CONSIDERATION REGARDING BUDGETARY POLICY IN ROMANIA

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Abstract: *This paper aims to study the dynamics of the government expenditures, revenues and budgetary balance and to determine the type of budgetary policy adopted in Romania, in the period 1999-2015. The research starts with a theoretical review of the budgetary policy which includes the actions of the governmental authorities, regarding revenue collection and budget expenditures, channels and means of attracting resources. This policy is considered to be a tool in influencing the economy to attenuate the cyclical fluctuation in economy, by accepting the budgetary deficit as a viable solution for the revival and simulation of economic growth. The real value of budget balance represents the actual balance recorded during a certain period and the cyclic balance indicates the difference between the actual balance and the structural balance. This research is focused on the study of budgetary policy implemented in Romania by making a quantitative analysis of the following macroeconomic indicators: governmental expenditures and revenues, budgetary deficit and real GDP. Moreover, a correlation between the dynamics of the structural budgetary deficit and the sign of the output gap has been done, and the results have indicated that, in the analyzed period, a restrictive budgetary policy was adopted in 2000-2004 and in 2011-2014, and an expansionist budgetary policy was implemented from 2005 to 2010. The results of this research highlight the main particularities of the budgetary balance in Romania and the actions taken through this channel in different phase of the business cycle.*

Keywords: GDP, government revenue, government expenditure, budgetary deficit, budgetary policy

JEL classification: H5; H6

1. Introduction

The issue of budget deficit has become a main concern in the macroeconomic policy starting with the 80's when several countries have recorded budget deficits. This concern is a legitimate one, because a high level of budget deficit implies future growths in taxes, as well as cutting off expenses which leads to a drop in the economic growth.

The objective of this research is to study the dynamics of the government expenditures and revenues and the type of budgetary policy adopted in Romania, from 1999 to 2015.
First, we made a quantitative analysis of the representative macroeconomic indicators for the budgetary policy (government expenditures and revenues and budgetary deficit), then the research continues with the determination of the structural budgetary deficit and of the cyclical component of the GDP and its trend, using Christiano-Fitzgerald filter in Stata software.
Finally, we analyzed the dynamics of the structural budgetary deficit in correlation with the output gap and determine the type of the budgetary policy adopted by the governmental authorities in Romania, in the analyzed period.
The paper is organized as follows: Section 2 reviews the related literature on the budgetary policy, Section 3 presents the empirical strategy and the data, Section 4 emphasizes and discusses our main results, and Section 5 concludes.

2. Literature review

In the context of general macroeconomic policy, a special place is given to budgetary policy. The state involvement in the smooth running of the economy, in adjusting imbalances and regulating activities requires a growth in public expenses determined by budgetary policy measures. This includes the actions of the governmental authorities, regarding revenue collection and budget expenditures, channels, means of attracting resources, using them according to their intended meaning, to ensure balance and economic revival. The budgetary policy is mirrored in the state budget as a key element of the public budget, being the policy of budgetary resources and expenditures.
Based on state budget, budgetary policy can be defined as an “assembly of options and decisions regarding the formation, allocation and efficient use of budgetary resources and balancing the budget for a durable development of society”. (Filip, 2002: 50) This policy has a wider range than fiscal policy as “the intervention tools are non-fiscal revenues, expenses, surpluses and budgetary deficits.’’ (Samuelson, 1967: 519)
The budgetary policy is regarded as a major tool in influencing the economy to pursue the task of attenuating the economic cycle fluctuations and reducing the deviation of inflation or deflation by choosing and pursuing adequate policy measures of budgetary expenditures alteration.
The real value of budget balance represents the actual balance recorded during a certain period, and the cyclic balance indicates the difference between the actual balance and the structural balance. The cyclic balance shows the influence of the economic cycle phases on public revenue and expenditures. The structural budget balance, known as balance of full employment, is the budget balance when economy is at its full usage of production capacities, if the actual GDP coincides with the potential GDP. The structural balance is influenced by discretionary measures: tax rates, welfare levels, defense expenditures level etc. (Samuelson and Nordhaus, 2000: 746-747)
The significance of the cyclic balance is especially important when choosing the

policy options. The actual balance doesn't only show the alteration of budget expenditures and expenses, but also the results of their automatic adjustment to the state of the economy. If the actual deficit grows, this evolution is not necessarily due to the state intervention in economic simulation, but can also be due to a decline in economic activities. This is why, for the foundation of budget balance policy the cyclical component of the budget is taken into account.

The option of a surplus budget balance is legitimate in times of economic boom, when there is an accelerated pace of production growth. In these conditions the facilitation of a budgetary surplus is correlated to the adoption of the right measures to reduce demand through taxes and public expenditures, so as to appear correlated to the option of a balance deficit, being adopted according to the actual state and evolution of the economic activity. (Samuelson and Nordhaus, 2000: 770)

The macroeconomic adjustment to budgetary deficit has been set on the grounds of the economic crisis phenomena, when the classic idea of budget balance was dropped out, by accepting the budgetary deficit as a viable solution for the revival and simulation of economic growth. In this case the budget deficit is a key component of the expansionist fiscal and budgetary policies, of influencing the aggregate demand.

The decisions of developing and implementing the adjustment budgetary policy, according to the budget balance are made differently: *(1)* expansionist budgetary policy, based on stimulation of growth, in the case of budget deficit; *(2)* restrictive budgetary policy of influencing the demand and a policy based on influencing the supply, in the case of budget surplus; and *(3)* expansionist budgetary policy, based on stimulation of growth and restrictive in influencing the supply, in the case of budget equilibrium, by altering the public expenses at the same rate and in the same direction.

The efficiency of budgetary policy also depends on the type of policy used, thus: during the stage of slowing down or stagnation of activity, it is more convenient to increase expenses than reduce taxes, because it is easier to implement a revival policy than a restrictive policy.

During periods of recession, that bring along crises and unemployment, the state investments to create workplaces and stimulating production, determine a growth of the deficit, considered to be a "starting button" that impels the economic stagnation and a source of support for future generations. (Galbraith, 1997: 56)

In terms of acceptation and limitation of budget deficit, the state intervention through budget deficit in macroeconomic adjustment must be made only during the stages of recession, thus avoiding the prolongation of the budget deficit state. While limiting the intervention, the evolution of public debt must also be taken into account, because, as Paul Samuelson showed, "as long as uninterrupted deficits result in a growth of the public debt which is faster than the growth in the net national income, an economic welfare cannot be supported." Samuelson (in Văcărel, 2000: 415)

The restrictive budgetary policy represents a type of macroeconomic policies implemented in countries that demand financial assistance from institutions, to cover the external payments balance deficit, having as main cause the surplus of

internal demand

3. Methodology and data

Starting from these premises, the paper studies the relevant macroeconomic indicators of the budgetary policy (government expenditure and revenues and budgetary balance) by using a quantitative analysis and a correlation to the real GDP for determining the type of budgetary policy adopted in Romania. The data series were collected from the EUROSTAT database for the period 1999-2015, at quarterly level.

We perform Augmented Dickey-Fuller test for unit root for the data series, we choose the model with intercept and 0 lags and obtain that: the natural logarithm of Real GDP has a T statistic of -4,224 lower than critical value (at 5% level) of -2,917 and for the budgetary deficit (as % of GDP) T statistic is -5,871 lower than critical value (at 5% level) of -2,917. Therefore, the null hypothesis is rejected and the data series are stationary.

Using Christiano-Fitzgerald filter we extract the cyclical component from the series, obtaining the output gap and the structural budgetary deficit.

Taking into account the budget deficit and the signs of output gap, we can identify the type of budgetary policy used by Romanian authorities during the analyzed period: restrictive or expansionist, counter-cyclical or pro-cyclical.

If year on year the structural budget deficit increases, the economic theory states that government authorities implemented an expansionist budgetary policy but, if the output gap is positive, then the policy is pro-cyclical and if the output gap is negative, counter-cyclical;

If a decrease of structural budget is recorded, a restrictive budgetary was implemented, and if the output gap is positive the policy is counter-cyclical, else pro-cyclical. Also, in times of recession, an expansionist policy is recommended and in expansion periods, a restrictive one.

Table 1: Dynamics of the budgetary balance and GDP in Romania

Time	Government expenditure (%GDP)	Government revenue (%GDP)	Budgetary deficit (%GDP)	GDP (mil RON)	Price index (2010=100)	real GDP (mil RON)
1999Q1	43.3	35.5	-7.8	9,664.7	13.424	71995.68
1999Q2	38.1	36.7	-1.3	12,655.0	16.263	77814.67
1999Q3	37.3	32.1	-5.2	15,843.2	16.709	94818.36
1999Q4	38.9	34.9	-4.0	17,316.5	17.781	97387.66
2000Q1	40.3	37.3	-3.0	14,708.7	20.118	73112.14
2000Q2	40.8	35.5	-5.3	18,176.4	22.493	80809.14
2000Q3	33.5	30.3	-3.2	22,867.1	23.540	97141.46
2000Q4	40.1	33.6	-6.5	25,523.1	25.757	99091.90
2001Q1	42.4	37.6	-4.9	21,537.9	28.661	75147.06
2001Q2	40.0	35.6	-4.3	26,994.2	32.097	84101.94
2001Q3	31.0	28.9	-2.1	33,124.1	31.707	104469.36
2001Q4	34.1	30.8	-3.3	36,671.0	34.734	105576.67
2002Q1	42.0	40.5	-1.5	27,574.0	35.436	77813.52
2002Q2	36.6	34.8	-1.8	35,438.0	39.817	89002.18

Time	Government expenditure (%GDP)	Government revenue (%GDP)	Budgetary deficit (%GDP)	GDP (mil RON)	Price index (2010=100)	real GDP (mil RON)
2002Q3	30.2	29.6	-0.6	42,440.5	38.555	110077.81
2002Q4	33.6	29.9	-3.7	47,177.5	42.355	111385.90
2003Q1	38.2	36.3	-1.9	36,087.2	44.070	81886.09
2003Q2	33.6	36.1	2.5	45,272.1	48.475	93392.68
2003Q3	32.5	29.7	-2.9	55,219.3	47.170	117064.45
2003Q4	30.7	27.8	-2.9	62,182.5	52.967	117398.57
2004Q1	41.5	40.6	-0.9	45,225.4	52.104	86798.33
2004Q2	36.1	34.3	-1.8	56,315.5	56.361	99919.27
2004Q3	28.1	28.4	0.3	69,219.9	54.022	128132.80
2004Q4	31.3	29.0	-2.3	77,986.8	60.526	128848.43
2005Q1	38.9	39.0	0.1	54,460.6	59.281	91868.56
2005Q2	35.9	34.0	-1.9	66,300.4	63.367	104629.22
2005Q3	30.7	29.7	-1.1	79,891.1	60.689	131640.17
2005Q4	30.6	29.2	-1.4	89,836.7	66.986	134112.65
2006Q1	35.7	37.4	1.7	65,302.0	66.048	98870.52
2006Q2	30.0	34.6	4.6	79,167.6	69.898	113261.61
2006Q3	29.2	30.6	1.3	93,662.4	65.698	142565.07
2006Q4	44.1	31.5	-12.6	108,872.3	75.195	144786.62
2007Q1	40.3	40.2	-0.1	78,168.1	74.112	105472.93
2007Q2	36.0	37.7	1.7	95,567.1	78.986	120992.45
2007Q3	31.9	32.3	0.4	112,064.1	73.919	151603.92
2007Q4	44.0	33.4	-10.6	132,458.6	85.139	155579.23
2008Q1	44.7	42.3	-2.3	99,042.4	86.071	115070.58
2008Q2	39.9	35.5	-4.3	121,805.6	90.928	133958.30
2008Q3	33.9	31.5	-2.3	143,875.8	85.797	167693.28
2008Q4	38.8	27.4	-11.4	159,664.9	98.085	162782.18
2009Q1	49.9	40.8	-9.2	98,906.9	91.728	107826.29
2009Q2	42.8	33.7	-9.1	119,631.6	97.400	122825.05
2009Q3	37.7	29.1	-8.6	136,070.5	88.065	154511.44
2009Q4	35.5	26.0	-9.5	155,913.8	101.765	153209.65
2010Q1	47.7	38.8	-8.9	103,791.6	97.895	106023.39
2010Q2	43.2	34.2	-9.1	125,279.8	102.244	122530.22
2010Q3	34.8	31.4	-3.4	145,033.7	95.213	152325.52
2010Q4	35.7	28.8	-6.9	159,776.0	104.428	153001.11
2011Q1	43.9	40.3	-3.5	110,356.3	103.535	106588.40
2011Q2	39.0	35.6	-3.4	131,176.9	106.702	122937.62
2011Q3	33.3	30.0	-3.3	156,218.5	99.887	156395.23
2011Q4	41.6	31.4	-10.2	167,345.5	108.833	153763.56
2012Q1	44.4	42.2	-2.2	113,796.0	106.505	106845.69
2012Q2	37.2	34.3	-3.0	140,715.6	112.134	125488.79
2012Q3	30.2	29.2	-1.0	164,408.8	105.647	155620.89
2012Q4	36.2	30.4	-5.9	176,446.9	113.795	155056.81
2013Q1	42.0	37.6	-4.4	121,620.7	111.352	109221.84
2013Q2	35.5	34.3	-1.2	148,256.7	116.302	127475.62
2013Q3	31.5	32.9	1.4	176,151.3	108.615	162179.53
2013Q4	34.0	29.3	-4.8	191,427.3	117.251	163262.83
2014Q1	40.6	39.7	-1.0	129,643.5	113.830	113892.21
2014Q2	34.3	33.4	-0.9	156,353.5	120.603	129643.13
2014Q3	29.6	31.5	1.9	183,672.1	109.688	167449.58
2014Q4	36.6	31.5	-5.1	197,908.3	117.885	167882.51

Time	Government expenditure (%GDP)	Government revenue (%GDP)	Budgetary deficit (%GDP)	GDP (mil RON)	Price index (2010=100)	real GDP (mil RON)
2015Q1	37.0	39.1	2.1	140,355.7	118.128	118816.62
2015Q2	34.4	34.5	0.1	162,661.5	121.292	134107.36
2015Q3	32.2	32.6	0.4	197,252.5	113.750	173408.79

Source: EUROSTAT, http://ec.europa.eu/eurostat

In Table 1 are presented the governmental expenditure and revenues, at quarterly level, based on which was calculated budgetary deficit (revenues – expenditures), as percent of GDP.
Also, real Gross Domestic Product (expressed in millions RON) was estimated using nominal GDP and price index, with the base year 2010.
The research continued with transformation of the real GDP from monetary units in natural logarithm and then, using Christiano-Fitzgerald Filter (CF Filter) was extracted the cyclical component and determined the output gap.

Table 2: Dynamics of the output gap and structural budgetary balance in Romania

Time	Real GDP (millions RON)	ln_real GDP	Budgetary deficit (%GDP)	Output gap	Cyclical Bugetary Balance	Structural Budgetary Balance
1999	341349	12.7407	-4.575	-0.0101673	0.2887121	-4.863712
2000	349511	12.7643	-4.5	-0.0050001	-0.1401002	-4.3599
2001	369057	12.8187	-3.65	0.0152297	-0.2583084	-3.391692
2002	388194	12.8693	-1.9	0.0135894	0.2691635	-2.169163
2003	409639	12.923	-1.3	-0.0006279	-0.2231587	-1.076841
2004	443875	13.0033	-1.175	0.0028966	-0.6383756	-0.5366244
2005	462392	13.0442	-1.075	-0.0313946	-0.2427441	-0.8322559
2006	499639	13.1216	-1.25	-0.0169533	0.721258	-1.971258
2007	533935	13.188	-2.15	0.0058509	1.499536	-3.649536
2008	579102	13.2692	-5.075	0.0645406	0.2668412	-5.341841
2009	538180	13.1959	-9.1	-0.0146683	-2.613618	-6.486382
2010	533881	13.1879	-7.075	-0.0207136	-0.3856061	-6.689394
2011	539519	13.1984	-5.1	-0.009853	0.7654649	-5.865465
2012	542981	13.2048	-3.025	-0.0115047	1.231897	-4.256897
2013	562155	13.2395	-2.25	0.0049362	0.0777609	-2.327761
2014	578791	13.2687	-1.275	0.0088814	-0.6935316	-0.5814684
2015	600415	13.3054	0.866667	0.0197719	0.247201	0.6194657

Source: made by the authors, in Stata, using data from Table 1

Budgetary deficit is composed of cyclical budget deficit (automatic stabilizers) and structural budget deficit (discretionary policies). Using CF Filter we extracted the cyclical component and obtained the structural budgetary deficit.

4. Results and discussion

First, we analyze the cyclical component of the gross domestic product to obtain the phases of the business cycle. We can see from Figure 1 the economic boom from 2007-2008 (output gap having a positive sign) and then the collapse of real GDP from the 2nd quarter of 2008 until 3rd quarter of 2012, when the output gap is negative.

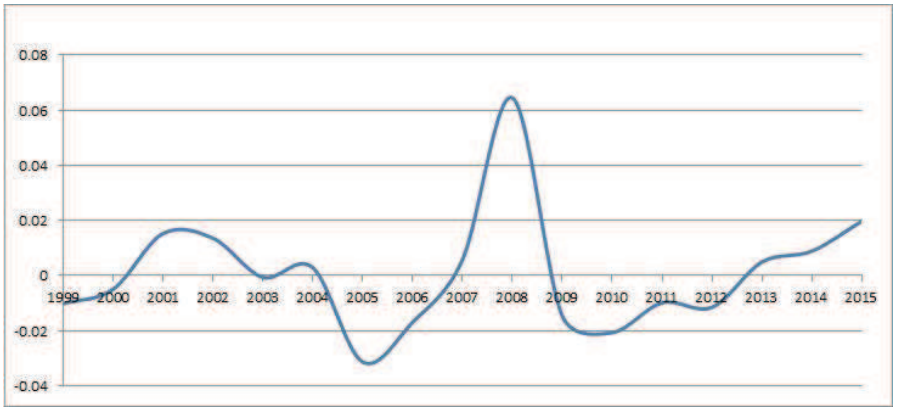

Figure 1: GDP cyclical component from CF Filter
Source: Table 2

Governmental expenditure is the main indicator of the budgetary policy, because it shows the way the budget is distributed. According to the economic literature, its value should increase in recession periods to maintain or boost the aggregate demand.
This can be observed in the period 2007–2012, which includes the recent economic crisis, when public spending reached, in average, the level of 40% of GDP. In the expansion period, from 2003 to 2006, the share of the governmental expenditure in GDP was, in average, 34%.

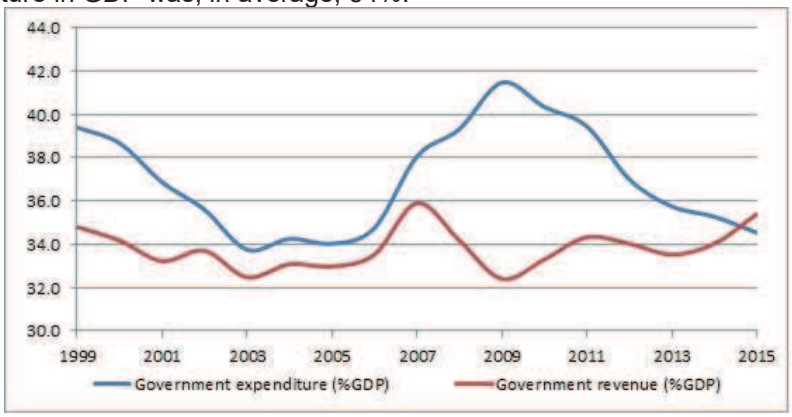

Figure 2: Dynamics of the Government expenditure and revenues in Romania
Source: Table 1

Analyzing the government expenditures in comparison with governmental revenues we observe that the government expenditures are higher that the governmental revenues, especially in 2008 – 2011, when the difference is visually noticeable in the Figure 2. In that period budgetary deficit recorded the highest levels of -5%, -9% and -7% of GDP.

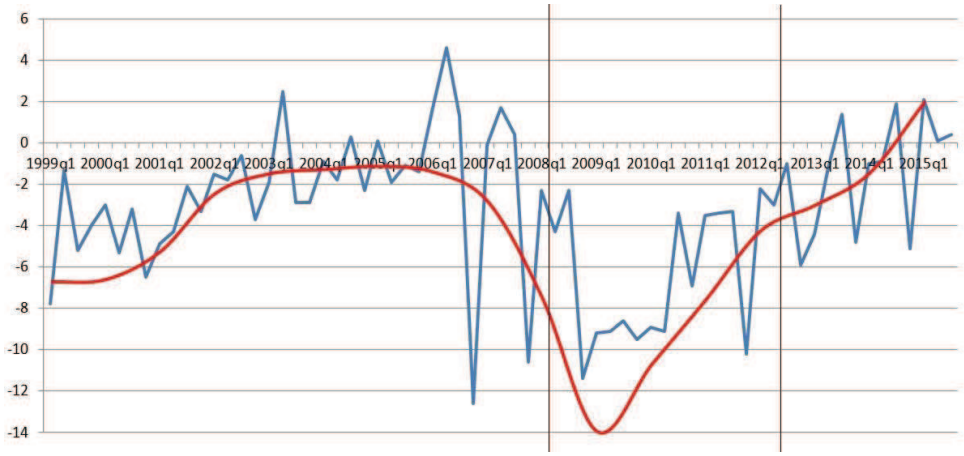

Figure 3: Dynamics of the budgetary balance in Romania
Source: Table 1

The same statement we can make from Figure 3, where is more clearly shown the dynamics of the budgetary deficit at quarterly and annually level.

The overall analysis of the representative indicators of budgetary policy shows that the average value of governmental expenditure was 37% of GDP, the average value of governmental revenues was 33,8% of GDP and the average value of budgetary balance was -3,2% of GDP.

By making a comparative analysis of these two indicators according to the presented methodology, the type of budgetary policy implemented in Romania between 1999 and 2015 was obtained. (Table 3)

Table 3: Type of budgetary policy implemented in Romania from 1999 to 2015

Years	Output gap	Budgetary Deficit	Budgetary Policy	
1999	negative			
2000	negative	decreasing	Restrictive	Pro cyclical
2001	positive	decreasing	Restrictive	Counter cyclical
2002	positive	decreasing	Restrictive	Counter cyclical
2003	negative	decreasing	Restrictive	Pro cyclical
2004	positive	decreasing	Restrictive	Counter cyclical
2005	negative	increasing	Expansionist	Counter cyclical
2006	negative	increasing	Expansionist	Counter cyclical

2007	positive	increasing	Expansionist	Pro cyclical
2008	positive	increasing	Expansionist	Pro cyclical
2009	negative	increasing	Expansionist	Counter cyclical
2010	negative	increasing	Expansionist	Counter cyclical
2011	negative	decreasing	Restrictive	Pro cyclical
2012	negative	decreasing	Restrictive	Pro cyclical
2013	positive	decreasing	Restrictive	Counter cyclical
2014	positive	decreasing	Restrictive	Counter cyclical
2015	positive	increasing	Expansionist	Pro cyclical

Source: made by the authors using data from Table 2

The data in Table 3 indicate a high level of inconsistency in the type of budgetary policy, the longest period during which the same type of budgetary policy was maintained was 2 consecutive years.

If we compare the indicators with the type of party that governed in that period, we obtain that the Social Democratic Party (who governed from 2001 to 2004 and from 2012 to 2015) preferred a restrictive budgetary policy and the National Liberal Party (who governed from 2005 to 2008) and Democratic Party (who governed from 2009 to 2011) preferred an expansionist budgetary policy, all of the parties alternating counter-cyclical with pro-cyclical type.

Of course, the type of policy has to be analyzed in the context of the phase of the economic cycle and as a general rule, the policy it is preferable to be counter-cyclical. The results indicate that from 2005 to 2010 was implemented an expansionist budgetary policy, which meant a reduction of the fiscal pressure by introducing the flat rate in 2005 and the growth of governmental expenditures. We consider that this measure came too early, as the economic crises started only in 2008, 2nd semester and contributed to the economic boom and instability.

5. Conclusions

The research performs a theoretical review of the literature associated with budgetary policy and using scientific observation, as research methods, illustrates its objectives and instruments. Correlating the phases of the business cycle with the budgetary policy, the economic literature recommends that in recession periods to be implemented an expansionist budgetary policy, and in expansion periods to be adopted a restrictive one.

Taking into account the budget deficit and the signs of output gap, was identified the type of budgetary policy implemented by Romanian authorities: from 2000 to 2004 was adopted a restrictive budgetary policy, from 2005 to 2010 was implemented an expansionist budgetary policy and from 2011 to 2014 was adopted a restrictive budgetary policy.

From the analysis of the main instruments of budgetary policy, we obtained that the average value of governmental expenditure was 37% of GDP, the average value of governmental revenues was 33,8% of GDP and the average value of budgetary

balance was -3,2% of GDP.
The results of the empirical research highlights the main particularities of the economic activity in Romania and the fact that the economic policy was guided by the criteria of minimizing the cost on the short term, by promoting measures aimed at achieving quick results in the production (by reacting to the changes that occurred in the economic context, such as economic crises) and the structural reforms that would have created a framework for sustainable growth have been delayed.

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