consists in identifying the key obstacles and ways of avoiding them.

3. Conflict resolution. Conceptual basis

The present acceptances on the conflict emphasize the positive aspects of the conflict, emphasizing the undesirable elements:

- “*Conflict is an indispensable part of life, of change*” (Barron, 1990);
- “*Beyond all perspectives, conflict is a natural consequence of diversity*” (Dumitru, 2000).

Conflict has its contribution to social change, thus ensuring certain interpersonal and inter-group dynamics within society. Conflict between groups, especially in the secondary educational system can provide unity or it can divide groups. There are many ways conflicts can be analyzed, thus we can summarize them by explaining them from a traditional and modern approach, and especially by insisting on the difference between them:

The traditional (old) approach towards conflict management	The new approach towards conflict management
<ul style="list-style-type: none"> - Conflicts can be avoided - Conflicts are caused by errors; - Conflicts divide and prevent optimal performance - The objective of management is to eliminate conflicts - Optimal performance requires conflict resolution 	<ul style="list-style-type: none"> - Conflicts are inevitable - Conflicts are caused by needs/interests, perceptions, different value; - The objective of management is to shift conflicts towards obtaining maximum performances - Optimal performance requires reducing the level of conflict

Conflicts are therefore ambivalent experiences: they have a potential danger but they can also be viewed as an opportunity, a chance to progress, they also have a positive potential, it all depends on how they are approached. Thus, approached through positive thinking, conflicts can be exploited for the purpose of one's own personal development or for social change. At the opposite pole, the unilateral approach (gain-loss) can have negative results emotionally and physically (Ulrich, 2000).

Conflict management involves the proper management of disagreements, misunderstandings, conflict situations so that their positive potential is harnessed, it involves cultivating distinct strategies and techniques to address, control and treat conflicts. Consequently, conflict management involves education in the spirit of peace, cooperation, by developing the appropriate attitudes towards others and towards conflict.

The sources of conflicts can be: control over resources, interdependent activities, individual approaches, different objectives, communication problems, differences between perceptions and values, working environment, personality and attitude difference, unclear authority structures.

3. Types of conflicts in the secondary educational system

There are many types of conflicts in the secondary schools, but rather than focusing on the types of conflicts, we should focus on the causes of these conflicts and the main sources of these conflicts. However, if we refer to the types of conflicts that may occur, conflicts can be divided into:

a) conflicts between students - are probably the most important ones professors should be aware of and be able to manage. Amongst the most important causes of these conflicts are:

- Competitive atmosphere of the educational process;
- Low intolerance to frustration;
- Low communication skills;
- Inability to express negative emotions;
- The desire to prove themselves at any price;
- Envy, mutual antipathy;
- Fight for the domination of the group;
- Lack of conflict resolution skills;
- Misuse of power by the teacher;
- Repeated aggression from colleagues, criticism from their families;
- The arrogance, lies and mock of physical aspect.

The teacher plays a decisive role in solving all these conflicts. He must be a peacemaker who effectively uses conflicts in order to achieve his/hers educational goals established. This goal can only be achieved by knowing, the initial fundamental causes of the conflict that arose (Ciobotaru, 2004).

The repeated and consistent use of conflict resolution techniques by teachers will make the students, after a while, be able to resolve their conflicts on their own and not bring them in front of the teacher. This has positive effects on the classroom atmosphere, contributing to the creation of an educational community in which students rely on each other (Stoica, 2004).

b) conflicts between professors and students - are also some of the fundamental conflicts that may occur within secondary education schools. Some of the main causes of these conflicts are:

- the incapacity of solving old problems, which can cause stress and tensions amongst groups;
- the overload with tasks correlated with the incorrect evaluation;
- subjective evaluation of knowledge and behaviors;
- giving greater importance to de informative and less to the formative ways of communication;
- not being able to asses concerns of students for independent study, their needs of expressing their creativity, or their needs regarding extracurricular activities;
- reduced diversification of active-participatory methods and of effective involvement of students in the teaching-learning activity;
- the abusive use of curricular work that blocking the express of creativity;
- insufficient application of the various forms and recipes of communication with all students.
- not being able to accept different opinions expressed by students;
- resorting to authority in dealing with conflicts;
- passivity or delay towards resolving conflicts;
- not being able to deal with external complaints that eventually affect the whole group;
- gaps in developing friendly relations, work groups, cooperation and mutual acceptance;
- not being able to involve students in the decision making process, in their own coordination and evaluation;
- not being able to convince students to participate in different activities;

- not being able to use communication skills outside the teaching hours, within extracurricular activities;
- ineffective communication with parents regarding the evolution of the students, in establishing a real partnership towards solving conflicts;
- incorrect assessment, subjective assessment of student behavior;
- permissive, or on the contrary autocratic, rigid way of dealing with communication.

In order to avoid such type of conflict, the professor must not use power in a discretionary manner, with the sole purpose of highlighting the lack of power of students. His/hers authority must be manifested in a constructive manner by creating a proper learning environment, by maintaining peace and order, and by being able to bring out the best out of each student. On the other hand, authoritarianism implies blind obedience and conformism on behalf of the students, and, although might be seen as efficient, it only solves short term problems in a classroom. It's a superficial way of dealing with things and thus on the long term it's imperative that teachers view their own ways of dealing with things, and especially with the ways they exercise their authority. In order to improve things, professors should:

- agree common conduct rules with students;
- discuss the importance of each of these rules with their students;
- together with the students, decide on the consequences of braking these rules;
- together with the students, decide on lower sanctions in case of mitigating circumstances towards braking the rules.

c) conflicts between teachers and parents - might be some of the most difficult to handle due to the fact that parents are usually (or should be) the main pillar in educating children. When conflicts occur between teachers and parents, that usually leads to conflicts between students and teachers, mostly because teachers loose their authority in front of the children (Preda, 2018).

The main causes of this type of conflict are usually:

- the lack of communication as a result of misunderstandings or a reduced number of meetings in the course of a year;
- the conflict of values and the struggle for power: parents have their own prejudices based on their previous experiences or it is unclear to them what the role of teachers is in their children's lives.

Improving relationships with parents by reducing the possibility of conflicts involves:

- Periodically informing parents, in writing or verbally, about the achievement of educational objectives, highlighting the progress made by their child.
- Increasing the number of contacts in which teachers ask parents for suggestions and opinions that show a certain level of openness on behalf of the teacher.
- Familiarity with the different ideas of the parents regarding the development of the educational process and the explaining the educational approach that generated the differences of opinions.

d) conflicts between teachers - are mainly caused by:

- the fight for obtaining certain advantages;
- the fight for obtaining certain management positions;
- the desire of satisfying his/hers own interests;
- the desire of affirmation;
- the existence of different beliefs and opinions, of different values, differences in their personality types or cultural values.

The conflicts of some teachers with the management team in general or with the school manager in particular can be very sensitive. In order to avoid and / or quickly resolve such conflicts, it is advisable for each party to adopt a proactive behavior, which seeks to improve interpersonal and organizational relationships. The management team must make their activity as transparent as possible, and the decisions must be made in common with the whole team.

4. The main obstacles in resolving conflicts in the secondary education system

Identifying and avoiding obstacles in resolving conflicts in the secondary education system can be a key point in improving the quality of the educational system. Thus each obstacle must be identified from the point of view of each participant, whether we refer to teachers, students or parents. [Iucu, 2006] The following tables can be just a starting point of many obstacles and ways to avoid them from the secondary education system (Bowling, 2012). Thus:

a) from the teachers point of view:

Obstacles	Ways of avoiding obstacles
- time management problems regarding the curricular activities	- redefining time as a resource with the help of parents who can help their children with the curricular activities (homework)
- budget problems regarding the curricular activities	- redefining curricular (and even extra-curricular) activities, budget planning and found raising
- communication problems regarding conflict management	- developing communication skills and understanding modern approaches towards conflict management

b) from the students point of view:

Obstacles	Ways of avoiding obstacles
- lack of interest/ lack of motivation	- establishing measures that will determine / increase a certain level of interest in the proposed activities, depending on each situation
- lack of understanding the scope of the proposed activities	- the teacher will explain them the purpose of each proposed activity

c) from the parents point of view:

Obstacles	Ways of avoiding obstacles
- lack of resources to help their children obtain a better education	- public grants, scholarships for their children etc.
- lack of patience for the curricular activities	- the teacher will explain them the purpose of each proposed activity

5. Increasing the quality level of the secondary educational system

The quality of education and professional development is essentially determined by measuring "added value" and the "value created". The quality of an educational service is expressed by what remains as a results obtained after completing the educational programs, after taking into account the influence of the "entry" factors (aptitudes, personal qualities and performances as "entries", social, economic and cultural environment, qualification of teachers/trainers, available resources etc.). In other words, "the absolute value of the obtained results does not count (for example - the percentage of students who pass their *final exams or the number of teachers who apply the results of specialized training*), but the ratio between these results and the performances at the entrance of the system that expresses the contribution of a school to a person's education" (Preda, 2018).

From a conflict management point of view, the increase of the quality of the secondary education system means that both educational managers and simple teachers need to take action in order to develop and implement an improvement plan.

Following the implementation of the improvement plan, the investigation instruments are applied in order to measure the new results, the difference between the previous results and the measurement of the added value. In other words, the comparison is made: results obtained before the improvement plan - results obtained after the implementation of the improvement measures. The added value is always higher when the efforts are made in the team, because in this way it represents the plus that each member of the team can bring to its overall activity, regarding the working procedure and the particular implementation of each one of the proposed activities.

The first step into developing such programs must consist into proposals for better ways of resolving conflicts with both students and parents.

6. Conclusions

When we talk about conflicts and resolving them there are several ways of doing it, but whether it's active involvement, or problem solving, resorting to some sort of compromise or ignoring it, conflict management takes an important part of the teacher's daily activity. Understanding the basic principles of conflict management helps create a better environment within the classrooms which therefore leads to the improvement of the quality of the secondary educational system.

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SYNERGY OF RESEARCH, DEVELOPMENT AND INNOVATION ACTIVITIES, SUPPORT FOR SUSTAINABLE DEVELOPMENT

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Abstract: *The main role of research, development and innovation, RDI, is to improve people's living conditions through the sustainable development of organizations. To find solutions to environmental challenges, organizations need to implement new projects that create synergy between science and society by involving all stakeholders in the sustainable development of society in general. Research, development and innovation activities should be seen as an investment in the harmonious development of future agribusinesses. Capitalizing on all the strengths and opportunities offered by the current environment and the current level of society development must stimulate innovative solutions to develop an economy in harmony with nature. Competition between states is also manifested through fiscal or other facilities offered to local or foreign investors. Among other factors, the attractiveness of a country for investors is also given by the incentives they can get for RDI activities. To this end, Romania has to align with EU standards in order to overcome the limits and to contribute directly to the well-being of European society and citizens by allocating resources to finance significant RDI activities.*

Key words: *sustainable development, innovation.*

JEL Classification: *Q01, O31, O32.*

1. Introduction

In any society, economic growth is based on decapital accumulation, organization development and technological progress. As a result of the international financial crisis, economic growth has been, and continues to be, a primary goal of national strategies at EU and international level. Considering that in the new context of global competitiveness technological progress is recognized as one of the key elements of sustainable economic development, R & D and Innovation (RDI) is central to this equation.

At the organizational level and in the field of human resources policy, R & D and innovation oriented companies can positively influence the strategy and the results of their activities in this field by encouraging their own employees to explore and adopt new ways to think. The main role of RDI, is to improve people's living conditions through the sustainable development of organizations.

To find solutions to environmental challenges, organizations need to implement new projects that create synergy between science and society by involving all stakeholders in the sustainable development of society in general. Research, development and innovation activities should be seen as an investment in the harmonious development of future agribusinesses. Capitalizing on all the strengths and opportunities offered by the current environment and the current level of society development must stimulate innovative solutions to develop an economy in harmony with nature.

The development research process must be future-oriented, taking into account new global and regional relevant trends, emerging technologies, societal challenges, global operator behavior, and sustained investment in research.

Competition between states is also manifested through fiscal or other facilities offered to local or foreign investors. Among other factors, the attractiveness of a country for investors is also given by the incentives they can get for RDI activities. To this end, Romania has to align with EU standards in order to overcome the limits and to contribute directly to the well-being of European society and citizens by allocating resources to finance significant RDI activities.

2. The EU Framework Program for Research and Innovation, Horizon 2020

EU countries account for almost a third of scientific and technological production in the world. Despite the economic crisis in recent years, the EU and its Member States have managed to maintain their stance on knowledge-based competitiveness.

However, the EU is facing increasingly fierce international competition in the field of research and technological production. That is why we need to make greater efforts to translate our innovative ideas into new products and new technologies.

The main milestones for implementing an EU research-innovation policy are (European Commission, 2014):

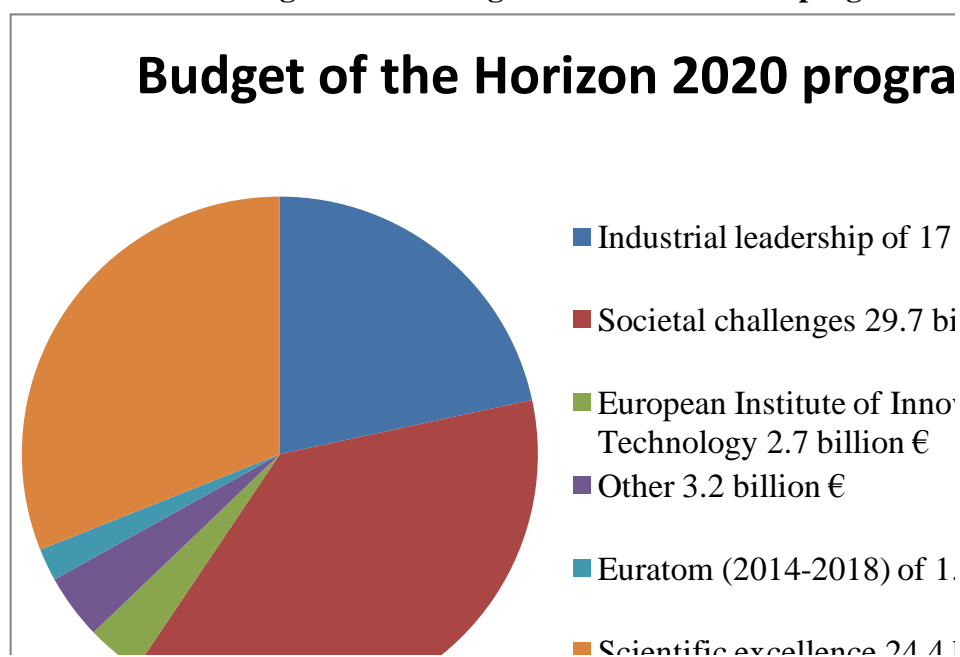
- 1950 - Treaty establishing the European Coal and Steel Community (ECSC, 1951) and the Treaty establishing the European Atomic Energy Community (Euratom, 1957).
- 1957 - The Treaty establishing the European Economic Community (EEC or the "Common Market") paves the way for a range of research programs in areas that are considered priority at the time, such as energy, the environment and biotechnology.
- 1983 - The European Strategic Program on Information Technology Research (ESPRIT) launches a series of integrated research programs in the field of information technology, as well as development projects and industrial technology transfer measures.
- 1984 - The first "Framework Program" (PC) for research is launched. This type of program will become the main tool by which the EU is funding research projects. PC1 targets in particular research in the fields of technology, telecommunication and industrial technology.
- 1986 - Research is formally a community policy devoted to a specific chapter in the Single European Act. The objective of this policy is "to strengthen the scientific and technological basis of European industry and to encourage the development of its international competitiveness".
- 2000 - Expresses its desire to create a European Research Area (ERA): an open space research space based on the internal market, in which researchers, scientific knowledge and technology can circulate freely.
- 2007 - The European Research Council (ERC) is established as part of the Seventh Framework Program (FP7). Its mission is to support frontier research actions in all fields based on scientific excellence.
- 2008 - Establishment of the European Institute of Innovation and Technology, based in Budapest. This is the first EU initiative to fully integrate the three dimensions of the "knowledge triangle" (higher education, research and enterprise) by supporting knowledge and innovation communities. The Institute begins its activity in 2010.
- 2010 - The EU is launching the "Innovation Union" initiative, which provides for 30 action points to improve conditions and access to research and innovation funding in Europe. The "Innovation Union" initiative, which is a core element of the Europe 2020 strategy, is intended to encourage the emergence of innovative ideas in products and services that generate growth and jobs.
- 2014 - Horizon 2020 is being launched, the largest research and innovation framework program in the history of the EU. This is a major financial instrument for implementing the "Innovation Union" initiative, which will benefit from a budget of nearly € 80 billion over the 2014-2020 period. Horizon 2020 is part of the drive to create growth and jobs in Europe.

Horizon 2020 is the largest research and innovation program in the history of the EU. It will facilitate more revolutionary breakthroughs, breakthroughs and world premieres by transferring ideas from the lab to the market. The amount available for funding is almost € 80 billion over a 7-year period (2014-2020), most of which is dedicated to the three basic pillars: scientific excellence, industry leadership and societal challenges. In addition, this investment will attract public and private national investment

Horizon 2020 has been endorsed by the governments of the EU Member States and the European Parliament, who have agreed that investment in research and innovation is key to Europe's future, placing it at the heart of Europe 2020. The aim is to ensure that Europe has a world class scientific and technological level that stimulates economic growth

The economic crisis has highlighted the central role played by the EU's industrial base and the need to renew it. Market failures can, however, prevent the private sector from obtaining the financial resources and knowledge needed to modernize our industrial base.

Figure no. 1. Budget of the Orizon 2020 program



Source: European Commission, 2014. *Understand the policies of the European Union. Research and innovation* [pdf] Available at: <https://europa.eu/european-union/sites/europaeu/files/research_ro.pdf> [Accessed 3 March 2019].

The budget of the Orizon 2020 program consists of investments in:

- a) Leadership in the industrial sector = Investing in promising and strategic technologies, encouraging businesses to invest more in research and cooperate with the public sector to stimulate innovation;
- b) Societal Challenges = Investments in research and innovation projects that can bring concrete benefits to citizens;
- c) European Institute of Innovation and Technology = Valuing the potential of Europe's talent pool and maximizing and distributing the benefits of innovation across the EU;
- d) Others = Science with and for society, spreading excellence and expanding participation, direct actions;

- e) Euratom (2014-2018, = Financing of EU fission and nuclear fusion research, safety and security issues, medical research, radioprotection, waste management, industrial uses of radiation, uses in energy production;
- f) Scientific Excellence = Stimulating the Union's competitiveness, creating jobs, improving living standards.

The Horizon 2020 program is seen as a way to boost growth and jobs, and benefits from the political support of European leaders and MEPs who have agreed that investing in research is an investment in our future by placing at the heart of the Europe 2020 Strategy for Smart, Sustainable and Inclusive Economic Growth.

By achieving a synergy between research and innovation, Horizon 2020 contributes to achieving these goals, focusing on scientific excellence, industry leadership and societal challenges, in order to ensure Europe's ability to produce world-class science, to remove barriers to innovation and to facilitate the collaboration of public and private sectors to deliver innovative solutions.

Horizon 2020 benefits from the political support of European leaders and MEPs who agreed that investing in research and innovation is key to Europe's future by putting them at the heart of the Europe 2020 strategy for smart, sustainable and inclusive growth. Horizon 2020 contributes to achieving this goal by combining research and innovation and focusing on three key areas: scientific excellence, leadership in the industrial sector and societal challenges. The aim is to ensure Europe's capacity to produce world-class science and technology to stimulate economic growth.

As a result of EU funding for research in previous school programs, scientists and industry representatives in Europe and around the world have joined efforts to find solutions to a wide range of challenges.

Their innovations have helped to improve the standard of living, protect the environment and increase the sustainability and competitiveness of European industry. Horizon 2020 is open to researchers from all over the world.

3. Research, development and innovation activities, supporting sustainable development in Romania

Sustainable development is the development process that responds to current needs without endangering the ability of future generations to respond to their own needs (Statement on Environment and Development, Rio de Janeiro, 1992).

The main objectives of the RDI at national level for the 2020 horizon are put into practice through several action lines that follow the principles of sustainable development.

Their role as a whole is to structure the innovation system in Romania.

In this context, the overall vision refers to the following objectives (Romanian Government, 2014):

- Increasing the competitiveness of the Romanian economy through innovation. The objective is to support the performance of economic operators on global value chains. The strategy supports the transition from cost-based competitiveness to innovation-based competitiveness. This implies developing companies' ability to absorb state-of-the-art technology, adapt these technologies to the needs of the markets served, and develop technologies or services that enable them to progress on value chains.
- Increasing the Romanian contribution to the progress of frontier knowledge. The strategy supports the increasing international visibility of research and experimental development in Romania. RDI activities involve the formation of a critical mass of researchers in the most promising areas, maintaining advancement in niche areas.

- Increasing the role of science in society. Science and technology become relevant to society when their effects are felt in the everyday life of the citizen. To this end, research and innovation respond to the concrete needs of the economic and public sector, especially those of increasing the quality of services offered (such as citizens' health or security), and offer attractive employment prospects in the private sector to as many people as possible. The strategy aims both to solve societal problems through innovative solutions and to provide expertise in public policy making.
- Creating a stimulating environment for the private sector initiative through tools to drive entrepreneurship and commercialization of RDI results, as well as by credible partnerships between public and private operators.
- Focusing an important part of RDI activities on societal issues to develop the capacity of the RDI sector to demand and adopt research results and to address issues related to the global challenges of relevance to Romania.
- Supporting the aspiration towards excellence in research at the frontier of knowledge through the internationalization of Romanian research, international evaluation, increasing the attractiveness of the Romanian RDI system through mobility and partnerships.

The development of innovation research activity requires the reorientation of RDI policies towards those research activities that deliver results relevant to the sustainable development of society.

An integrated approach to social, economic and environmental issues is needed.

This requires:

- stimulating a certain kind of economic behavior, oriented towards environmental policies;
- understanding the social impact of science, technology and economic activities in the relevant sectors;
- interdisciplinary research and development.

The main directions of action are oriented towards the development of projects initiated by firms, competence centers, innovation infrastructure, priority programs, research infrastructures, performance and organizational concentration, a strategic orientation mechanism.

The development research process must be future-oriented, taking into account new global and regional relevant trends, emerging technologies, societal challenges, global operator behavior, and sustained investment in research.

In sustainable development strategies at European and national level as well as in the Framework Program, special emphasis is placed on ensuring links between sustainable research and development. This link is also underlined in the latest R & D policy documents at European level: A Strategic European Framework for International Science and Technology Cooperation, Towards Joint Programming in Research: Working together to tackle common challenges more effectively.

The 2020 vision of the European Research Area also mentions that "it must have strong roots in society and respond to its needs and ambitions in the desire to ensure sustainable development" (European Commission, 2014).

Figure no. 2. Synergy between research, development, innovation and sustainable development



In order to implement national strategies that synergistically combine research-development-innovation activities with those of sustainable development, specific actions need to be taken:

- developing techniques and solutions for saving energy and using renewable energy;
- developing green infrastructure concepts and solutions in relation to Eco-innovation;
- making and preserving "green corridors";
- the implementation of measures to ensure the provision of public amenities and the prevention of pollution due to noxious substances, including noise pollution, the reduction of pollution caused by the storage of household waste;
- strengthening capacities of national and local administrations to develop and implement the climate change strategy, preserve and protect the environment, and ensure integration of these strategies into national programs;
- integrating environmental aspects into other sectoral policies, promoting green economic development.

4. Conclusion

The development of a strong research, development and innovation, RDI, activity at national level is the essence of a sustainable development of society. Companies that encourage the development of creative thinking, while creating an organizational culture and a strategy that supports this type of thinking, are those that are most likely to have sustainable development.

Creating and addressing a synergy between research and development concepts and activities - innovation and sustainable development of society is the most effective way to create a development that satisfies both the financial and human aspects of an activity.

The integration of sustainable development in innovation research projects expresses the commitment of organizations to implement the legal provisions and guidelines included in the relevant strategies, taking into account the positive impact that the implementation of these projects may have on the environment.

This must be understood as a long-term participatory process that can not be achieved without establishing the possible environmental impact that the innovation development research project may have.

The main role of RDI, is to improve people's living conditions through the sustainable development of organizations.

To find solutions to environmental challenges, organizations need to implement new projects that create synergy between science and society by involving all stakeholders in the sustainable development of society in general. Research, development and innovation activities should be seen as an investment in the harmonious development of future agribusinesses. Capitalizing on all the strengths and opportunities offered by the current environment and the current level of society development must stimulate innovative solutions to develop an economy in harmony with nature.

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THE IMPACTS OF SBM MODEL ON THE ISRAELI EDUCATION SYSTEM

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Abstract: *The trend era of globalization and networks is pushing individuals, organizations, societies and companies to survive fast changes of this trend and its' consequences. The main theme is the ability of passing and flowing this transformation trend that being less expensive and more productively efficient by meeting the global market requirements, via conducting self-changes based self-management and self-economic mobility whose match globalization spirit. There is a deep relationship between education and economics, namely there is no adopt that economy based-knowledge system of a globalized economy, and knowledge-based economy behavior and values are the major tool of easily jump on survival boat to flow with the transformation of the new-age of globalization. The aim of the research is to evaluate and analyze the SBM model as an integration model of economic-educational testing, by conducting a comparative examining of traditional schools (NSBM) and schools based management (SBM), via exploiting various methods of management analysis, comparative descriptive data of schools numeric outcomes; and comparative descriptive data of schools survey outcomes, according to school management type.*

Keywords: SBM model, Israel, education system, globalization.

JEL Classification: F02, I2, O32.

1. Introduction

The correlation evidence showed that education and economic growth are related, the primary economic development tool for any country is the education level (Carnevale and Desroches, 2002, p.16). Schools and other educational institutions have a vital role of preparing a generation which can face the challenges of this new-age, especially facing skills' illiteracy for the advancement of the knowledge-based globalized economy at large (Carnevale and Desroches, 2002, p.17). Managing the transformation process requires new model of educational institutional system, effective human resources, behavior based-economic and high effectiveness values. Namely, mobilization process towards idealization of the implementation and the demand actions belong. The main tools of this theme related school system are transition from traditional school to school based management-SBM, from low to high effective manager, from unsatisfied to satisfied employees, and from dependent climate to open and independent one. Many countries have a higher growing rate of population rather than increasing rate of national income, thus they are heading to reduce expenses as well as they can at all life aspects and ministries, including Ministry of Education. While reforming and aligning education is costly, not implementing these changes is perhaps even more expensive. Furthermore, countries tend to increase their achievements such as students' achievements, comparatively related to other countries, with trying to raise and to be proud of these achievements, especially when they are members of international organization like "OECD", and with attempting to raise their economy and systems as their organization commitments and expectations, the target is to win the race. One important part of these transformations is the transition of the traditional schools to new model of managing (SBM) all over the world, in order to achieve better outcomes, economic improvements and students' achievements, flow the reducing expenses, increasing productively efficient and paralleling globalization spirit in addition to international organization membership. SBM model is implemented in many schools around the world in different ways, as a product of local concept.

School Based Management (SBM) is a new educational management direction which includes reducing of centralization and formal authority to the school management staff level with parent's council, contains making independent decisions on educational,

financial, and organizational issues, in order to improve the school outcomes, students' achievements and effectiveness, by exploiting the financial and educational resources, under the policy of the Ministry of Education (Ministry of Education in Israel, 2015). Thus, there is a great need for conducting more reports and studies in order to assess the Israeli's 2012 SBM reform to expel disclarity; thus, this study explores and seeks more truths and more evaluation the SBM reform, and answers with attempt to answer the main question, does SBM impact school outcomes: economic, students' achievements, school and principal effectiveness and staff satisfaction.

Methodological support. This study is a quantitative-comparative research, based on data taken from a questionnaire distributed in 21 Arab primary schools, and by data taken directly from schools and from the Israeli Ministry of Education, the National Authority for Measurement and Evaluation in Education in Israel, the Israeli Central Bureau of Statistics, as well as world data from OECD.

2. SBM model. There are mixed results about the SBM. While many studies are supporting, for example (Obiwuru et al., 2011; Caldwell, 2005; South Australian Department of Education and Children's Services, 2008), others brought criticism of SBM (Brus et al., 2011; Hanusek, Link and Woessman, 2013). First, the present of studies that show positive results in SBM that help to understand the benefits. Further, representative studies, which showed findings, do not support self-management that helps to understand difficulties of SBM.

The researchers investigated three main components, which improved following the implementation of SBM:

- Improving student achievements - most studies tried to explore effects of SBM model on student achievement. For instance, in 1988 SBM reform in Chicago, the goal was to raise student achievement. A comparison was made between testing scores in 1990 and 1997, and student achievement was improved (Ben, Dunphy and Griffiths, 2014).
- A large study that surveyed 39 countries, found SBM has an impact on student achievement in TIMSS test in many countries, and has shown a link between SBM and student achievement (Popham, 2004).
- Ability to lead – school autonomy has improved by providing conditions for leading to improve SBM (Nayab, 2011).
- Responsibility and reporting - a study in Europe which tested SBM, results have shown increasing of reporting responsibilities at school local level (Ben, Dunphy and Griffiths, 2014).

Studies which have not found support for SBM model. Many studies explored that SBM rule does not affect student achievement. For example, in PISA tests in 2009, a student reading scores in SBM were 6 points lower than student scores in schools with less autonomy. In 2012, the difference was nine points lower in science; although SBM showed more taking part of decision making related to traditional schools, it's still without real impact on improving achievement (Nusche et al., 2012; OECD, 2013).

Another example shows, SBM don't affect student achievement, SBM survey in Australia, New Zealand and other countries explored that no impact of SBM on teaching improvements (Popham, 2004). Finally, SBM also does not affect the inequality between students with different social background, in developed country or developing countries (Hanusek, Link and Woessman, 2013).

The study elaborated by the author is supported by literature review and economic research, including results of questionnaires, is based on the following questions:

- How does SBM influence the economic improvement as measured by the school outcomes lists (a descriptive statistics), comparative between pre SBM period and SBM

period of experimental schools (SBM) themselves; and between experimental schools (SBM) and control schools (NSBM), as measured in elementary Arab Israeli schools?

- How does SBM influence the student achievements as measured by the school outcomes reports, comparative between pre SBM period and SBM period of experimental schools (SBM) themselves; and between experimental schools (SBM) and control schools (NSBM), as measured in elementary Arab Israeli schools?
- How does SBM or NSBM influence the perception of teachers about Management effectiveness level in experimental schools (SBM), comparative to control schools (NSBM), as measured by the general Effectiveness and Satisfaction Questionnaire (ESQ), from the viewpoint of school staff?
- How does SBM or NSBM influence the teacher and principal satisfaction in experimental schools (SBM) comparative to control schools (NSBM), efficacy outcomes and teacher satisfaction as measured by the Effectiveness and Satisfaction Questionnaire, in elementary Arab Israeli schools?

In order to explore the level and differences in outcomes; economic improvement; students achievements; and school climate by knowing teachers' and principals' level of job satisfaction, the target population of this study were 21 Arabic schools in Israel, located in Haifa (north) district with mixed urban and rural schools: 18 – elementary are the experimental schools (SBM); 9 – junior schools are the control schools (NSBM). In both were researched 360 teachers and principals.

Research questions will explore the impact of SBM model on Arabs Israeli on schools improvement and effectiveness outcomes (economic improvement and student achievement); and on perceived principal management effectiveness level (style); and on teachers and principals level of satisfaction.

This is a quantitative, comparative and descriptive designs study, will utilize two instruments in order to answer the research questions. The first one is the data lists of the SBM schools outcomes, directly from the schools and treasury departments of Arabs municipalities, and against outcomes lists of NSBM and BSBM traditional schools.

The second one is a survey instruments Likert - type questionnaire. The Effectiveness-Satisfaction-Questionnaire – (ESQ) Questionnaire will be used to measure the conceptions of teachers with regard to elementary SBM Managers effectiveness style; and teachers and principals in order to determine school effectiveness level.

The questionnaire consists of 3 elements, the first one contains three questions about profession (teacher or principal); school kind (SBM vs. NSBM) and school SBM seniority (school NSBM has zero seniority), the second part is about effectiveness which contains two questions; and the third part is about satisfaction whose contains 3 questions. The ESQ will test the perceived effectiveness and satisfaction among the Arabic elementary SBM teachers and principals; against the Arabic elementary and traditional junior schools-NSBM.

Both of questionnaires parts collected in one pamphlet in order to facilitate the task for the respondents the respondents were asked to consider their school principal, and answer a number of questions that related to their school, and their perceptions of the teaching occupation about their satisfaction related to work in school. In addition, background and demographic information wasn't collected due to this study aimed to investigate the general feeling and climate as comparison between the two school kinds, thus, wasn't necessary of exploiting personal details.

The researchers and principals conducted the survey at participate schools by deviating the questionnaires to the participating persons, by the Author direct visiting to the schools. In addition, the researcher has collected economic data and student achievement lists of the participate schools from the schools and from education and

treasure departments of the municipalities besides to the sites related to the Israeli Ministry of Education (Ministry of Education in Israel, 2015).

Data was collected through surveys and numerical data methods. It was recorded on Excel program and SPSS program, using means, regression and figures to explore the significant outcomes and significant differences of the SBM vs. NSBM, in order to determine the real impacts of SBM model on the school effectiveness, feelings and staff satisfaction.

The initial data of this stage contains the study sample characteristics, research relevant years, the four main analysis outcomes: Economic improvements; student's achievements; effectiveness and level of satisfaction.

Study sample characteristics: number and kind of schools and participants (Table 1).

Table 1. The study sample characteristics (independent variables)

Non-SBM vs. SBM	Participants N	Frequency	School Percent	Valid Percent	Cumulative Percent
Non SBM Schools	120	9	42.9	42.9	42.9
SBM Schools	240	12	57.1	57.1	100.0
Total	360	21	100.0	100.0	

Source: calculated by the author based on data research sample

The data in table 1 shows that the school's sample contains 12 SBM schools and 9 NSBM schools, 360 participants are divided into the 120 of NSBM vs. 240 of SBM. Owing to conducting two kinds of comparison, the SBM vs. BSBM, and SBM vs. NSBM, the schools number and participants' quantity of the SBM were doubled rather than the NSBM.

Following the conducted analysis by the author, will be highlighted **the achievements comparison between BSBM and SBM.**

Achievements comparison between BSBM and SBM in the last 3 years before implementation the SBM reform 2010-2012, of the other 12 SBM schools, and the years of the after SBM implementation 2013-2015/16, of the same SBM schools, who have been applying SBM. (Table 2).

Table 2. Means test of achievement according to years for the experimental group (SBM)

Subject	Scholastic Years							
	SBM from 2010 - 2012/13				SBM from 2013 - 2015/16			
	Mean	Count	Min	Max	Mean	Count	Min	Max
Math	431.22	12	379.00	502.00	463.17	12	434.00	504.00
English	440.06	12	449.00	490.00	460.28	12	420.00	513.00
Science	434.00	12	451.00	493.00	484.67	12	416.00	505.00

Source: calculated by the author based on schools' achievements reports (top score is 600)

From the above table the study observes that the student achievement means before applying SBM reform in the 12 experimental schools (BSBM) were lower in the three items, about average of 30 points minus, Math., English, and Science, compared to the years after the application of SBM in same schools. That means there is a clear improvement in all student achievements. This improvement is about 6% increase, makes the improvement not significant, although it's towards achieving SBM targets, which the ministry of education aimed to fulfill.

These study findings reflect indeed the improvement process which the SBM reform started, but as mentioned, this improvement isn't significant, due to increasing scores isn't excessive. If the increase is up to 10% on NSBM scores at least, then perhaps the improvement is significant. The quality, number of the items which has increased scores, in this case all subjects (Math., Eng., Science) increased and testified scores improvement, is important to exist improvement. But the improvement is more significant when the scores quality also available. It means that, not just the target is to increase scores all over items; moreover the intent is to achieve incisive extension.

Student Achievements Differences between NSBM and SBM. Student achievements differences between NSBM and SBM in the 3 years after implementation the SBM reform (2013-2015/16), of the 9 NSBM schools, and 12 SBM schools, as the third part of conducting comparison, in order to test the study issue, and if the SBM reform fulfills achievements assumptions (Table 3).

Table 3. Test-achievement differences from 2013-2015/16 between NSBM and SBM schools

Achievement subject	Mean of 9 NSBM scores	Mean of 12 SBM scores	Mean differences in favor SBM	SBM Changing direct	SBM scores Improvement
Math	440.11	463.17	23	+	yes
English	431.33	460.28	29	+	yes
Science	445.11	484.67	39	+	yes

Source: calculated by the author based on schools' achievements reports (top score is 600)

From the above table 3. the data shows that the student achievement means in traditional schools-NSBM, in parallel period (2013-2015/16) of applying SBM reform in the 12 experimental schools-SBM, were lower in the three items (Math., Eng. and Science). The average differences in the SBM schools is higher than 30 points, compared to the NSBM schools. This mean improvement is about 7% increase, in favor of SBM schools. This finding is similar to former finding related comparison between BSBM vs. SBM. But also this result doesn't make this improvement a significant, although it is encouraging findings, it is still not incisive, due to the extension is small.

When comparing subject grades of the student achievements table 3 shows that there are nearly significant differences but not incisive differences, due to the mean scores improvement is just about 7% in all the three subjects. The improvements after implementation SBM (2013-2015/16) are: In math 23 points is about 5% extension; English 29 points is about 7% extension and Science 39 point is about 9%, thus, the extension mean of the three subjects is about 7%. This is also an encouraging finding towards achieving SBM targets, although the improvement isn't significant, SBM supporters will be proud to present it.

The data in table 3 shows that there are nearly significant differences in means achievements in all subjects (Math, English and Science). Scores were little better in the years from 2013 until 2015/16 as study hypothesis was assumed, the SBM can achieve improvement student scores. If factors related SBM reform were fulfilled, the result which expected is towards improvement direction.

In conclusion the comparison between two kinds of schools, student achievement result and differences, the findings are in favor of SBM schools, and they confirm SBM does affect student achievement. The improvement is clear but not significant or incisive changings, which is meaning, the direction is towards improving and this is in favor the SBM reform. That mean, due to the short SBM period (just 3 years seniority) can't give significant result or incisive finding.

It seems that in the current SBM is better than the old SBM (2001), and lessons were learned from the past and implemented in the improved present model. The results speak for themselves, it is very important to give SBM reform the chance for improving itself; and to continue this research for along years in order to determine absolute findings, although the results in this study are encouraging.

The student's achievements analysis. Regarding the results of the statistical analysis of the effect of self-based management (SBM) on the student's achievements, we can conclude as follows:

- In the first 12 schools, before applying SBM (2010-2012), the means were low compared to the years after the application of SBM (2013-2015-16) in these schools, and it is clear through the means of each subject items (Math., Eng., and Science).
- The difference between before (BSBM) and after applying SBM in the first 12 schools during the years from 2010 to 2012; and from the 2013 to 2015/16 was nearly significant, the means of the student grades items during the years 2010 to 2012/13 were low compared to the means during the years 2013 to 2015/16. The mean of grades increase was 7% in favor of SBM.
- When we compare between the means for the second 9 NSBM schools during the years 2013-2015/16 and the means for the 12 SBM schools after the application of SBM 2013-2015/16, there were differences in favor of the years after the application of SBM in the first 12 SBM schools. The mean of grades increase was 7% in favor of SBM.
- Thus, the SBM reform as tested at the school grades achievements part, SBM school has achieved advantages more than the traditional schools-NSBM, and the reform direction is towards fulfillment the targets. The huge fulfillment of achieving goals, as this study assuming, will be achieved after more seniority years, if this trend continues growing.

Comparative between pre SBM period and SBM period of experimental elementary Arab schools (SBM). Means and standard deviations for the first 12 schools (with SBM) before and after the application of SBM from 2010-2012/13 and from 2013 to 2015/16 (Table 4.)

Table 4. Means of SBM school in 12 experimental schools (SBM), before and after SBM

Finance	before the application of SBM 2010-2012/13			after the application of SBM 2013-2015/16		
	Minimum	Maximum	Mean	Minimum	Maximum	Mean
Bank Balance	500	35100	2849.41	9210	17500	12807.84
1- volunteer	3750	11190	9247	9550	10900	9286
2- parents payments	29200	642500	54420	37980	59451	53451.57
3- computer purchases	5	12	9	11	20	16

Source: calculated by the author based on financial schools report (finance 1-3 are in Shekels- Israeli Coin)

From the above table the study observes that the means before applying SBM reform in the 12 experimental schools (BSBM) were lower in two parts, bank balance and computer purchases, compared to the years after the application of SBM in themselves schools. That means there is a clear improvement in two budget items, but equal result in one finance part is the volunteer is very similar, without significant difference. Another field is the parent payments the results also resulted equal, even in the BSBM period the mean is higher a few, the score is 969 shekels in favor BSBM.

Differences between before SBM (BSBM) period and SBM period of experimental schools (SBM). The economic differences between before and after applying SBM in the 12 SBM schools during the years from 2010 to 2012/13 and from 2013 to 2015/16 see (Table 5.).

Table 5. Test- Economic differences between after and before implementation SBM of 12 SBM

Finance	Mean 12 BSBM	Mean 12 SBM	Mean differences in favor SBM	SBM Changing direct	Improvement SBM
1- Bank Balance	2849.41	12807.84	9958	+	yes
2- Volunteer	9247	9286.27	39	=	Not clear
3- Parents payments	54420.57	53451.57	969 -	-	No
4- computer Purchases	9	16	7	+	yes

Source: calculated by the author based on financial schools report (finance 1-3 are in Shekels- Israeli Coin)

The data in table 5 shows that the economic differences were in favor of the years after the application of SBM, in the Bank Balance and computer purchases while at the parent's payments there were no significant difference, even it was few in favor of BSBM (969 shk.). So also at the volunteer part there are no differences between the two periods.

When comparing terms of the budget shows that there are significant differences in two budget parts. Bank balance has increased about 4 times in SBMS, and computer purchases also have increased about double times. Opposite, in another two budget parts there weren't significant differences. In general, the direction results and differences divided into two parts, the one confirms SBM affect economic improvement in form significant, and the other one either doesn't confirm improvement, in this case equal results (volunteer) in the two periods; or even confirms un improvement (parents payments).

In conclusion finance comparison result and differences the findings confirm, SBM does affect economic improvement, but with no significant improvement. Thus, it's in favor of SBM, in meaning, the direction is in favor the SBM reform.

Economic comparison between the last 3 years 2013-15/16 of the 9 NSBM schools that haven't applying SBM reform; and the last 3 years 2013-2015/16 of the 12 SBM schools who have been applying SBM. Mean's finance subjects for the control 9 NSBM schools, after the application of SBM during the years 2013-2015/16; and the means for the experimental 12 SBM schools after the application of SBM 2013-2015/16. (Table 6).

Table 6. Economic means of 9 NSBM and 12 SBM after applying SBM reform

Finance	SBM after application of SBM			NSBM after application of SBM		
	Minimum	Maximum	Mean	Minimum	Maximum	Mean
1-Bank Balance	650	4550	3459	9210	17500	12807
2-Volunteer	1400	6500	3266	9550	10900	9286
3-Parents payments	49600	60700	55007	37980	59451	53451
4-computer Purchases	7	15	11	11	20	16

Source: calculated by the author based on financial schools report (finance 1-3 are in Shekels- Israeli Coin)

From the above table the study observes that the means after SBM period, 2013-2015/16, in 9 control traditional schools-NSBM, were low compared to the means of for the 12 experimental SBM schools after the application of SBM 2013-2015/16. And it is clear through the means for each budget item. Except in the parents payments item the mean was higher.

Economic differences between: the last 3 years 2013-15/16 of the 9 NSBM schools that haven't applying SBM reform; and the last 3 years 2013-2015/16 of the 12 SBM schools who have been applying SBM. The economic differences between after and after applying SBM in the 12 SBM schools during the years from 2010 to 2012/13; and 9 NSBM schools during parallel period 2013-2015/16 (Table 7.)

Table 7. Economic differences between Control Schools NSBM and experimental SBM schools

Finance	Mean 9 NSBM	Mean 12 SBM	Mean differences in favor SBM	SBM Changing direct	Improvement SBM
1- Bank Balance	3459	12807.84	9348	+	yes
2- Volunteer	3266	9286.27	6020	+	yes
3- Parents payments	55007	53451.57	1556 -	-	No
4- computer Purchases	11	16	5	+	yes

Source: calculated by the author based on financial schools report (finance 1-3 are in Shekels- Israeli Coin)

The data in above table 7 shows that the economic differences again were in favor of the SBM schools after the application of SBM, related to parallel period of the traditional schools-NSBM. The Bank Balance is in favor SBM, has increased 9348 shk. About 3 double of NSBM bank balance; and the volunteer also has doubled 3 times in SBM schools after applying SBM reform; besides to computer purchases which increased 45%. While at the fourth item the parent's payments, there was no significant difference, even it was few in favor of NSBM (1556 shk.). When comparing terms of the budget shows that there are significant differences in three budget parts. Bank balance, volunteer and computer purchases, have increased about double times. Oppositely, in another budget item, there wasn't a significant difference, but this advantage for NSBM doesn't reject the economic improvement direction. Due to 3 items in favor of SBM vs. just one part is in favor the NSBM.

So, the direction results and differences divided into two parts, the one is major (3 of 4) which confirms SBM affect economic improvement in form significant, and the other one is minor (1 of 4). doesn't confirm improvement (parents payments).

In conclusion finance comparison result and differences the findings confirm that SBM does affect economic improvement. But again it is without significant improvement, although the results are in favor SBM they still not incisive. In sum, the direction is in favor the SBM reform, but due to the short SBM period (just 3 years seniority), thus, the next few years can help research field to determine absolute findings about SBM reform.

3. Conclusions

Regarding the results of the economic analysis of the effect of SBM on the school budget **author conclude as follows:**

-In the first 12 schools, before applying self-management, the means were low compared to the years after the application of SBM in these schools and it is clear through the means of each budget item, except the parents payments were in favor of traditional schools NSBM, and the volunteer was equal.

-In the last 9 schools, the means after applying SBM were low compared to the means of the 12 SBM schools after the application of SBM 2013-2015/16.

-The difference between before and after applying SBM in the first 12 schools during the years from 2010 to 2012 and from the 2013 to 2015/16 was significant, the means of the budget items during the years 2010 to 2012 were low compared to the means during the years 2013 to 2015/16.

-When we compare between the means for the second 9 NSBM schools during the years 2013-2015/16 and the means for the first 12 SBM schools after the application of SBM 2013-2015/16 there were differences in favor of the years after the application of SBM in the first 12 SBM schools.

-Thus, the SBM reform as tested at the economic part, has achieved advantages more than the traditional schools-NSBM, and the reform direction is towards fulfillment the targets.

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IMPACT OF EXCHANGE RATE ON ECONOMIC GROWTH IN NIGERIA (1981-2016): AN ARDL APPROACH

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Abstract: *The study assessed empirically the impact of exchange rate on economic growth in Nigeria from 1981 to 2016. Data on GDP, Exchange rate, foreign direct investment (FDI), inflation rate, imports, exports, trade openness, final consumption expenditure (FCE), interest rate, and government expenditure were obtained from the different issues of the CBN Statistical Bulletin. Data series were assessed for stationarity with the aid of the ADF test. Bound test was conducted and the model was estimated within the ARDL framework supported by the relevant post estimation diagnostic tests. The bound test showed that there was long run relationship among the study variables. Model estimation revealed that import, lag of trade openness, FDI, lag of exchange rate, interest rate and inflation significantly affected the growth of the economy in the short run. In the long run, economic growth was affected by trade openness, FDI, exchange rate, government expenditure and interest rate. It was concluded that the present year exchange rate did not affect economic growth in the short run but its one year lag did, while exchange rate had negative effect on the growth of the Nigerian economy in the long run. To achieve growth in the economy, effective exchange rate management system alongside expansionary fiscal policy and encouragement of importation of capital goods are recommended.*

Key words: *exchange rate, economic growth, Nigeria.*

JEL Classification: *F31.*

1. Introduction

Money is an item that is acceptable generally as a medium of payment for goods and services and repayment of debt in a country. Money generally has different functions which are; measure of value, unit of account, store of value and standard for deferred payment. Since money is the key to exchange i.e. facilitates exchange, the rate at which goods are exchanged for each other depends on the value of money. Similarly, money is the determining factor of exchange between two countries which also depends on the value of each country's currency. This is because the value of each currency differs depending on the economic situation of each country and other accompanying macroeconomic dynamics. The comparison of different currencies of different countries is needed because of exchange which takes place across international borders through trade.

Exchange rate may be described as the price of a particular currency relative to the other. It can also be seen as a medium by which the prices of commodities in two different economies are connected together. According to Obansa, Okoroafor, Aluko & Millicent (2013), exchange rate determines the participation of external sector in cross-border trade. The issues of rate of interest and exchange rate regime have been a major topic of debates in international finance and in developing countries, with more countries liberalizing trade as means or pre-condition to achieving economic growth. Exchange rate can be seen as one of the very important and useful macroeconomic variables which a country uses to achieve its macroeconomic objectives of economic growth (e.g as being practiced by China, Japan and South Korea to stimulate export), reduction in unemployment level, price stability and increase in standard of living.

The traditional school is of the opinion that depreciated currencies will improve trade balance, solve the problems of balance of payment and increase employment and output only if the Marshall–Lerner conditions are met. The said condition is that currency depreciation will result into the growth of output if the addition of the price elasticity of demand for imports and price elasticity of demand for export is greater than one. The idea driving the direct effects is to enhance the local production of tradable goods, improve the competitiveness of export industries in international markets and stimulate local industries towards the use of more local raw materials (Iyoboyi & Muftau, 2014).

One of the main objectives of macroeconomic policy is significant growth in the economy of a country which is measured in terms of continuous growth in national income. Growth is actually perceived to have occurred when the productive capacity of a country improves (Akpan, 2008). Actual production of goods and services stimulates exports and sometimes requires importations (of raw materials) which involves transactions in foreign currencies (Oyovwi, 2012). Jin (2008) showed that the implications of Nigeria's over-dependence on export of oil is that the economy is highly prone to external shocks because in the event of any major fall in oil price, foreign exchange earnings will decline noticeably and there will be destabilizing effects on exchange rate as there will not be enough stock of foreign currencies to defend the local currency at the foreign exchange market. This major shift in relative prices (exchange rate) would result in a near equal adjustment in the allocation of a country's local resources and possibly move the economic structure away from the production of exportable commodities (agriculture) into possibly the services sectors.

The structural adjustment programme (SAP) was adopted owing to the unfavourable economic situation in the 1980's which made Nigeria to implement the devaluation policy. This policy was adopted mainly to discourage imports and encourage exports by increasing the nations' productivity and income thereof but there has not been noticeable increase in export since. The rate of currency exchange between the naira and United State Dollar for example continues to rise and imports continue to rise which was not the original motive of adopting and implementing the devaluation policy.

Furthermore, according to Nwosu (2016), exchange rates that emerged after the collapse of Bretton Wood System has been unstable and has made scholars and professionals to be skeptical about its effectiveness in enhancing economic growth. For instance, the naira to US Dollar exchange rate was ₦4 in 1987 while the real GDP was about N204.8Billion. In 1995, it depreciated to ₦21 to one US Dollar while the real GDP was ₦281.4B. As at 2014, the exchange rate was ₦168 to one USD and the exchange rate depreciated to ₦365 in 2017.

In the light of the above, it is important to evolve a research whose aim is to assess the intrinsic relationship existing between exchange rate and economic growth in Nigeria. This study bridges the knowledge gap by answering the relevant research question of "how does exchange rate affects economic growth in Nigeria" using most updated available data. Findings emanating from the study is expected to be useful for policy making aimed at achieving economic growth from the exchange rate point of view.

2. Literature Review

Purchasing Power Parity (PPP)

The exchange rate theory known as the Purchasing Power Parity was developed by a Swedish economist Gustav Cassel after the First World War. The term PPP is applied to a number of related but quite different ideas within international trade theory. The first interpretation of PPP is a strict one in which exchange rate equilibrium will exactly be determined by some ratio of prices. The second variant of the theory claimed that relative

price change is the only germane determinant of exchange rates. The third and most general interpretation considered price change as the primary determinant of the exchange rate. It however gave allowance for some useful secondary variables such as tariffs and other trade hindrances, capital flows, transport costs and expectations. Cassel's work actually espoused the third version. Majority of the criticisms by authors such as Ballassa (1964), Samuelson (1964) and Viner (1937) have been against the narrow version while authors who believe in the theory such as Keynes (1924) and Yeager (1958) argued for an intermediate or a most general version as an explanation for the exchange rate behaviour. In summary, it seems to be a significant acceptance of relative price changes as an important factor in determining exchange rates.

The notion of PPP enables the determination of the rate of exchange between two different currencies so that the rate will be at par with the purchasing power of the two concerned countries' currencies. This emphasizes that the rate of exchange of currencies between two economies is better determined by the purchasing power of their currencies.

The traditional Flow model

According to Augustus (2003) the traditional flow model perceived exchange rate as the outcome of the interaction between the supply and demand for foreign exchange. In the said model, the exchange rate will be in equilibrium when demand equals supply for foreign exchange (Olisadebe, 1991).

The Monetary Approach

This is the oldest approach in the determination of exchange rate. It is used as a measure for the comparison of the other methods in the determination of exchange rate. The monetary model assumes a simple demand for money curve. The monetary model in addition also assumes an aggregate supply curve which is vertical. This reflect a situation of flexible rather than constant output. It is worthy of note that the PPP is an important component of monetary approach (MA). The MA perceives exchange rate as the relative price of two asset (national monies) which is determined mainly by the demand for and supplies of those monies and that it is when economic agents willingly hold the existing stocks of the two monies that the equilibrium exchange rate is obtained (Gbosi, 2003). Hence, it is opined that a theory of exchange rate should be stated mainly in terms of the demand for and supply of the currencies.

Exchange rate policy in Nigeria.

A country can adopt any policy or mechanism by which she manages her exchange rate. Any policy adopted is geared towards achieving the macroeconomic objectives of a nation. Exchange rate directly or indirectly affects all the macroeconomic objectives but the degrees differ. By convention, some relationships exist between exchange rate and prices and/ or prices of goods traded among nations i.e. price of imports and exports; therefore, every nation seeks to adopt a reasonable exchange rate policy that will help her attain its objectives especially in the aspect of price stability and sustainable growth in the economy. Obadan (2007) stated that the decision about the choice of a particular regime of exchange rate alongside the appropriate level of the rate tends to be indeed a major important decision in any open economy due to the influence of exchange rate on the economy, the peoples' wealth, resource allocation, distribution of income, standard of living, balance of payment and some other equally important aggregate economic variables.

There are two major classifications of exchange rate systems which can be adopted by a country: These are the fixed exchange rate system and a flexible or floating exchange rate system. A fixed exchange rate system or regime is a system by which the rate of exchange of a particular country's currency relative to other currencies is predetermined by the country's highest monetary authorities (Central Bank of Nigeria in this case). It can

also be known as a regime by which the amount of a foreign currency (Dollar for instance) needed to get a domestic currency (the naira) or vice versa is fixed by the monetary authority who is usually saddled with such responsibility. Fixed exchange rate system has a number of advantages which include avoidance of upward and downward movements (fluctuations); encouragement of investment and control of inflation especially in an importing country like Nigeria.

A flexible or floating exchange rate is one in which the authority does not determine the price of the domestic currency. This is a regime in which the market dynamics determine the rate at which currencies are exchanged. The greatest advantage of this system is the monetary policy independence. However, the authorities make policies that influence the domestic interest rates and inflation. The disadvantages of the freely floating regime have been documented. These include persistent exchange rate volatility, high transaction cost and inflation.

Fapetu, and Oloyede (2014) assessed the nature of the relationship existing between foreign exchange management and economic growth in Nigeria. It was revealed that the type of management strategy adopted the country's foreign exchange did affect most economic variables which also subsequently affects growth in the economy. In the same vein, Eze and Okpala (2014) adopted some quantitative approach to assess the impacts which exchange rate policies have on Nigeria's economic growth and asserted that neither fixed nor flexible exchange rate matters in determining economic growth but what was important was the effectiveness of the management of the policy(s).

Economic growth.

Economic growth in simple terms may be described as the increase in the productivity or in the productive capacity of a country. There are many or diverse ways of measuring growth of an economy, the commonly used is gross domestic product (GDP). Others include per capita income e.t.c. Hence, growth can be defined as the rise in the GDP or an increase in the per capita income. In other words, it can be referred to as the increase in the productive capacity of a country. Gross domestic product can be described as the market value of all goods and services produced within a country usually a year. It can be measured as:

$Y = C + I + G + (X - M)$ where:

C = Consumption or consumer spending,

I = Investment

G = Government spending

(X - M) = Exports minus imports, or net exports.

Review of Some Previous Studies

Economic growth is usually measured as continuous increase in national income which results into increase in the quantity of goods and services produced in the country. The said production of goods and services usually further involve imports and exports which subsequently involve transaction in foreign currency. It is worthy of note that exchange rate is at the middle of the whole process and playing a pivotal role. Obadan (2007) stated that the decision about the choice of a rate of exchange regime alongside the appropriate rate appears to be the most important decision in an open economy due to the impact which exchange rate is likely to have on economic performance, the wealth of citizens, resource allocation, standard of living of the people, the balance of payment, income distribution and other aggregate economic variables. Several scholarly researches have assessed the relationships between exchange rate and economic growth. The outcomes of most these studies have been very diverse. For instance, Adeniran (2014) posited that exchange rate had no significant relationship with economic growth in Nigeria.

This emanated from a study covering the period from 1986 to 2013 which was analyzed using the ordinary least square (OLS) regression.

Nwosu (2016) assessed the impact of volatility in exchange rate on the growth of the Nigerian economy from 1987 to 2014 and reported that volatility (conditional variance) in exchange rate imparted negatively on economic growth in Nigeria. Amassoma and Adeniyi (2016) assessed the nexus existing between variations in exchange rate and economic growth in Nigeria from 1970 to 2013 and reported that exchange rate fluctuation did not significantly affect economic growth in both in the short run and the long-run. Obi *et al.*, (2016) also investigated the relationship which is likely to be existing between exchange rate regimes and economic growth in Nigeria using data from 1970 to 2014. Based on the results obtained from a Generalized Method of Moment (GMM) model, the study concluded that fixed exchange rate constrained economic growth while it was established that exchange regimes was indeed very important in the country's economy as the study's result revealed that deregulated exchange rate regimes enhanced economic growth.

The study of Azeez, Dada and Aluko (2014) established that volatility in exchange rate had positive and significant effect on macro-economic performance both in the long and short run. Because of exchange rate volatility, investors usually take advantage of a rising value of Naira to bring in the capital and technologies they require for their operations. Danmola (2013) carried out an analysis which bothered on the how the volatility of exchange rate affected macroeconomic variables in Nigeria and reported a positive influence of exchange rate volatility on GDP.

A study was carried out on the effect of exchange rate movement on economic growth in Nigeria by Akpan and Atan (2012). The study adopted a GMM approach to analyze a simultaneous equation model and reported that exchange rate movement did not significantly affect economic growth in Nigeria. Ismaila (2016) carried out a study aimed at assessing the relationship between depreciation in exchange rate and Nigeria's economic performance after the Structural Adjustment Programme (SAP) and no significant relationship was reported. Furthermore, Okorontah and Odoemena (2016) using data from 1986 and 2012 assessed effects which exchange rate fluctuations may have on economic growth of Nigeria. The study employed a combination of econometric methods and reported that there was no strong relationship existing between exchange rate and economic growth in Nigeria. However, Khondker (2012) reported a positive relationship between exchange rate depreciation and economic growth in Bangladesh. It was reported that a 10 percent depreciation in exchange rate resulted in 3.2 percent increase in economic growth. Though, majority of the studies reported a negative relationship between exchange rate and economic growth, some reported positive relationship while some reported no significant relationship. This diversity actually warrant further studies.

3. Methodology

Theoretical Framework

The study was based on the Keynesian model of an open economy which states that aggregate output in the economy (Y) equals the addition of the aggregate consumption in the country (C), aggregate investment (I) plus government expenditure plus (G) plus net income from abroad which is the difference between export and import of goods and services in the economy i.e. (X-M).

$$Y = C + I + G + (X - M)$$

$$Y = C + I + G + X - M \dots\dots\dots(1)$$

From economic theory it is widely known that exchange rate affects some of the variables in the model, for instance, exchange rate devaluation affects exports, imports and

investment in the economy. The present study included other variables believed to be relevant to economic growth.

Method of Data Analyses

(a) Pre-estimation

(i) **Descriptive Statistics:** Descriptive analyses of all the study variables was carried out. These included mean, median, maximum, range, standard deviations, skewness test, normality test e.t.c. In addition graphical illustration of the study variables were also carried out.

(ii) **Unit Root test:** This is necessary in order to examine whether the series had constant mean and variances over time (i.e whether they were stationary or not). If a series is stationary, such a series will be predictable, stable over time and it could be used for meaningful analyses and forecast with high predictive power. Therefore the stationarity of the series were assessed with the aid of Augmented Dickey-Fuller (ADF) test.

(iii) **Co-integration test:** The presence of long run relationship among the variables in the model otherwise referred to as cointegration of variables was assessed with the aid of the ARDL Bound test. Since the series were not integrated of the same order, the Engle-Granger co-integration test approach became inapplicable. Hence, the choice of the Auto-Regressive Distributed Lag Bounds Co-integration Test (Bound Testing Approach) became important and relevant.

(b) The Empirical Model

$$GDP = (EXR, INF, INT, FDI, TO, FCE, GEXP, IMP, EXP).....(2)$$

The static econometric form of the model by double logging can be specified as

$$LN\text{GDP}_t = \lambda_0 + \lambda_1 LN\text{EXR}_t + \lambda_2 LN\text{INF}_t + \lambda_3 LN\text{INT}_t + \lambda_4 LN\text{FDI}_t + \lambda_5 LN\text{TO}_t + \lambda_6 LN\text{FCE}_t + \lambda_7 LN\text{IMP}_t + \lambda_8 LN\text{EXP}_t + \lambda_9 LN\text{GEXP}_t + \mu_t(3)$$

Table 1: A priori expectations

Explanatory Variables	Sy mbol	Expected Sign
Exchange Rate of Naira to USD	EX R	Positive or Negative
Inflation Rate (in percentage)	INF	Positive or Negative
Interest Rate (in percentage)	INT	Negative
Foreign Direct Investment	FDI	Positive
Trade Openness (ratio of import + Export to GDP)	TO	Positive
Final Consumption Expenditure in Naira (in Naira)	FC E	Positive
Imports (value in Naira)	IM P	Positive or Negative
Exports (value in Naira)	EX P	Positive
Government Expenditure (in Naira)	GE XP	Positive

Dependent Variable: Gross Domestic Product (GDP)

Estimation Technique: The model was estimated based upon the result obtained from the unit root and the co-integration test. Since the series were integrated of different

orders i.e I(0) and I(1),Autoregressive Distributed Model (ARDL) estimation procedure where the short and the long run models were generated was adopted and it is stated as:

$$\begin{aligned} \Delta GDP_{it} = & \alpha + \mu \text{TREND} + \sum_{m=1}^M \theta_m \Delta GDP_{i,t-m} + \sum_{j=0}^J \vartheta_j \Delta EXR_{i,t-j} + \sum_{r=0}^R \theta_r \Delta INF_{i,t-r} \\ & + \sum_{p=0}^p \varphi_p \Delta INT_{i,t-p} + \sum_{q=0}^Q \delta_q \Delta FDI_{i,t-q} \\ & + \sum_{l=1}^L \epsilon_l \Delta TO_{i,l-1} + \sum_{d=0}^d \pi_d \Delta FCE_{i,t-d} + \sum_{b=0}^b \omega_b \Delta IMP_{i,t-b} \\ & + \sum_{\alpha=0}^{\alpha} Y_{\alpha} \Delta EXP_{i,t-\alpha} + \sum_{s=0}^s T_s \Delta GEXP_{i,t-s} + \lambda_1 EXR_t + \lambda_2 INF_t + \lambda_3 INT_t \\ & + \lambda_4 FDI_t + \lambda_5 TO_t + \lambda_6 FCE_t + \lambda_7 IMP_t + \lambda_8 EXP_t + \lambda_9 GEXP_t + E_t \end{aligned}$$

Data Sources: Data used in the study were sourced from the various issues of the Central Bank of Nigeria (CBN) statistical bulletin.

(c) Post-Estimation Analysis

As a follow-up to the main analyses, it was necessary to assess the validity of the estimated model and to determine whether some basic assumptions have been violated or not. Therefore, relevant tests examined under this section included the test for linearity using the Ramsey RESET test, test for normality of distribution of residual using Jarque-Bera test, heteroskedasticity using the ARCH-LM test and test for serial correlation using the Breusch-Godfrey test.

4. Results and Discussion

Description of Study Variables

Table 2 presents the descriptive statistics of the study variable. It presents the median, mean, standard deviation and other relevant statistics related to the distribution of the series. These included the skewness, kurtosis, and Jaque-Berra test statistic.

It was revealed that all the series in the study were positively skewed. The kurtosis analyses which shows the degree of peakedness revealed that only export, FDI and interest rate were mesokurtic in nature as their values were approximately three (3). Other variables were platykurtic in distribution as their values were lower than 3. The Jaque-Berra test of the normality of the series distribution utilizes information from both skewness and kurtosis. The results showed that export, FDI and government expenditure were not normally distributed while other variables were confirmed to be normally distributed.

Table 2: Descriptive Statistics of Study Variables

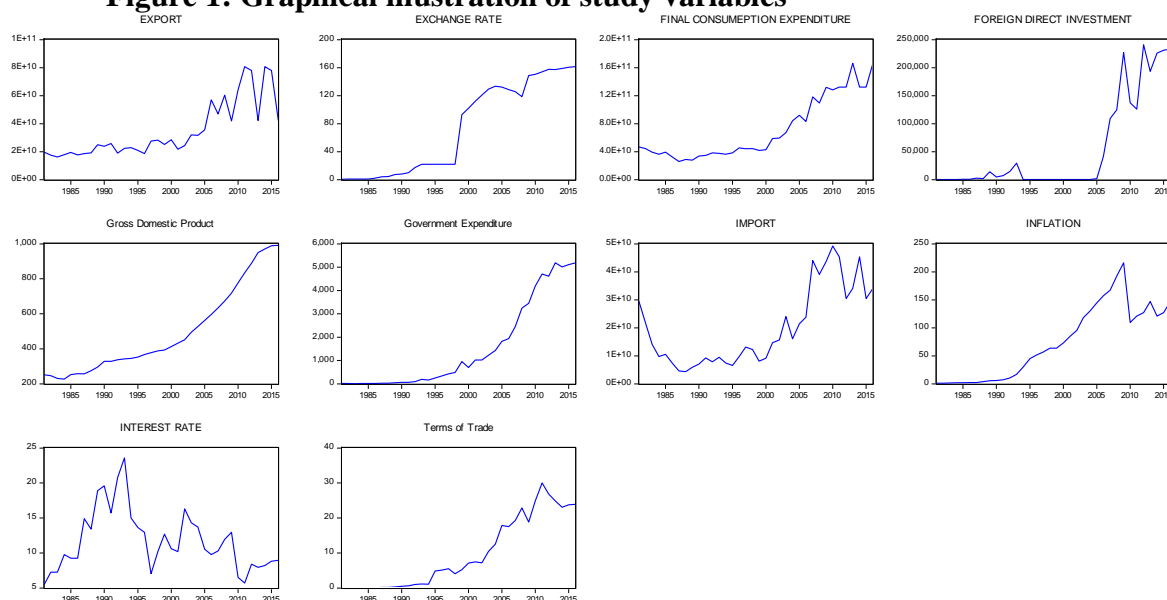
	EXP	EXR	FCE	FDI	GDP	GEXP	IMP	INF	INT	TO
Mean	3.48E+10	73.13	7.09E+10	54670.63	493.23	1541.06	2.00E+10	73.58	11.71	9.68
Median	2.54E+10	57.37	4.49E+10	1819.71	390.78	594.09	1.44E+10	63.56	10.40	5.37
Maximum	8.08E+10	161.31	1.66E+11	240994.5	991.11	5185.32	4.92E+10	215.99	23.60	30.05
Minimum	1.62E+10	0.61	2.60E+10	22.23	227.25	9.64	4.31E+09	1.03	5.50	0.06
Std. Dev.	2.02E+10	65.59	4.39E+10	86689.55	246.29	1879.67	1.40E+10	65.22	4.35	10.11
Skewness	1.24	0.11	0.84	1.26	0.85	0.97	0.74	0.37	0.86	0.61
Kurtosis	3.22	1.21	2.24	2.91	2.40	2.35	2.17	1.90	3.26	1.80
Jarque-Bera	9.32	4.89	5.13	9.49	4.95	6.26	4.36	2.65	4.52	4.38
Probability	0.01	0.09	0.08	0.01	0.08	0.04	0.11	0.27	0.10	0.11
Sum	1.25E+12	2632.65	2.55E+12	1968143.	17756.30	55478.07	7.19E+11	2648.89	421.71	348.61
Sum Sq. Dev.	1.43E+22	150561.7	6.75E+22	2.63E+11	2123193.	1.24E+08	6.87E+21	148890.0	663.26	3576.20
Observatn	36	36	36	36	36	36	36	36	36	36

Source: Author's computation, 2018.

Trends of the Study Variables

Figure 1 presents the graphical illustration of the various series in the study. Most of the series have been rising steadily with noticeable fluctuation overtime except for interest rate which started rising from 1981 reaching its maximum of about 24 percent in 1993 and had since fallen and has been fluctuating between 10 and 15 percent till date. The observed general upward trend of most of the series is not surprising as most economic variables tend to move together in the same direction depending on the nature of their relationships as background economic situations change.

Figure 1: Graphical illustration of study variables



Stationarity of the Study Variables

The series stationarity was examined with the aid of the ADF test. Non-stationary time series is known to produce spurious regression which may lead to faulty estimation, forecasting and ultimately policy recommendation and formulation. Hence, the need to know whether or not study series were stationary. All the variables except export were not stationary at level but became stationary after first differencing. They are therefore

integrated of order one i.e I(1) except export and import which were stationary at level i.e I(0) as presented in Table 3.

Table 3: Results of Augmented Dickey-Fuller Test for Stationarity of Study Variables

Variables	Level			First Difference			I(d)
	None	Intercept	Int&Trend	None	Intercept	Int&Trend	
LGDP	2.9863	0.4005	-2.6810	-1.908*	-3.922***	-3.916***	I(1)
LEXP	1.7954	-3.4466*	-3.95***				I(0)
LEXR	1.4587	-2.2232	-0.834	-4.10***	-4.93***	-5.52***	I(1)
LFCE	1.7796	0.5827	-2.8205	-6.18**	-6.61***	-7.13***	I(1)
LFDI	0.2679	-1.177	-1.7987	-6.264***	-6.285***	-6.216***	I(1)
LGEXP	-0.3835	-1.5278	0.2477	-0.6413	-1.8535	-4.5879***	I(1)
LIMP	0.0482	-1.1224	-3.482*				I(0)
INF	0.2165	-0.9534	-2.3181	-6.231***	-6.407***	-6.305***	I(1)
TOT	1.0837	-0.1950	-2.1950	-5.556***	-6.038***	-6.004***	I(1)

*Significant at 10% level, **Significant at 5% level, ***Significant at 1% level.

Source: Authors' computation, 2018

Lag Length Selection

In a bid to determining the appropriate lag-length for the ARDL model estimated, a lag length selection criteria test was performed. The Akaike Information Criteria (AIC) which penalizes heavily for over-parameterization was followed in selecting the appropriate lag-length (Table 4). The test revealed that a lag length of 2 was the most appropriate.

Table 4: Lag Length Selection Criteria Results

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-368.1197	NA	0.002163	22.24234	22.69127	22.39543
1	-100.8112	361.6526*	1.46e-07	12.40066	17.33889*	14.08474
2	57.47164	121.0398	2.96e-08*	8.972257*	18.39978	12.18731*

* indicates lag order selected by the criterion

Long Run Cointegration (Bound Test)

The ARDL Bound test for the presence of long run cointegration among the study variables was performed (Table 5). The F-statistic value of 6.38 which was higher in value compared with the upper bound value of 4.24 at 1 percent level implied the presence of long run cointegration among the variables.

Table 5: Result of ARDL Bound Test for Long Run Cointegration

Test Statistic	Bound Test Results		
F-Statistic	6.38		
Critical Test Bounds			
Significance Levels	I(0)	Lower Bound	Upper Bound I(1)
1%		2.97	4.24
2.5%		2.67	3.87
5%		2.43	3.56
10%		2.16	3.24

Source: Author's computation, 2018

Short Run Relationship

Table 6 shows the results of the estimated short run model of the impact which exchange rate and other macroeconomic variables on the growth of the economy. Exchange rate serves as a major link between a country's economy (especially through trade) with the outside world or other countries. The result showed that lagged series of exchange rate ($\alpha = 0.1$), one year lag of import ($\alpha = 0.05$), lag of Trade Openness ($\alpha = 0.05$), final consumption expenditure ($\alpha = 0.1$), inflation rate ($\alpha = 0.05$), interest rate ($\alpha = 0.05$) and time trend ($\alpha = 0.05$) significantly affected economic growth in the short run in Nigeria.

The present study results revealed that the current year exchange rate did not significantly affect economic growth. However, lagged series of exchange rate ($\alpha = 0.1$) had positive and significant effect on economic growth. Furthermore, a percent increase in exchange rate in the previous year resulted in 0.04 percent increase in economic growth in the present year. This finding is in favour of devaluation as means of stimulating economic growth. This may be achieved through aggressive encouragement of export which may eventually enhance economic growth. The finding in this study ran contrary to that of Okorontah (2016) who found no significant relationship between exchange rate and economic growth. However, the effect of lagged exchange rate was not reported in the study for proper comparison. The finding reported here is similar to that of Lawal (2016) after a study conducted on Nigeria.

Lag of import came up with a positive sign and a coefficient value of 0.06. This implied that one percent increase in import in the previous year increased economic growth by 0.06 percent in the present year. This is usually the case in a situation where majority of importations are on capital goods. Such good like equipment and machineries are engaged in production and services in the subsequent years. This finding corroborated that of Azeez *et al.*, (2014) which found a direct association between import and economic growth in Nigeria after a study covering the period from 2000 to 2012. Adesuyi and Odeloye (2013) study revealed a direct relationship between non-oil import and economic growth in Nigeria.

Trade openness is the ratio of the addition of import and export to GDP. The lag of trade openness had significant and negative effect on GDP. Contrastingly, current year value of trade openness had positive but non-significant effect. Nduka (2013) reported a positive relationship between trade openness and economic growth in Nigeria. It should however be noted that the present year trade openness did not have significant effect on economic growth in this study. Furthermore, in the shorth run, final consumption expenditure positively affect economic growth. One percent increase in final consumption expenditure resulted in 0.16 percent increase in economic growth.

The study revealed that inflation significantly and negatively affected economic growth. The negative effect of inflation on the economy is contrary to theory and this might be due to the very high inflation rate experienced in the country which might have been beyond the acceptable threshold to enhance noticeable economic growth. The negative influence of inflation on real growth in the economy reported in this study corroborated the assertion of Hossain *et al.*, (2012) that high inflation is not good for the economy. Interest rate was found to be significant and have positive (though, small) impact on the growth of the economy in the short run. This corroborates the finding of Maiga (2017).

The trend variable was positive and significant which indicated that economic growth has been trending upward overtime. The coefficient of the error correction term fulfilled the three conditions necessary for the confirmation of the presence of long run relationship in the model. These are being less than one, negative and significant. The error

correction term value of -0.68 which was significant at 1 percent implied that 68 percent of the disequilibrium in the system due to external shock in the previous year is restored back in the current year. In effect, it takes less than two (2) years for the system to restore back unto its long run equilibrium path in the event of any disequilibrium due to an external shock on the system.

Table 6: Short Run Model Result

Variable	Coefficient	t-Statistic	Prob.
D(LGEXP)	-0.0167	-0.8751	0.4020
D(LIMP)	0.0178	0.5882	0.5694
D(LIMP(-1))	0.0602**	3.1142	0.0110
D(TO)	0.0015	0.4738	0.6458
D(TO(-1))	-0.0058**	-2.2723	0.0464
D(LFDI)	-0.0061	-1.2020	0.2570
D(LFDI(-1))	-0.0029	-0.9411	0.3688
D(LFCE)	0.1629*	1.8760	0.0901
D(LEXR)	0.0039	0.2198	0.8304
D(LEXR(-1))	0.0431*	2.1287	0.0591
D(LEXP)	0.0559	1.5483	0.1526
D(INF)	-0.0006**	-2.4153	0.0363
D(INF)	-0.0005	-1.5502	0.1521
D(INT)	0.0070**	2.8112	0.0184
D(@TREND())	0.0237**	2.8530	0.0172
CointEq(-1)	-0.6875***	-4.9692	0.0006

***Significant at 1%, **Significant at 5% and *significant at 10%

Source: Authors' computation, 2018

Results of the Long Run Model

The long run analysis results revealed that trade openness in line with *a priori* expectation had positive and significant effect on economic growth. This is contrary to the negative effect in the short run. It may be that the positive effect of trade openness took some times to manifest. The positive relationship is in line with the findings of Nduka (2013). Surprisingly, FDI had negative effect on economic growth in the long run while exchange rate had negative relationship with the growth of the Nigeria economy in the long run. Government expenditure was found to be significant (at 10 percent) and had positive effect on economic growth. Government expenditure has the potential of significantly initiating improvement in GDP especially with expansionary fiscal policy. In the same vain, the significance and the positive sign of the trend variable coefficient revealed that economic growth has been trending positively over time (Table 7).

Table 7: Result of the Static (Long run) Model

Variable	Coefficient	t-Statistic	Prob.
LGEXP	-0.0242	-0.8881	0.3953
LIMP	-0.0885	-1.4120	0.1883
TO	0.0226**	2.9901	0.0136
LFDI	-0.0229*	-1.8444	0.0949
LFCE	0.2369	1.6672	0.1264
LEXR	-0.0589*	-2.0989	0.0622
LEXP	0.1522*	2.1892	0.0534
INF	-0.0002	-0.6204	0.5488
INT	0.0203**	3.1543	0.0103
C	-1.8953	-0.5757	0.5775
@TREND	0.0344***	4.6480	0.0009

***Significant at 1%, **Significant at 5% and *significant at 10%

Source: Authors' computation, 2018

Post Estimation Diagnoses

Table 8 presents the results of the post estimation analyses. The ARCH-LM test was used to assess the existence of heteroscedasticity in the estimated model. Given the probability level which was more than the acceptable level of 5 percent the null hypothesis of “no heteroscedasticity” could not be rejected. Hence, it was concluded that the model was homoscedastic. The Jarque-Bera test for the normality of the residual revealed that the residuals were normally distributed. The residual of the estimated model was free from serially correlation (autocorrelation) considering the results of the Breusch-Godfrey test. The Ramsey-RESET test was carried out to examine the linearity of the model or to confirm if the model was well specified. The high probability level implied that the null hypothesis of linearity of the model could not be rejected. Hence, it was confirmed that the model estimated was had constant variance, normally distributed, free from autocorrelation and well specified (Table 8).

Table 8: Post Estimation Diagnosis Results

Econometric Problem	Test Procedure	Statistics (Probability)	Conclusion
Heteroscedasticity	ARCH-LM	0.6374 (0.4246)	No heteroscedasticity in the model
Normality	Jarque-Bera	1.230 (0.5401)	Residual Normally Distributed
Autocorrelation	Breusch-Godfrey LM	24.38 (0.8970)	The is no autocorrelation in the model
Linearity Test	Ramsey Reset	0.0024 (0.9667)	The model is well specified

Note: Figures in parenthesis are probability values

Source: Author's computation, 2018

4. Conclusion and Recommendations

It was concluded that current year exchange rate did not have any significant influence on economic growth. However, the lag of the exchange rate did have significant effect in the short run. Meanwhile, exchange rate had significant and negative (but marginal) effect on economic growth in the long run. It may be deductively concluded that exchange rate is not a major determinant of economic growth in Nigeria in the short-run while exchange rate depreciation is expected to stimulate economic growth in the long-run as it takes some times before the effect of such devaluation on the economy begins to manifest. The implication of this is that exchange rate can be used to spur economic growth in Nigeria. Furthermore, import, lag of trade openness, final consumption expenditure, government expenditure and interest rate significantly drive the economy.

Building on the major findings of this study, it was recommended that effective exchange rate management capable of enhancing economic growth should be adopted while the concerned authorities should open up the economy to beneficial foreign trade. In addition, sequel to the significance of government expenditure in the estimated model, expansionary fiscal policy may be adopted by the government in order to enhance the growth of the economy.

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THE INFLUENCE OF METHODS OF VALUATION OF STOCKS AT THE ENTITY OUTPUT ON PERFORMANCE

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Abstract: *In an economic environment in a constantly changing, performance is a priority, an assurance of some profitable economic results, a measure of profit, productivity, growth, value creation, and an indicator hardly touched. Economic entities benefit from the great opportunities to influence the outcome and, implicitly to shape their performance. These include the choice of the method of evaluating the stocks especially in putting their consumption because the entry in the inventory entity does not generate an expense which would have impact on the performance. In this sense, this article aims to analyze the implications of stock assessment methods to the entity upon performance. The research is based on the comparative analysis of the extent to which three methods of assessment of stocks respectively first in-first out, last in first out, weighted average cost may be used depending on the needs of modeling results. The research results show that the methods of stock assessment chosen by each company, governed by the law of national accounts have considerable influences upon the cost and outcome, concealing various possibilities of performance manipulation.*

Keywords: *performance, result, FIFO, LIFO, weighted average cost.*

Classification JEL: *L25, M41.*

1. Introduction

In the conditions of a dynamic economic environment, with growing competition on the market, imperfect and constantly changing legislation, a series of social and economic imbalances that make their presence felt more and more, the performance has a special significance for the wide range of users of accounting information: investors, suppliers, customers, state, employees, banks, creditors, etc. To meet all the "challenges", and to be prosperous, attractive, and developmental, an entity must be performing, that is to obtain profit, and implicitly a significant result. We believe that entities have great opportunities to influence their performance by modeling the result as well as the tax base. These include the choice of inventory valuation method, especially when it comes to consumption, since entry into the entity of stocks does not generate an expense that has an impact on the result. Exit from the entity generates instead an inventory expense that will affect the accounting result, leading the entity to pay a higher corporate tax (when less expense) or less (where expense is bigger).

The purpose of this article is to determine the extent to which the use of a particular stock valuation method influences the performance of the entity. Research results show that the choice of an entity's stock exit method, regulated by national accounting legislation, hides possibilities to model the results, value added by the entity, and through which performance can be influenced.

2. Research methodology

In the paper, the review of the literature seeks to present the current state of knowledge, by calling for specialized bibliographic references, highlighting current concepts of inventories, methods of valuing inventories at the outlet of the entity, the influence of these methods on performance. At the same time, the theoretical documentation allowed the presentation of concepts considered significant in relation to the subject studied, as well as the main methods of valuing the stocks and their influence on the costs and the result. The use as a research method of the case study aims to illustrate the implications that the methods of valuing stocks at their consumption in consumption have on performance through a comparative analysis of the use of the three methods:

FIFO, LIFO and CMP to assess outflows, to appreciate the costs and the result obtained by using each individual method. Finally, we used participatory observation to analyze and interpret the results of the case study and, last but not least, to substantiate opinions based on the results obtained and to achieve the proposed objectives.

3. Issues on Methods of evaluation of stocks

Inventories represent an important part of an entity's assets. As a component of current assets, stocks are: held to be sold during the normal course of business; in production for sale in the normal course of business; in the form of raw materials, materials and other consumables to be used in the production or provision of services (OMFP 1802/2014, art.272, paragraph 1). We meet in the literature many preoccupations for defining, classifying, presenting stock valuation methods. Some authors consider that any good entered into the entity at the cost of acquisition or cost of production is maintained at these values until it expires and since the cost of acquisition or production costs may fluctuate from one day to the next and the quantities both entry and exit can be large, it becomes difficult to attribute to each item unit at its output, purchase or production cost from the moment it enters the entity (Popa, Briciu, Oprean, 2009, pg.107).

In other authors' opinion, the FIFO method offers a more realistic picture of current assets, while the weighted average cost method is recommended to be used under conditions of relative price stability. (Dumbravă, Pop, 2011, pg.346). In the view of some authors, the use of one of the assessment methods is particularly necessary in the case of consumption exits of certain categories of raw materials and materials, which have different acquisition costs from one lot to another (Todea, 2009, pg .197). Regarding inventory valuation, according to a study in the field (Costi B, 2017), it may have an impact on the increase or decrease of the results of the entity, and besides the fact that the Romanian legislation clearly determines the methods agreed for the evaluation inventory, the use of one or other method is left to the choice of management and is influenced by the specificity of the company's activity, and once chosen the method must be preserved.

In principle, an entity should use the same inventory valuation methods for all stocks that are of similar nature and use. The method chosen should be applied consistently from one financial year to the next. The entity's management decision will be included in the accounting policy manual. Current accounting regulations nevertheless allow changes in accounting policies under duly justified circumstances, if required by law, or if they will lead to more relevant or credible information about the entity's operations. Of course, a change in accounting policies (and, implicit, methods of valuing inventories at the exit of the entity) should be mentioned in the set of annual financial statements, specifically in the explanatory notes.

According to the current accounting regulations (OMFP 1.802 / 2014, art.75), inventories, consumption, donations, destruction, stocks are valued and deducted from their management at their input value using the following methods:

- a) The weighted average cost-CMP method;
- b) first-in-first-out method - FIFO;
- c) The last input-first-out-LIFO method.

In the following, we will describe each method of valuation in part, based on the accounting regulations in force (OMFP 1802/2014, art.96).

The weighted average cost method involves calculating the cost of each item based on the weighted average cost of similar items in stock at the beginning of the period and the cost of similar items produced or purchased during the period. The average can be calculated periodically or after each reception. The calculation period should not exceed the average storage time. In the literature, we find a detail of the weighted average cost

method calculated at the end of the month, which is established as a ratio between the initial stock value (V_{si}) plus the input value (V_i) and the quantity in the original stock (Q_{si}) plus the inputs), ie (Pântea, Bodea, 2013, pg.110):

$$CMP = (V_{si} + V_i) : (Q_{si} + Q_i)$$

According to the first-come-first-out method (FIFO), outgoing assets are valued at the acquisition or production cost of the first input (lot). As the lot is exhausted, the goods out of management are valued at the purchase or production cost of the next lot, in chronological order.

According to the LIFO method, outgoing assets are valued at the acquisition or production cost of the last input (lot). As the batch is exhausted, the assets out of the management are valued at the acquisition cost or production cost of the previous lot in chronological order.

In addition to the three methods presented above, provided by the current accounting legislation, in the literature, in the category of stock valuation methods we also meet:

- The cost or standard price method, which consists in determining the standard or pre-determined cost of the products, based on an antecedence of the standardized levels of materials and consumables plus the calculated (determined) workmanship based on the efficiency of production capacities (Sălceanu, 2011, pg.260).

- Retail pricing method used in retail to determine the cost of stocks of fast moving goods with similar commercial margins and for which it is not practical to use another method. The cost of inventories sold is calculated by deducting the gross margin value from the inventory sale price (Briciu, Capusneanu, 2010, pg.132).

- An indispensable method of inflation accounting is "next-in, next-out: NIFO", which consists in assessing outputs at an anticipated price (replacement cost) that may be the price of the last invoices or the estimated price of the next invoice for inventory purchases. Because outputs are valued at replacement value, it is necessary, in order not to obtain a negative balance, to reevaluate the remaining stock; therefore the necessary stock is therefore reevaluated. The revaluation difference is neutralized (Briciu, Căpușneanu, 2010, pg.132).

4. The Influence of Inventory Valuation Methods on Output on Performance

4.1. Conceptual delimitations of the notion of performance

Performance is a complex notion that has seen a number of definitions in the literature. In the economic field, the concept of performance covers different concepts such as growth, productivity, profitability, profit, value, success, yield, progress. At entity level, "performance is success", being in fact "a dependent representation of the success of different categories of users of accounting information, helping to improve cost-effectiveness, and not only what contributes to cost reductions or increasing value" (Pintea, Achim, 2010). Performance is obtained as a result of the summation of three variables: economy, efficiency and effectiveness. Other authors believe that performance is "the state of the company's competitiveness that ensures its sustainable presence on the market, an indicator of potential future outcomes arising from meeting strategic goals, meeting the expectations of all its partners: creating value for its shareholders and customers, offers pleasure in the workplace and a clean environment for the community" (Jianu, 2007). Other authors refer to the notion of financial performance, which is a "modulation of the overall business efficiency", reflecting "how the enterprise values the resources entrusted to it, conditional on the ability to finance the enterprise, that is, the ability to attract new resources, and ultimately constitutes an essential stake for the relations of the enterprise

with its environment as well as for the internal relations "(Barbuța-Mișu, 2009, pp.216-217). We can conclude that performance is the most complex and hard to reach indicator

4.2. Influence of stock valuation methods on performance

Profit has been, and continues to be, today the main indicator for measuring enterprise performance. Profit is calculated as the difference between income and expense. The higher the expense, the lower the result. Exit from the entity, is discharge, is reflected in the accounting for an expense with significant effect on the accounting result. From a fiscal point of view, the higher the expense on a given amount of goods sold or given in consumption, the more profits and the profit tax are, and vice versa, the lower the expense, the more the profit and the tax on profits are higher. In other words, the size of the expense related to the outflow of inventories is indirectly proportional to the size of the result. This reasoning leads us to believe that, depending on the desired outcome, the use of a method of valuing inventories at their consumption conceals, in principle, a possibility of modeling the outcome, with strong implications for performance.

In the literature, we encounter preoccupations to determine the influence of costing methods on their giving to consumption on the result, from which the considerations appear (Briciu, 2006, p. 411):

- First In-First Out (FIFO) method presents the drawback that in periods of inflation leads to a sub-load of production costs, outflows being valued at the lowest prices, higher gross profit, and final inventory value higher stocks. The company will pay tax profits higher taxes unjustified. In the case of a continuous fall in the prices of goods on the market, this method leads to an overburden in production costs, outputs being valued at the highest prices, an unjustified fall in gross profit and a lower inventory stock value. In conclusion, it can be said that the FIFO method benefits viable companies in times when there is a continuous fall in market prices of goods in the nature of stocks;

- LIFO's last-in-out method (LIFO) in the periods of inflation leads to an overburden in production costs, outputs being valued at the highest prices, unjustified gross profits, and a lower inventory inventory value. For low-profit units, the risk of bankruptcy increases, although they will pay tax to smaller corporate tax rates. This method has the drawback that, during periods of continual price depression on the market, it leads to a sub-load of production costs, outputs being valued at the lowest prices, higher gross profit and value inventory of higher stocks. The company will pay tax profits higher taxes unjustified. In conclusion, it can be said that the LIFO method benefits companies in the inflation period. "LIFO's popularity is closely related to the diminishing of taxable profits and thus to the improvement of the treasury.

5. Case study on the influence of stock valuation methods on the output of the entity on performance

To illustrate the influence of stock valuation methods on the output of the entity, we conducted a case study through which we evaluated raw material outflows over a calendar month based on the three valuation methods provided by national accounting legislation: FIFO, LIFO, and CMP. During the year, Gama SRL recorded the following raw material movements, namely initial stock, supplies, consumptions, and final stock. I evaluated in table no. 1 outputs of raw material by the LIFO method. The results are as follows:

Table no. 1. Evaluate raw material outputs using the LIFO method

Nr.ct	Op	INTRĂRI			IEȘIRI			STOC		
		Q	C.U.	V	Q	C.U.	V	Q	C.U.	V.
1	SI	-	-	-	-	-	-	11.428	1,35	15.427,80
2	A	212.122	1,15	243.940,30	-	-	-	11.428	1,35	15.427,80
								212.122	1,15	243.940,30
3	C	-	-	-	110.562	1,15	127.146,30	11.428	1,35	15.427,80
								101.560	1,15	116.794
4	C	-	-	-	59.045	1,15	67.901,75	11.428	1,35	15.427,80
								42.515	1,15	48.892,25
5.	A	424.025	2,05	869.251,25	-	-	-	11.428	1,35	15.427,80
								42.515	1,15	48.892,25
								424.025	2,05	869.251,25
6.	C	-	-	-	150.462	2,05	308.447,10	11.428	1,35	15.427,80
								42.515	1,15	48.892,25
								273.563	2,05	560.804,15
TOTAL		636.147		1.113.191,55	320.069		503.495,15	327.506		625.124,20

Source: Author's projection

By evaluating the outputs of raw material through the LIFO method, there is an expense of 503,495.15 lei with the consumption of raw material during the year and the final stock of 327.506 kg has a value of 625.124,20 lei. It can be noticed that if the LIFO method is used, stocks remain at a very old price. In Table 2, we determined raw material outputs using the FIFO method, evaluating the outputs at the cost of the first input. The results are as follows:

Table no. 2. Evaluate raw material outputs using the FIFO method

Nr.ct.	Op	INTRĂRI			IEȘIRI			STOC		
		Q	C.U.	V	Q	C.U.	V	Q	C.U.	V.
1.	SI	-	-	-	-	-	-	11.428	1,35	15.427,80
2.	A	212.122	1,15	243.940,30	-	-	-	11.428	1,35	15.427,80
								212.122	1,15	243.940,30
3.	C	-	-	-	11.428	1,35	15.427,80	112.988	1,15	129.936,20
								99.134	1,15	114.004,10
4.	C	-	-	-	59.045	1,15	67.901,75	53.943	1,15	62.034,45
5.	A	424.025	2,05	869.251,25	-	-	-	53.943	1,15	62.034,45
								424.025	2,05	869.251,25
6.	C	-	-	-	53.943	1,15	62.034,45	327.506	2,05	671.387,30
								96.519	2,05	197.863,95
TOTAL		636.147		1.113.191,55	320.069		457.232,05	327.506	2,05	671.387,30

Source: Author's projection

By evaluating the outputs by this method, there is an expense of 457,232.05 lei with the consumption of the raw material, and a value of the final stock of 671,387.30 lei. At first glance, I would say that the amount of spending using the FIFO method is higher than if I use the LIFO method and the final stock value is higher when using FIFO. In table no. 3 we determined the value of the feedstock output using the CMP method. The results are as follows:

Table no. 3. Evaluating raw material outputs using the weighted average cost method

Nr.crt.	Op	INTRĂRI			IEȘIRI			STOC		
		Q	C.U.	V	Q	C.U.	V	Q	C.U.	V.
1.	SI	-	-	-	-	-	-	11.428	1,35	15.427,80
2.	A	212.122	1,15	243.940,30	-	-	-	223.550		
3.	C	-	-	-	110.562			112.988		
4.	C	-	-	-	59.045			53.943		
5.	A	424.025	2,05	869.251,20	-	-	-	477.968		
6.	C	-	-	-	150.462			327.506		
TOTAL		636.147		1.113.191,50	320.069		543.331,06	327.506	1,74	569.860,44

Source: Author's projection

The amount of the average cost at the end of the period is calculated by reporting the amount of the initial stock (15,427.80) and the amount of inventory entered during the period (1,113,191.50) to the initial input (11,428) and the input (636,147) obtaining the value of 1.74. By using the weighted average cost method as a method of valuing inventories at the entity's output, we can see that the value of the raw material cost is 543,331.06 and the final stock of raw material is 569,860.44.

The appreciation of the financial performance is based mainly on the profit and loss account, on the analysis of interim management balances (Barbuța-Mișu, 2009, pg.225). As a result, in order to monitor the activity of Gama Srl in 2018, namely, in order to assess the financial performance obtained, to analyze and diagnose the risks to which it is subject, based on the data in the financial statements we have drawn up the picture of the intermediate balances management (Table 4). The picture of interim management balances is as follows:

Table no. 4. Performance measurement based on interim management balances

Nrert	CALCULATION	LIFO	FIFO	CMP
1	Sell goods income (707)	1.769.159	1.769.159	1.769.159
2	Goods expenses (ct 607)	854.526	854.526	854.526
3	Commercial Margin (1-2)	914.633	914.633	914.633
4	Sell Production (ct 701-706+708-709)	83.594	83.594	83.594
5	Change in stocks (ct 711 +/-)	-	-	-
6	Stock production income(ct 721+722)	-	-	-
7	Exercise productions (4+5+6)	83.594	83.594	83.594
8	Third expenses (gr.60-607, gr.61, gr.62-621)	521.773	475.510	561.609
	8.a. Expenditure on consumption of raw materials	503.495	457.232	543.331
	Third expenses exclusive consumption	18.278	18.278	18.278
9	Added value (3+7-8)	476.454	522.717	436.618
10	Tax expenses (gr.63)	5.833	5.833	5.833
11	Wage expenses(gr.64+621)	117.726	117.726	117.726
12	Gross operational surplus (9-10-11)	352.895	399.158	313.059
13	Other operational revenue	23.790	23.790	23.790
14	Other operational expenses	84.145	84.145	84.145
15	Depreciation Expenses	26.531	26.531	26.531
16	Operational result (12+13-14-15)	266.009	312.272	226.173
17	Financial revenue	755	755	755
18	Financial expenses	10.482	10.482	10.482
19	Financial result (17-18)	-9.727	-9.727	-9.727
20	Gross result (16+19)	256.282	302.545	216.446
21	Tax	12.282	12.282	12.282
22	Net result (21-22)	244.000	290.263	204.164

Source: Author's projection

The cost of raw material consumption is included in the balances of intermediate consumption. One can observe the influence that raw material expenditure has on added value. The largest contribution of the entity to national wealth is present when using the FIFO method, because in this case the value of the consumption with the inventory is the lowest. Being significantly lower, expense indirectly influences net result and performance

implicitly. We can say that in order to record a more significant performance, the entity will use the FIFO method.

We can see that inventory valuation methods directly affect performance. The use of the CMP method leads to the evaluation of the outflows at the highest cost. The descending trend is then followed by the LIFO method, and the FIFO method later. Therefore, the use of the LIFO method by increasing costs leads to a reduction in the accounting result, and implicitly the corporate income tax, while the use of the FIFO or CMP method through the gradual reduction of costs will influence the result in the increase, thus increasing the profit tax. Of course, at the end of the month, CMP gives us the most realistic picture of the value of raw materials in stock. The LIFO method significantly reduces the value of the final stock, while the FIFO method increases the final stock of raw material stock. Regarding the influence of inventory valuation methods on the result, it can be represented graphically:

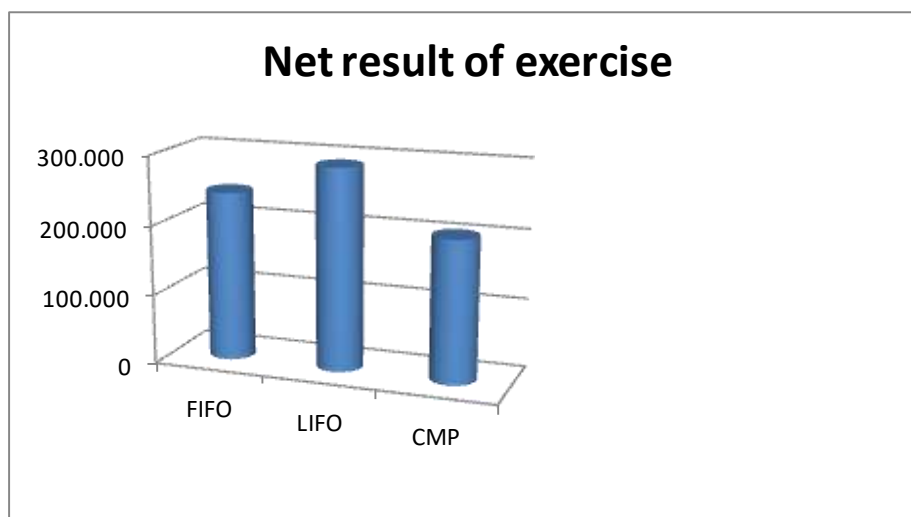


Chart no. 1. Implications of stock valuation methods on performance

We can conclude that choosing a stock valuation method can have a significant effect on the outcome and implicitly on performance, and the size of the cost of inventory consumption is directly proportional to costs and indirectly influences the result obtained. This choice, governed by current national legislation, also hides the intention of any entity to influence its costs, but rather the outcome.

6. Conclusions

Entities have some flexibility in choosing inventory valuation methods, with a significant incidence on the accounting result but above all on performance. Following the analysis of the influence of inventory valuation methods at the entity's output, it follows that when an entity seeks to increase the result, it uses the FIFO method under price rises, is the LIFO method under price depression. On the basis of the researches carried out, it is found that in the case of the FIFO method the result can be overstated, because the outputs are valued at the value of the first input at the value of the historical cost; and under conditions of price increases: Exits are valued at the lowest cost, resulting in profit and performance gains, and otherwise, in the conditions of price declines: output valuation is done at the highest cost, profit reduction takes place. The FIFO method therefore offers a more realistic picture of stocks, as stocks of raw materials / materials valued at the latest prices will remain in stock. In the case of the LIFO method, the situation is the reverse, this method reflecting a quantity of stocks valued at old prices, the value that is unrealistic compared to the stock value at current prices. As far as the CMP method is concerned, it is

not known precisely the value of the outflows during the month, which can be traced only quantitatively.

The research results show that the methods of stock assessment chosen by each company, regulated by national accounting legislation, have considerable influence on costs and outcome, concealing various possibilities of performance manipulation.

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STRESS MANIFESTATIONS DEPENDING TO THE TYPES OF LEADERSHIP

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Abstract: *The ever-changing environment determines man to adapt heavier to the demands it generates. In these conditions, the stress has become a problem with which we are confronted permanently, in both the extra-professional and the professional environment. Due to stress consequences generated by work situations, in recent years, most of the research were mostly oriented towards this. Initially, occupational stress has been studied at the managers level ("staff stress with executive power ") subsequently, has been expanded depending to types of leadership existing. The purpose of this paper is to present stress factors associated with types of leadership and to identify effective leaders behavior for the purpose of diminishing level of stress in the organization.*

Key words: *leadership behavior, leadership, types of leadership, stress.*

JEL classification: *M12, O15.*

1. Introduction

The leader can be described as a possessor of the "tools" needed to create and change the structure and culture within an organization. These prerequisites will influence managers' leadership style, managers' health and also facilitate communication, feedback, and reward systems. According to Schein (1992, apud Nyberg, Bernin, Theorell, 2005), middle managers and low managers have an increased influence on their subordinates, stress and health. They execute and determine limits for subordinates.

Since the last century, research on leadership has focused on different aspects of personality traits of leaders, behaviors and styles. Finding a series of leadership theories that dominate the research scene: pregnancy-oriented leadership theory, relationship oriented leadership, and transformational and transactional leadership theory. These will be discussed in more detail below.

2. Types of leadership

A series of studies argue that the behaviors that make up the lead role are divided into two general categories: relationship-oriented behaviors and behavior-oriented behaviors.

Relationship-oriented behaviors refer to feelings, attitudes, group satisfaction and morale, increase cohesion, reduce interpersonal conflicts, show care for members of the group (Lord, 1977, apud Nyberg, Bernin, Theorell, 2005).

În contrast, comportamentele orientate spre sarcină se concentrează pe problemele care apar și mai puțin pe satisfacția personală a membrilor grupului. Liderii trebuie să conducă; ar trebui să orienteze grupul spre realizarea obiectivelor propuse. Definirea problemelor grupului, crearea rețelelor de comunicare, furnizarea de feedback, planificarea, acțiunile motivante, coordonarea acțiunilor membrilor și facilitarea obiectivelor prin propunerea de soluții și eliminarea obstacolelor sunt aspecte-cheie ale conducerii orientate spre sarcini (Nyberg, Bernin, Theorell, 2005).

The idea of transformational and transactional leadership was introduced for the first time by Burns (1978) and later developed by Bass (1985).

Bass defines transformational supervision in terms of the motivational effect of leaders on subordinates. They show loyalty, trust, admiration and respect to the transformational leader. Subordinates are motivated to serve and accomplish more than they expect from them initially. They are inspired to achieve the objectives that involve increased difficulty and become more aware of the organization's needs. Larsson (1999, apud Nyberg, Bernin, Theorell, 2005) explains the dynamics of transformational leadership as identifying subordinates with the leader, sharing his visions of the future, and the efforts made by subordinates outweigh their own interests. Bass (1990, apud Nyberg, Bernin, Theorell, 2005) mentions some personality traits that characterize transformational leaders: self-confidence, determination, understanding the needs of subordinates. There are four varied types of transformational leadership behaviors (Figure 1).

Figure 1. Types of transformational leadership behaviors

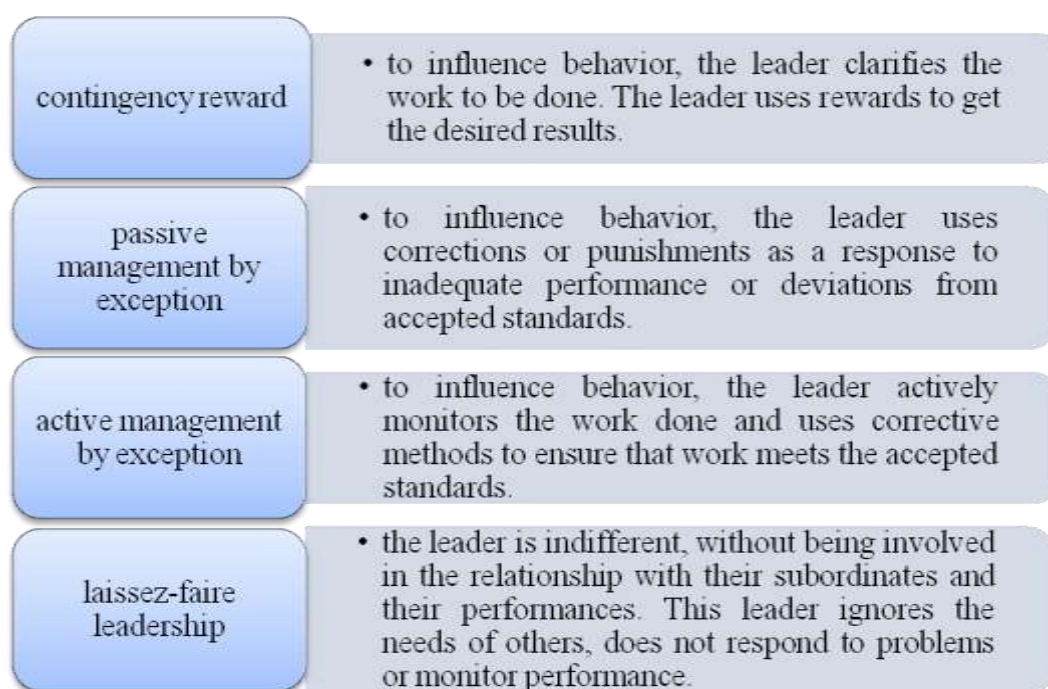


Source: Processed by: Nyberg, A., Bernin, P., Theorell, T., (2005), *The impact of leadership on the health of subordinates. The National Institute for Working Life and The Swedish Trade Unions in Co-operation, 1.*

The ultimate result of transformational leadership leads others to have more initiative in their work, inspires them to be more dedicated, and develops self-confidence.

In contrast, transactional leadership attempts to motivate subordinates by appealing to their own interest. The transactional behaviors are centered on achieving the task and good collegial relationships in return for desirable rewards. Transactional Leadership is based on four types of behaviors (Figure 2).

Figure 2. Types of transactional leadership behaviors



Source: Processed by: Nyberg, A., Bernin, P., Theorell, T., (2005), *The impact of leadership on the health of subordinates. The National Institute for Working Life and The Swedish Trade Unions in Co-operation, 1.*

The behavior of transactional leadership is used to a greater or lesser extent by most leaders.

Bass (1985) considers the two dimensions of leadership to be complementary rather than opposite; both serving to reach the goal. There are also some major differences between the two types of leadership. Transformational leaders not only react to circumstances, they are actively trying to remodel and influence the environment. Transactional leaders motivate their subordinates through punishments and rewards, while transformational leaders attempt to determine subordinates to orient themselves for a longer term and be intrinsically motivated. (Larsson, 1999, and Nyberg, Bernin, Theorell, 2005)

3. Leadership and Health of Employees (Subordinates)

In many studies, leadership has been considered to be one of the many sources of workplace stress but the magnitude of its impact varies from study to study.

Management is part of the organization, its culture and its structure. Both leaders and subordinates are influenced by culture and organizational structure, but leaders have a greater chance of shaping and changing them. Management or leadership style could interact with the organization to become a factor that impacts on subordinate health. Below we presented the effects of leadership types on organizational health.

➤ *Transactional Leadership.* The loss of autonomy stemming from the existence of a transactional leader along with low appreciation may be an important contributing factor to burnout (Seltzer et al., 1988, pp. Nyberg, Bernin, Theorell, 2005). The highest perceived stress levels as well as the highest number of retirees and retirees per case of disease were in organizations where no effort was made to resolve the existing problems. (laissez-faire

leadership). Active management by exception has been shown to create high levels of emotional exhaustion among subordinates.

➤ *Transformational Leadership*. In a study it was shown that if athletes perceive that their coaches provide good social support, positive feedback, democratic decisions and less autocratic style, there were more positive results (perceived competence, joy) and fewer results (Price & Weiss, 2000). The transformational leader causes low responses to physical, emotional and psychological stress among subordinates. Organizations characterized by a democratic way of solving problems have obtained the best scores related to the health of their subordinates (Price & Weiss, 2000).

➤ *Relationship-oriented Leadership*. Relationship oriented leadership style correlates with low workplace tension, burnout or low emotional exhaustion among subordinates (Nyberg, Bernin, Theorell, 2005). It has also been demonstrated that a leader who adopts a style oriented on both the task and the relationship creates very low levels of stress and burnout among the subordinates.

Leadership styles and behaviors have been shown to explain a small part of the results obtained with the health of their subordinates. It was also suggested that the relationship between leadership and employee health might be indirect. Leaders can have a great impact on tasks, control and social support, which are known to have a strong influence on employees' health. This indirect relationship of leadership to subordinate health can be highlighted through the model-demand model developed by Karasek (1979, apud Smith, Sulsky, Uggerslev). Work organization is crucial in the requirement-control model. Whether or not an organization allows employees to develop skills is an essential factor in the individual's ability to exercise control. High demands may induce increased arousal, which is considered to be harmful to health if the possibility of control is reduced. Managers and leaders are also considered to be part of the active quadrant with high psychological requirements and increased decision-making. Johnson (1986, apud Nyberg, Bernin, Theorell, 2005) introduced social support in the control-demand model, arguing that this is a basic need in the workplace to protect against pressure. The increased risk for cardiovascular disease is associated with low levels of social support. Women with cardiovascular disease had a low level of control at work. Control and low social support have been associated with a high degree of mortality due to cardiovascular disease.

4. Leadership and emotions

Leaders have a great impact on subordinates as well as on the organization they lead. Therefore, a healthy leader is the cornerstone of a healthy organization and, implicitly, of healthy subordinates.

There is a vast literature on work-related factors and the well-being and stress of employees, an important aspect in this direction being the impact of leaders on the emotional experiences of employees. There are at least two reasons why employees may experience increased anxiety while interacting with leaders, firstly leaders directly assess performance and thus interactions with supervisors can increase performance anxiety. Second, there is evidence that individuals manifest the need for autonomy, which tends to be limited to the workplace by superiors. Interaction with leaders allows a closer observation of employee behavior, which can make them feel monitored and cracked, resulting in feelings of irritation. Moreover, it has been shown that leaders' expectations can cause employees to compress their emotional expression, which can lead to negative emotional reactions. Fitness (2000 by Bono, Foldes, Vinson, Muros, 2007) found that incorrect treatment by leaders, which remains unresolved, is a key source of employee anger.

The study by Bono et al. (2007) showed that employees show less optimism, happiness and enthusiasm when interacting with superiors than interacting with colleagues and clients. At the same time, employees who perceive the superior's behaviors as specific to the transformational leader manifest more optimism, happiness and enthusiasm throughout the day, including interactions with clients and colleagues. The behavior of the transformational leader has a strong and long-lasting effect on the employee as an individual as well as on the organization as a whole. Beyond the immediate effects on employee status, the positive emotions manifested by the transformational leader have the potential to influence the entire working climate as well as customer satisfaction. Emotion adjustment has been associated with low work satisfaction and increased stress levels, even for individuals who do not regulate their own emotions.

One of the variables that depends on the nature of the social context at work is the well-being of employees. Reducing well-being and increasing stress has the effect of low performance in work, absenteeism, workplace wastage, workplace accidents, apathy, alcohol consumption and low commitment (Shirom, 1989, apud Dierendonck, Borrill, Haynes, Stride, 2004).

It is believed that leaders can influence the perception of subordinates about their own person as well as about the workplace (House, 1981, apud Dierendonck, Borrill, Haynes, Stride, 2004). Poor relationships between leaders and subordinates, characterized by low leadership support, poor communication and lack of feedback reduce the well-being of the individual, causing stress. The leader-subordinate relationship is considered to be one of the main sources of stress in the organization, as well as a key psychological climate factor within an organization. In most studies, the relationship between leader and subordinate is operationalized in terms of experiential support. In this context, well-being is conceptualized as referring to employee sentiments about one's own person and the place where they work and live.

5. Conclusions

Leaders' behavior towards subordinates plays an important role in how the supportive context is perceived. Behavior characterized by trust, recognition and feedback can stimulate the well-being of employees. Numerous studies attest that the perceived social support from the leader is related to the level of stress and burnout perceived. Leaders who show high control, a less supportive style, fail to clarify responsibilities and provide supportive feedback, have subordinates that exhibit a low level of well-being.

Subordinates who have a good opinion about their own person may be more socially active, which can stimulate and strengthen the positive leadership behavior. Thus, not only the behavior of leaders influences the well-being of employees, but also the way subordinates feel and behave influences the manner in which they are treated.

The attachment between leader and subordinate is identified as one of three dimensions to be developed to achieve reciprocity (the other two being contribution and loyalty).

So, the relationship between leaders and subordinates is not one-way, but bi-directional, a relationship in which behavior and positive feelings from one side positively influence behavior and feelings on the other. That is why the relationship between leaders and subordinates is considered to be a process of mutual influence.

The well-being of subordinates may influence the leadership affiliation behavior. People generally tend to avoid depressed people, preferring those who are well-off, and this is also true for leaders towards their employees.

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