The Impact of Public Debt on GDP Growth - the Debt Multiplier in the Case of Albania

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Abstract: Debates about the level of public debt and their impact on the level of investment and the economy as a whole, are permanent due to the lack of an optimal level offered by economic literature. The recent banking financial crisis brought some EU countries with very high levels of public debt, beyond the maximum limits laid down in EU membership agreements. While in developing countries, public debt is part of the economic debates and has often caused political confrontation. Although with a lower public sensitivity compared to the level of investment, unemployment and the level of prices, public debt plays an important role in the proper performance of these parameters. Increasing or decreasing public spending and especially public investment directly affects the level of investments, employment, prices, production, etc. Public debt, for the most part, is used to finance these public investments. Put together, the level of public debt affects precisely these parameters. Specifically, the level of public debt directly influencing public investment (G) primarily affects the level of public and private investment (I), the level of employment, the level of consumption in an economy (C) and the level of production affecting the level of imports (I) and exports (X). All of the above parameters are part of the Gross Domestic Product or GDP. The public debt level impact analysis at the level of GDP is measured by the Keynesian public debt multipliers. It is precisely the simplified and practical calculation that this multiplier is the focus of this paper. The aim is to calculate the Keynesian public debt multipliers for Albania to analyze the efficiency of public debt utilization in recent years when it has been part of the debate because of its rise to high historical levels. The calculation of this Multiplier for the developed Western countries as well as the emerging countries of the region creates the possibility of a comparative analysis to have a more objective assessment of the efficiency of using public debt in function of the Albanian economy's growth in the last 10 years.

Keywords: Public debt, Multiplier, Management, Economic growth

1. History of the Albanian Economy and the Role of Public Debt

According to analyze conducted on the performance of the Albanian economy, it can be said that the transition period is characterized by six key periods:

The first period 1991-1992, during which a contraction of the economy was verified, coupled with a high rise in the price level. At the end of 1992, the gross value added of the Albanian economy was 60% of that of 1989, while the inflation rate was a three-digit value.

The second period 1993-1996, characterized by a significant recovery of economic growth rates. On average, the real economic growth for this period is estimated to be around 9% a year, coupled with a somewhat more stable inflation rate and improvements such as fiscal and current balances.

The positive performance of this period is estimated to be supported by many different factors, especially by:

- Prudent monetary and fiscal policies that lower pressures from the overall level of prices;
- High level of privatization undertaken in this period (in the agricultural sector, small and medium enterprises, etc.)

The third period (1997), characterized by the collapse of pyramid schemes, causing a drastic fall of the Albanian economy. Gross Domestic Product resulted in a decline of 7%, coupled with a doubling of the overall price level. Budget revenues fell by over 2% of GDP, and domestic borrowing mainly financed the fiscal deficit.

The period 1998-2000, a period which marks a significant recovery of economic growth rates accompanied by significant improvements in fiscal deficit management and revenue growth in the state budget. The real economic growth was about 7.5%, and at the end of 1999, it is estimated that the gross value added of the Albanian economy marked roughly the same value in 1989. It is also estimated that 85% of GDP is created by the private sector, which employs about 80% of employed persons in Albania.

With the end of the first decade of the free market economy, the period 2000-2006 follows, which is characterized by a steady growth and at an average rate of real economic growth of 7%, enabling GDP per capita mark the levels of middle-income countries and the deficit level drops several times compared to the previous period.

The period 2006 - ongoing, characterized by an average growth of 6% during the first years, whereas during the global crisis period (2009 - 2016) economic growth rates have halved, coupled with an increase in unemployment and growth of the general level of the public debt stock. The table below provides time series data regarding the performance over the years and the respective projections by 2016 of:

- The level of public borrowing
- The level of public debt stock
- GDP growth over the years.

Table 1: Performance of economic growth, borrowing and public debt stock in Albania 2006-2016 (billion ALL)

Indicators	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
GDP	334,36	331,32	384,85	443,59	501,20	563,45	610,49	677,74	737,66	804,16	872,74
Total net borrowing	-	-	43,15	44,01	33,05	27,50	35,68	28,50	21,82	26,47	26,09
Total Public Debt	116,33	170,76	214,20	251,82	319,61	339,64	391,31	408,29	423,97	468,09	494,74
Indicators	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
GDP	965,53	1.080,68	1.143,94	1.239,64	1.300,62	1.332,81	1.350,05	1.394,42	1.435,75	1.501,89	
Total net borrowing	22,05	53,56	52,95	37,87	45,79	46,37	55,88	69,96	50,33	27,95	
Total Public Debt	517,03	595,88	682,55	715,52	772,73	829,27	950,58	1.005,16	1.043,21	1.072,47	

Placed on a coordinate axis, the data in the table above represent a level of GDP, borrowing and public debt as shown below. As it is shown, the level of additional public borrowing has been relatively stable, and a positive correlation exists between the stock of debt and the level of

GDP. However, without proper analysis, we cannot say that there is a strong positive correlation between them. This is because it's natural for these parameters to grow over the years.
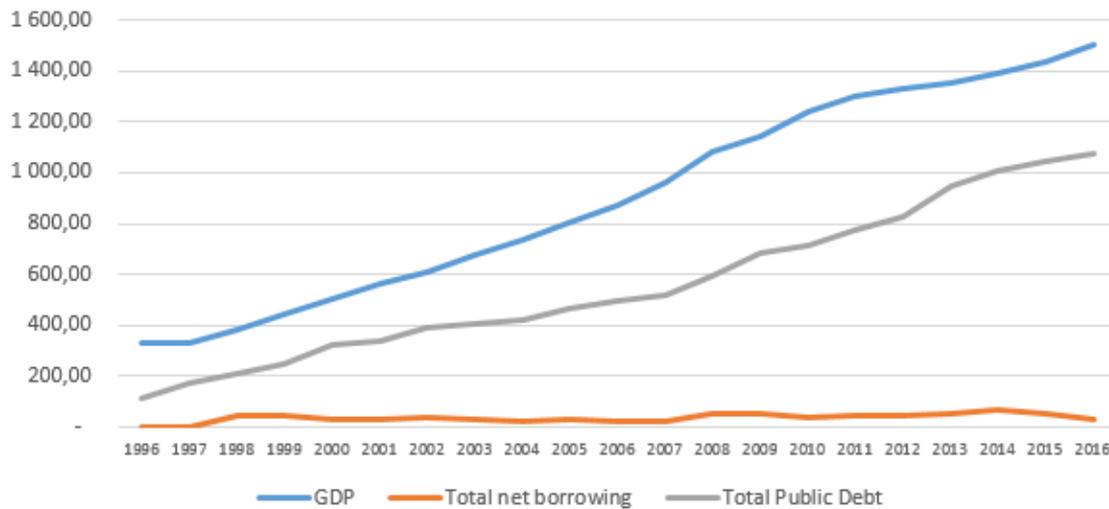

Figure 1: Performance of economic growth, borrowing and public debt stock in Albania 2006-2016 (billion ALL)

2. Budgetary Management - OECD Principles

Albania, as a country, aspires integration into the European Union and at the same time a country engaged in contractual relations with international organizations and financial institutions, carries obligations and follows international standards for budget management, in general, and public debt care, in particular. The experience of recent years has shown how good budgeting, especially regarding collecting and managing public debt, relies on the pillars of modern public governance: transparency, integrity, participation, responsibility and a strategic approach to planning and achieving national targets. In this context, the OECD recommends using the best practices of a 10-year budgeting experience, based in particular on the ten principles of good governance for designing, implementing and improving budget systems. The main purpose is to provide a useful reference tool for policymakers and experts around the world and to help public funds be effectively planned and managed. In short, below are presented the 10 OECD principles on which budget management in Albania is based:

Principle 1: Managing budgets within clear, reliable and predictable borders on fiscal policy.

Principle 2: Budgets are closely linked to the government's medium-term strategic priorities by developing a strong mid-term dimension in the budgeting process beyond the traditional annual cycle; Organizing and structuring budget allocations in a manner that responds to the requirements of national objectives; etc.

Principle 3: Drafting the capital spending budget framework in order to meet the needs of national development in a cost-effective and coherent manner by arguing capital investment plans, which by their nature have impact beyond the annual budget, making an objective assessment of the gaps in economic capacity, infrastructure development needs and social and sectional priorities; Assessment of investment decisions independently of the particular financing mechanism, through traditional capital procurement or a model of private financing such as public-private partnership (PPP); etc.

Principle 4: Ensure that budget documents and data are open, transparent and accessible, through clear factual budget reports that should inform about the main stages of policy formulation, implementation, and review.

Principle 5: Ensure a comprehensive and realistic debate in budgetary decision-making by providing Parliament and its committees with the opportunity to engage in the budget process at all stages of the budget cycle as "Ex-ante" and "Ex post."

Principle 6: Presenting a complete, accurate and reliable public finance account, by correctly accounting in the budget document of all national government expenditure and revenues, without forgetting or hidden figures; The presentation of a comprehensive national public finance statement that includes central and local government levels, as well as a public sector perspective as a key context for a debate on budgetary decision-making; etc.

Principle 7: Active planning, management, and monitoring of budget execution, through full implementation by public budget allocation bodies, authorized by parliament, with year-round supervision by the unit responsible for budgeting and line ministries as appropriate.

Principle 8: Performance, evaluation and value for money are an integral part of the budget process, in particular, by helping parliament and citizens to understand not only what is being spent, but also what is being purchased in "name of citizens"; Presenting the continuous performance information in an informative manner on the usefulness of financial allocations in the budget report, noting that such information should clarify, not be unknown or obstruct accountability to the public; etc.

Principle 9: Identify, evaluate and manage carefully the long-term sustainability and other fiscal risks by applying mechanisms to promote the elasticity of budget plans and mitigate the potential impact of fiscal risks, and by promoting a sustainable public finances; clearly identifying the classification by type, explaining and calculating fiscal risks, including contingent liabilities, in order to provide sufficient information on the appropriate fiscal policy approach adopted in the budget; etc.

Principle 10: Promote the integrity and quality of budget forecasts, fiscal plans, and budget implementation through rigorous quality assurance, including independent auditing.

3. The Keynesian Multiplier of Public Debt

Richard Kahn introduced the Keynesian multiplier in 1930. It shows that any government spending incurs a successive cycle of spending. This increase of expenditures in the economy, regardless of their form, directly affects the growth of employment and prosperity in the economy. For example, the investment projects of the Albanian Government through public investments realized by themselves or by the concessionaires will have to increase the cash flows thrown into the economy. This will be distributed as labor costs, purchase of materials, various expenses, and taxes. This money thrown into the economy will increase as consumption thereby increasing the revenues of companies from sales of goods and services. At the same time, this money thrown into the economy will increase savings by simultaneously increasing funding sources for company investments. In both cases, both the increase in consumption and savings will increase funding for business investment by increasing their investment. In short, a government cash flow into public investment is expected to trigger an increase in private investment in a multiplied chain. This logic is the main argument for expectations for increased investment, employment, output and the economy as a whole driven by additional public investment flows.

If in a hypothetical situation we would assume that people would not spare, but all of the additional income would go for consumption. Then, the economy would turn into an unstoppable engine that would aim for full employment. According to Keynes, it would be beneficial to increase consumption by reducing savings by setting a savings tax in order to encourage people to consume more and more. The Keynes model arbitrarily divides private savings and investments into two distinct functions by showing savings as a depleted economy and private investment dependant on spending cuts.

One element that ignores the Keynesian multiplier is how public investment is funded. If the add-on to public investment is financed through increased taxes then we have to consider the

fact that some of the money is withdrawn from the economy, causing a multiplier effect of falling spending and investment in the economy. Likewise, domestic debt financing has the same effect by increasing competition for private investment. Only the increase of external debt investment gives the full effect of the multiplier of investments because the funds come from outside the economy and do not affect the current level of investments and expenditures of economic operators in the country.

4. Effectiveness of Public Debt in GDP Growth

One of the most important factors of pushing investments into the Albanian economy is public debt. In the first years of transition, in an extreme absence of the domestic production, public debt was used to finance current public administration spending. Their impact on investment was zero. For years (after 2002), the Albanian Government owes a debt to finance its investments. In order to analyze the economic impact of public debt on economic growth, we have considered data from 2005-2016. The following table presents the data of the public debt stock over the years 2005-2016 where the data of 2016 is a plan because the exact value of the public debt stock for this year is not yet confirmed.

Table 2: Public Debt stock 2005-2016 (billion ALL) *

Years	2005	2006	2007	2008	2009	2010
Public debt stock	468,08	494,74	517,03	595,89	682,55	715,52
Years	**2011**	**2012**	**2013**	**2014**	**2015**	**2016****
Public debt stock	772,74	828,27	950,58	1.005,16	1.043,21	1.077,65

** **Source:** Ministry of Finance, Comments and Analysis: Open Data Albania*
** Note: Values for 2016 are a plan.

If we would draw the data in the table above on a coordinate axis, we would see the ongoing growth of the debt stock as shown in the chart below. It should be noted that during 2005-2007, the stock of debt has remained at low growth rates and after this year growth has intensified but remained at a steady growth rate.
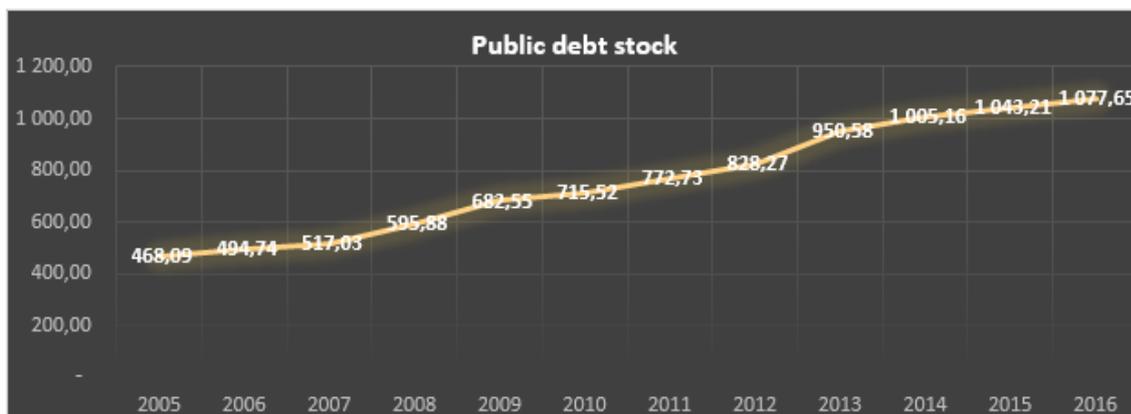

Figure 2: Performance of public debt stock 2005-2016 (billion ALL) *

Although growing public debt trends are perceived as risky to the economy of a developing country like Albania, they should be seen regarding the effect they bring to the economy. Of particular importance in this assessment is the recognition of the effect on the economy of

having an additional Lek of debt to GDP growth. The following table presents these additions to public debt and the Albanian GDP for 2005-2016.

Table 3: Effectiveness of Public Debt in GDP 2005-2016 (billion ALL)

Year	2005	2006	2007	2008	2009	2010
Public debt stock	468,09	494,74	517,03	595,88	682,55	715,52
Change in public debt		26,65	22,29	78,85	86,66	32,97
GDP	804,16	872,74	965,53	1.080,68	1.143,94	1.239,64
Change of GDP		68,57	92,79	115,15	63,26	95,71
Effectiveness of public debt (Debt Multipliers)		2,57	4,16	1,46	0,73	2,90
Year	2011	2012	2013	2014	2015	2016
Public debt stock	772,73	828,27	950,58	1.005,16	1.043,21	1.077,65
Change in public debt	57,22	55,53	122,31	54,57	38,05	34,44
GDP	1.300,62	1.332,81	1.350,05	1.394,42	1.435,75	1.501,89
Change of GDP	60,98	32,19	17,24	44,37	41,33	66,14
Effectiveness of public debt (Debt Multipliers)	1,07	0,58	0,14	0,81	1,09	1,92

For each year, a parameter that divides the change in GDP with the change in public debt is calculated. This parameter is a simplified form of Debt Keynesian Multipliers. It shows how much the economy has grown from the one Lek public debt growing in the current year. For the period 2005-2016, the performance of this parameter is as in the figure below.
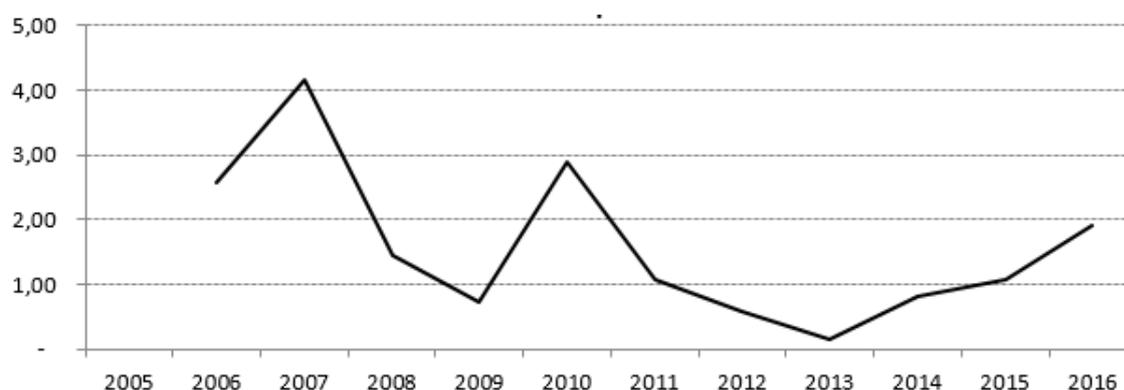

Figure 3: Effectiveness of Public Debt in GDP 2005-2016 (billion ALL)

As you can notice, the curve trajectory that shows how effective the growth in debt to produce additions to GDP is with an improper fluctuation. This form shows the influence of the most powerful factors in the Albanian economy. As you can notice, after 2007, debt effectiveness has been declining. So, the economic added-value of debt-added units has fallen from 2007 to 2009. This has come from the influence of a strong external factor that was the financial crisis that hit the European Union countries after 2007. The powerful impact of this crisis, especially in Greece, had a direct impact on the Albanian economy mainly through the decline of remittances by

emigrants. After 2009, the debt effectiveness has increased only for one year and has continued to decline until 2013. In this year, the economic surplus has begun to increase for each additional public debt unit.

5. Conclusion and Recommendations

Based on the principles underpinning public debt management in Albania and at the same time the Keynesian Public Debt Multiplier logic, intertwined with the quantitative data analysis of the Albanian economy over the period 1996-2016, we have reached some conclusions and recommendations. We judge that these conclusions and recommendations can be useful if implemented even in the form presented in this study and may also serve as a basis for further study of these phenomena. Below are listed the conclusions of the analysis of public debt and their impact on GDP.

First, as well as analyzing the values of public debt and economic growth, it is easy to identify a very weak relationship between them. The change in economic growth does not go along or precede a change in the same proportion of the public debt. Of course, to have a precise conclusion, other factors, not only economic but political nature needs to be analyzed. Despite this, it can be said that, in principle, there is a weak correlation between public debt and economic growth.

Secondly, the economic, financial crisis has been a factor strongly influencing the level of economic growth in Albania especially after 2009. This crisis has impacted on curbing economic growth, while simultaneously reducing the effectiveness of public debt and public investment in GDP. The impact of this regional crisis on the Albanian economy has come mainly through the reduction of remittances which have served as an important source of development for the Albanian economy.

Thirdly, public debt effectiveness calculated as a ratio between GDP changes with public debt change is an approximate variant of Keynesian debt multiplier calculation. Based on the features of the Albanian economy, we believe that this personalized multiplier is more appropriate for Albania and developing countries such as Albania. We believe that this personalized multiplier presents the fastest indicator to measure public debt efficiency in terms of a relatively high level of political abuse with this parameter.

Fourthly, Albania is steadily increasing its public debt stock by reaching 71.5% in 2016. This is a level which greatly increases the risk for the Albanian economy. This risk becomes more real if we take into consideration the fact that the increased level of public debt (stock) is not followed by an increase to the same extent of GDP.

Based on these conclusions and those that can be accomplished to improve economic growth, recommendations are made, mainly addressed to the Albanian Government. These recommendations represent a source of analysis and are feasible and, we believe, necessary for the development stage and the prospect of a developing economy such as the Albanian economy.

Firstly, the Albanian Government in harmony with the international financial institutions, to which has contractual obligations such as the IMF, must develop a better-considered plan for the level of public debt and the impact it is expected to deliver on the economy. In those years when the effectiveness of public debt is low, it is necessary to study the factors of this phenomenon and at the same time find the possible solutions.

Secondly, a short-term replacement plan for remittances is needed. Looking at the development potential of the country, funds raised through various forms of loans should primarily target

public investment and stimulate private investments. At this point, it would be appropriate to replace domestic debt with foreign debt. This would increase the foreign currency by giving the economy that breathing which is being reduced by falling remittances. The goal is to find an alternative source of development that will replace remittances. The financial crisis that hit the European Union countries also damaged the Albanian economy through remittances. In fact, the crisis is not the only cause of their collapse. Even if the crisis did not happen, it is expected that their level will fall. The crisis only proves how sensitive the Albanian economy is from the fluctuation of the level of remittances.

Thirdly, public debt at the 71.5% level poses a risk to the Albanian economy and as such this level should be reduced. The Albanian government in coordination with its creditors should develop a well-planned plan to reduce this debt stock without risking the negative impact of this reduction in GDP. Of course, this process is against the Keynesian debt multipliers logic but is a need to have a stable and low-risk economy. The negative examples of mismanagement of public debt coming from neighboring countries such as Greece, which although part of the European Union did not respect the debt standards of this community, are already sufficient.

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