

PUBLIC INSTRUMENTS IN ENSURING ECONOMIC GROWTH. CASE STUDY FOR ROMANIA

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Abstract: *The main objective of the paper is to study the relationship between some relevant macroeconomic variables in Romania for 2001-2017. On the one hand, indicators belonging to the fiscal and budgetary policies are emphasized, while, on the other hand, there is the economic growth. GDP evolution is the main indicator describing the economic performance of a country, while the governmental policies and the level of corruption play a key role with respect to the implications they have in promoting economic reforms. The results obtained after using several statistical tools prove that the general consolidated budget revenues and the average monthly gross earnings factors have a major impact on Romania's economic development.*

Key words: *economic growth; public debt; budgetary policy; corruption.*

1. Introduction

The fiscal and budgetary policies are some of the most significant components of the financial policy of a country and fulfil an important role in stimulating economic growth. Adopting the right policies at the right moment may ensure financial stability, proper allocation of resources and, moreover, it brings about the development of the whole economy. Both the fiscal and the budgetary policies may be defined by the financial relationships which occur during the distribution process of GDP. The simple existence of the public sector and the need for economic and social progression are basic factors that reveal the necessity of applying the most adequate reforms at a certain time.

The fiscal policy refers to the use of fiscal instruments to influence the macroeconomic conditions, including economic growth. Most of the coordinates on which fiscal policy is based belong to Keynes, who claimed that the governments would be able to stabilise the economic cycle by permanently adjusting public policies.

Complementary to the fiscal one, the budgetary policy is the policy of revenues and expenditures. The budgetary system has to accomplish the decisions taken by the state in order to ensure the necessary financial resources (Annicchiarico *et al.*, 2012, p. 11).

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An alternative interpretation, which predicts a more complex approach, is highlighted in the following lines: the budgetary policy operates with the growth or reduction in the fiscal rate and with the increase or decrease of the public spending for the purpose of controlling the size of the budget deficit or excess (Robertson, 2004, p. 140). “An overall budgetary policy can be summarized by whether it is balanced, in surplus or in deficit. Until Keynesian policy ideas influenced governments, government budget deficits were regarded as a sign of financial recklessness; now budget deficits are regarded as a fiscal policy option available to most governments.” (Rutherford, 2013, p. 61)

The mix of policies has a stronger or weaker impact on economic growth. Taking into account the measures taken by the government during the last years in Romania, the paper aims at identifying the cause-effect phenomena and the degree of influence.

In section 2 of the paper, the concept of economic growth is presented since the late 18th century until the 21st century. Several interpretations of economic development were presented in the first part of the section, while in the second part, the annual change of real GDP and the dynamics of GDP per capita in Romania were considered.

The next chapter and its subsections consist in a rigorous analysis of several factors considered to influence the overall economic performance of Romania to a certain degree. The four indicators selected are: public debt, the general budgetary revenues, the average monthly nominal gross earnings and the corruption perceptions index.

In section 4, by using statistical procedures, we conducted a simple, but accurate study regarding the correlation between the variables. We discussed the results obtained and their relevance. The period of time considered was 2001-2017 and the processed values were expressed in per cents and in real terms in order to avoid the effects of inflation.

The final part highlights the main findings and offers some ideas for further analysis.

2. Literature Overview on Economic Growth

The concept of economic growth appeared explicitly in the 20th century, but its roots are to be found in the 18th century, in the studies of Adam Smith and David Ricardo. The economic theory of the value based on the workforce developed by Smith reveals the causes for the continuous increase of the “wealth of nations” and economic prosperity.

As presented in the introduction, the Great Recession and Keynes’s theory regarding economic crises and how to overcome their effects proved to the entire world that economic booms and recessions are not random events, but they have multiple causes. Moreover, during crises, it is very hard for most countries to recover by themselves and usually, even though the government and other institutions make balanced decisions around the need to intervene, they have to put a lot of effort to emerge from the crisis.

Among the economists who had a contribution in developing the ideas introduced by Keynes we may find: Harrod (1939), Domar (1946), Samuelson (1948), Solow (1956) and Swan (1956). Their theory focuses on the accumulation of capital and on the importance of the technology in reaching high economic growth (Acemoglu, 2009, p.26).

2.1. The Concept of Gross Domestic Product

The real increase of GDP represents a quantitative measure of economic growth. It reflects the value of all the goods and services intended for final consumption produced

yearly by all the residents of a country. The GDP growth rate is the percentage increase in GDP from quarter to quarter. If the economy produces less than the quarter before, it contracts and the growth rate is negative. This signals a recession. If it stays negative long enough, the recession turns into a depression. As bad as a recession is, you also do not want the growth rate to be too high because of the danger of inflation. The ideal growth rate is between 2% to 3% (Amadeo, 2018).

2.2. GDP Evolution in Romania

This subsection presents GDP dynamics using different forms of expression. As mentioned, GDP is the most important indicator reflecting the economic climate of a state. We used data retrieved from the National Institute of Statistics and processed them in order to reveal the trends that characterized Romania during the last years.

Figure 1 shows both the general evolution of the nominal GDP recorded in Romania (blue left side - million lei) and the rate of change of the same nominal values of GDP (red right side - %). 93 values were collected between 1995 and Q1 2018.

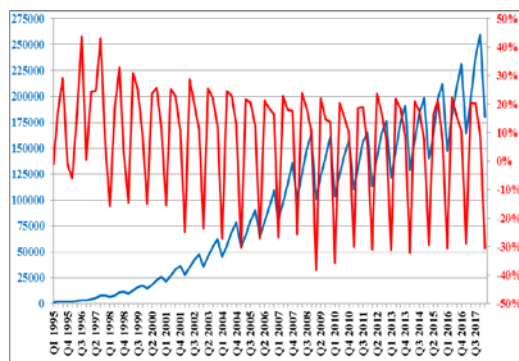


Fig. 1. *The quarterly evolution of GDP in current prices (million lei) and the relative change of GDP (%), 1995 - 2018*

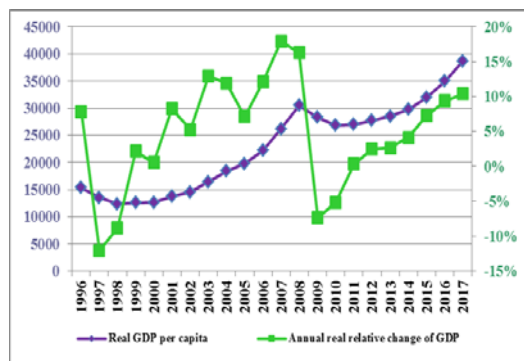


Fig. 2. *The annual evolution in real terms of GDP per capita (million lei/inhabitant) and of the relative change of GDP (%), 1996-2017*

We may observe in Figure 1 the annual repeated fluctuation of the indicator. GDP has a continuous increasing trend during the entire year, but it drops suddenly in the first quarter of the following year. A reasonable cause for seasonality is the fact that the citizens tend to spend more around Christmas and not because of an income increase. If during the first years of analysis GDP decreases in the first quarter by lower percentages (about 1%) or even increases as an exception in 1997, starting from 1998 until 2001 the cut is on average by 15%, while in the last 16 years, the decrease in economic growth is by 25%-30% or even more. The worst situation is found at the beginning of the economic crisis, in Q1 2009, when the nominal rate of decrease was of 38.27%.

In Figure 2, a much accurate presentation of the GDP dynamics is revealed as it takes into account two significant ways of expressing this variable: the relative change of the real GDP per capita and the real GDP growth rate. As presented in subsection 2.1., the literature requires such indicators to be included in studying economic growth. Because

of the lack of data, but also for a more simplified graphical representation, Figure 2 includes annual evolutions for the past 22 years. In addition, for a more accurate analysis, the values expressed in real terms were used, 2017 being the reference year. The real GDP per capita indicates an upward trend during the whole period of time. The figure shows two peak years: 2008 and 2017. However, there are years when GDP goes down as it happened in 1997 and 1998 (only in 2003 the real GDP/capita reached a higher value than the one of 1996), but also during the last depression. The value of 30,466.2 million lei/inhabitant recorded in 2008 remained the highest until 2015. The purple line of GDP per capita seems to divide the graph into two similar parts, the 2008 value being in the middle. As a consequence, we may expect that a new crash could appear in the future.

Economists from the London Business School have come with several general solutions or preventive measures to avoid future worldwide financial crisis.

First, the banking system should improve the way it functions. Second, the major factor of risk is considered to be the amount of private and public debt that is still in the economy. Much of it is the “legacy” of the previous crisis whose effects are still present in many states even though, from a theoretical point of view, there is economic growth (4% GDP growth in the world economy in 2017) and stock markets are booming. Debt is a factor of high risk especially when debt comes after credit boom periods like the one from 2008 or even the Great Depression of 1929 (World Economic Forum, 2018).

3. The Analysis of the Factors that Influence Economic Growth

The probability of a nearby financial crisis is also seen from the numerous papers describing how effective one type or other of public or monetary policies might be in avoiding or minimizing the effects of such economic disasters.

Timely countercyclical fiscal measures contribute to shortening the length of crisis episodes by stimulating aggregate demand. Fiscal expansions that rely mostly on measures to support government consumption are more effective in shortening the crisis than those based on cuts in public investment or taxes (Baldacci *et al.*, 2012).

This section provides a synthesis of the evolution of the Romanian public debt, budgetary revenues, corruption and average national gross income.

3.1. Public Debt and Budgetary Revenues

The foreign debt of Romania before 1990 was the result of the loans taken from international creditors denominated in hard currencies. These loans were used to buy technology, equipment and raw materials needed for the industrialization of the country. As oil prices increased during the 1979 energy crisis, together with the rising international interest rates, Romania found it difficult to pay it back, leading to the necessity to request the IMF a line of credit.

The decision to repay the debt as early as possible led to the 1980s austerity policy that has been considered to be irrational as other developing countries that were hit by the same problem were able to obtain debt rescheduling. The cost of this decision was

economic recession and dramatically compressed consumption (Ban, 2012, p. 743). The author also reveals the correlation between loan accumulation and economic growth.

Romania is considered to be one of the few countries that succeeded to pay all the money borrowed. Nevertheless, in the last two decades, the national public debt expressed in current prices has had a continuous upward trend from 25,288.8 million lei in 2000 up to 300,777.2 million lei in 2017 and 304.851,7 million lei in May 2018.

In Figure 3, the annual real change of public debt is represented starting with 2001.

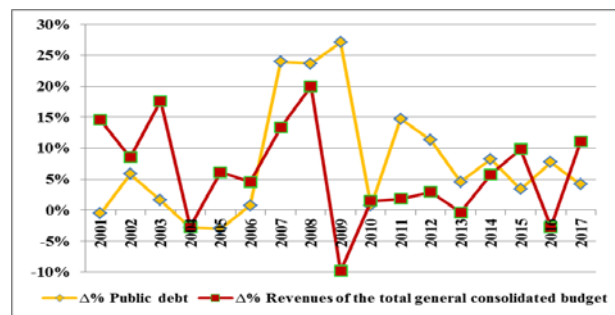


Fig. 3. *The annual evolution in real terms of public debt and total general consolidated budget revenues, 2001-2017*

Adjusted by the price index, the real evolution expressed in % is a fluctuating one. The highest real annual growth rates of the public debt are seen in 2007, 2008 and 2009. During these years, public debt increased by over 20% annually. Romania did not seem to succeed covering all its consuming needs from its domestic production. The public finance policies should have acted as a compensator for the expansion of internal consumption fuelled by credit or external capital inflows and act anti-cyclically. Instead of being preoccupied by attracting more public revenues to ensure covering of the deficits and funds for public investments in time of economic downturns, the government managed only to increase the public expenditures to reflect a presumed situation of welfare. Even if the degree of public indebtedness of Romania was and still is reduced, compared to the situation of other emergent economies, the main problem was that it was created paying salaries and pensions and did not originate from making public investments to stimulate the economic rebound (Dincă and Brătulescu, 2010, p. 141).

The 2009 increase of the total public debt by 27.09% was mainly the result of the IMF support to counter crisis. In March 2009, Romania borrowed 17.1 billion dollars as the current account deficit became very large in the years before the crisis. The government also ran increasingly large fiscal deficits during the good times, leaving little room for manoeuvre when the economy turned down. As conditions in the region worsened, the authorities decided to adopt a policy package to withstand the crisis (IMF Report, 2009).

The positive annual change rates of public loans continued to be recorded in the following years, but the increase values are not that high as compared to the three years mentioned before. As compared to the previous years, a decrease of the public amount of money borrowed and left to be reimbursed is recorded only in the first years of analysis: 2001, 2004 and 2005. The situation changed in 2006 when, as a result of the

macroeconomic evolutions described in the previous paragraph, the country started to borrow money and the real public debt increase was by 0.73% as compared to 2005.

Figure 3 also reveals the real evolution of the annual total general consolidated budget revenues. The trend seen seems to be different from the yellow line describing the public loans evolution. The results are normal if we think that an increase in the amount collected at the budget causes a lower need for public funds to sustain expenditures. The most significant rates of increase of the total budget revenues were recorded in the years before the crisis. In 2007, the real increase of revenues was of 13.3%, while in 2008, the revenues expressed in real terms were 20% higher than the ones of 2007.

3.2. Average Monthly Nominal Gross Earnings

According to the national legislation, the gross nominal earnings comprise salaries, benefits and indemnities, legal rises of salary, awards, holiday bonuses and other amounts paid from the salary fund according to normative or labour contracts.

For a homogeneous presentation of all the selected factors that influence economic development, we chose to show the relative change of the average gross earnings also in real terms. The aggregated average annual values are highlighted in Figure 4.

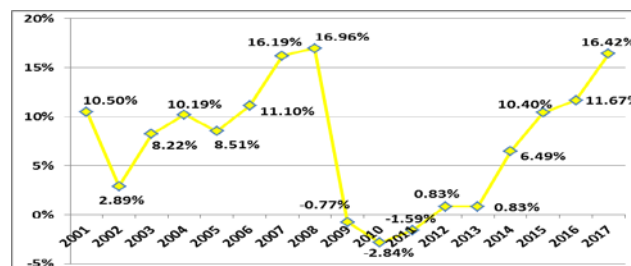


Fig. 4. *The relative change of the average monthly nominal gross earnings in real terms*

The evolution of the indicator is a good example of an inadequate implementation of the fiscal policy. As mentioned, the type of public policy implemented at a certain point in time requires first the identification of the phase of the economic cycle. On the one hand, when booms occur, knowing that the action of operators is pro-cyclical, the fiscal policy is required to be anti-cyclical or at least neutral in order to avoid the overheating of the whole economy. On the other hand, public policies should generate appropriate stimulus to accelerate economic activities to their potential when crises appear.

Starting from 2003 and until 2008, the real increase of the gross income fluctuated between 8.22% and 16.96%. In fact, in just 8 years, from 2000 to 2008, the average gross earnings grew by more than 120% in real terms and by more than 6 times (by 520%), from 284 lei to 1,761 lei/month during the same period of time. The recession came with a cut in the real incomes by 0.77% in 2009, by 2.84% in 2010 and by 1.59% in 2011. Actually, wages continued to increase in nominal terms by very small, but steady per cents (about 3-5%), while the inflation rate increased more than expected (by \approx 6%). In the next six years, the indicator recovered and gross earnings reached the highest average value of 3,314 lei/month in 2017.

3.3. Corruption

The findings on the impact of corruption on the economic development are mixed. Some of them argue that corruption is a pure negative phenomenon, its negative impact being seen as an abuse of power. Other findings consider that bribery might reduce delays and transaction costs and, thus, contribute to economic growth, easing procedures in the countries with ineffective bureaucracy (Dincă *et al.*, 2016, pp. 77-78).

The institutional inefficiency plays a major role in achieving low economic growth. The negative association between corruption and investment, on the one side, and corruption and economic growth, on the other, is significant (Mauro, 1995).

Johnston (2000) suggests that very high levels of corruption in a country threatens democracy and governance by weakening political institutions and by delaying and deforming the economic development needed to sustain democracy.

Mo (2001) shows that a 1 percentage point decrease of CPI reduces economic growth by 0.54 percentage points. Corruption hinders economic growth, which implies a decline of investments, distorted allocation of government spending and low efficiency projects.

Ulman and Bujancă (2014) concluded that an increase in the level of corruption will be translated into a deterioration of macroeconomic indicators. This leads to economic slowdown, reduced revenues, rising inflation and inefficiency in resource allocation.

For our analysis, data on corruption were collected from Transparency International. This organisation scores countries on how corrupt their public sectors are seen to be. Corruption Perceptions Index (CPI) sends a powerful message and governments are somehow forced to take notice of it. The data collected for Romania for the last 28 years reveal some worrying figures regarding CPI. Figure 5 shows both the level of corruption in Romania and the average EU for 2000 - 2017 period of time.

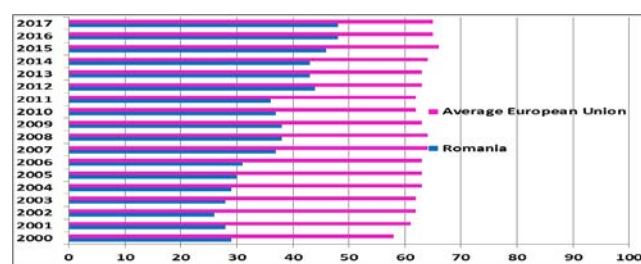


Fig. 5. *CPI evolution in Romania and in the European Union*

On a scale from 0 to 100, Romania's index fluctuates between 26 and 48, values which indicate a medium to high level of corruption. An index close to 0 shows high corruption, while a score of 100 shows a very clean country. Although the corruption score in Romania is much lower than the average score for EU, the general trend between 2000 and 2017 is a good one. Over the last 15 years, CPI in Romania moved from 22 in 2002 to 48 in 2017. This means that some results concerning the public sector corruption were finally seen and that the authorities in charge with the fight against corruption were efficient. Nevertheless, in 2017, non-governmental organisations (NGO) and mass-media experienced challenges in monitoring decision-makers (Transparency International).

4. Correlation analysis and discussion

To verify whether the variables chosen influence economic growth, we measured an important indicator, whose purpose is to diagnose the intensity of the relationship between the variables. We took into consideration the case of Romania, for 2001-2017.

The correlation coefficient between the variables and economic growth Table 1.

Public debt (PD) - GDP growth	General consolidated budgetary revenues (GCBR) - GDP growth	Average monthly nominal gross earnings (AMNGE) - GDP growth	Corruption perceptions index (CPI) - GDP growth
-0.06052	0.67366	0.89545	-0.15179

The strongest bound is between the real change of the AMNGE and the real change of economic growth. This means that an increase of the AMNGE in the economy is reflected in the evolution in the same direction of the economic growth rate. A direct correlation is also seen when studying the link between the level of GCBR collected and GDP evolution. Surprisingly, PD and CPI are not significant factors of influence. With respect to the public debt, the correlation coefficient of -0.0605 is a very weak one.

Figure 6 presents the correlation diagrams between the four variables and economic growth between 2001 and 2017. The graph also displays the trend line, the line equation and the value of R square which shows if the relationship is strong or weak.

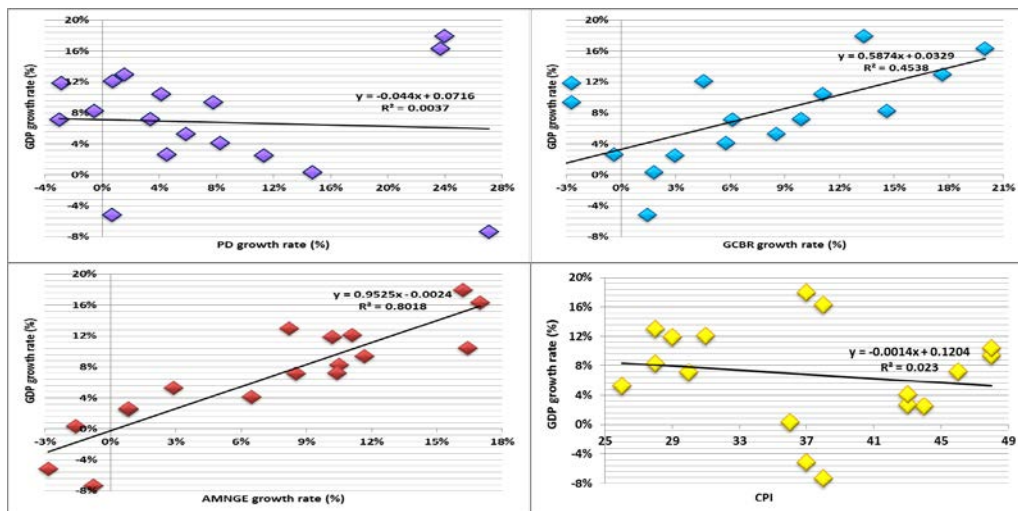


Fig. 6. *The correlation diagrams between the factors of influence and economic growth*

We notice the evolution in the same direction of GCBR and GDP, on the one hand, and AMNGE and GDP, on the other hand. In the second case, the slope has a high positive value of 0.9525, while in the first case, the slope is lower (0.5874). Still, it proves the existence of a strong cause-effect relationship. R^2 is also very high, especially when considering the evolution of AMNGE (80.18%). When studying the bound between CPI and economic growth, although most findings in the literature show a clear connection

between the two variables, our analysis reveals modest results. The slope of the trend line is negative, which is at least unusual since it shows that an increase of the CPI is accompanied by a decrease in the real GDP growth rate. It might be the result of processing a relatively reduced number of years.

In the case of PD - GDP correlation, the trend line is almost parallel to the abscissa axis which shows a very weak influence. However, we notice the negative sign of the correlation coefficient which, in this case, is a normal thing as it means that the need to borrow more money comes with a decrease of performance. A decrease of the public debt by 4.4% is accompanied by an increase in the rate of economic growth by 1%.

All in all, the correlations emphasize several important issues and trends for 2001–2017. For Romania, corruption and even some strategic policies like the public debt policy did not seem to have a major impact on economic growth. Still, the decision of taking loans produced some stronger effects and became an important instrument especially during the economic crisis. If the initial analysis undertaken gave us a correlation coefficient of -0.06 for public debt, during recession, between 2009 and 2012, the indicator representing public debt exerted a stronger, but unusual influence of +29.25%. So, in times of recession, the country continued to borrow money, but it also stopped payments. The amounts of money borrowed have been used by the government to sustain different economic programmes to overpass crisis.

5. Conclusion

The study highlighted that each factor analysed has a different evolution and a different degree of influence on economic development. The strongest correlation with the evolution of the real GDP rate were the ones involving the average monthly nominal gross earnings and the revenues of the general consolidated budget. An increase of the average income brings about an increasing amount of money collected at the budget, so more money available for public spending. In addition, citizens are also able to save more for future investments or to consume more at present. All these decisions will be reflected in the level of GDP and, eventually, in the economic growth of the country.

Even though the connection between the degree of indebtedness and the economic evolution is negative, it is extremely weak. Such a situation might make our public representatives expect that Romania is able to borrow money with no constraint because loans do not seem to have an unfavourable effect on economic performance. This would be a mistake since most economists pinpoint the danger of taking loans irresponsibly and the problems that countries with high indebtedness rates have to face.

Corruption is also a dangerous phenomenon which reduces economic growth by increasing public investment in very technical projects, but with low productivity.

A reason for the poor economic development of Romania as compared to most EU countries is the fact that there is no single fiscal, economic and social development rule at EU level (Ulici-Ciupac *et al.*, 2013, p. 161). This is unreachable, because each rich state wants to satisfy its own interests and not those of all EU citizens. Instead, the less developed countries, such as Romania, hope to achieve an economic convergence in the future to raise the standard of living and to provide a stable climate for citizens.

Being aware of the importance of the topic, we consider it necessary to continue the analysis by highlighting the viable solutions for increasing the economic development in Romania in a healthy way. This paper provides a starting point for future studies and the theme can be improved by adding an econometric approach or by continuing using the correlation coefficients when taking into account some other indicators as well.

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