

## Are deficits in the government's budget inflationary? (Analyses of statistical data of Albania economy during the years 1996-2010)

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### Abstract

Specific events of state finances has significant effects mostly in accelerating inflation and thus also on the country's economic stability. Given that inflation exerts a negative impact on the economy, the objectives of this study focus not on the consequences of inflation in economy but on the budget deficit- cause that effect inflation in the economy.

Considering the fact that Inflation has a large impact on the economy of a country, this study focuses on verifying the relationship and interdependence that exists between this variable and the other macroeconomic variable such as government Budget Deficit. This paper is a research study based on the registered statistical data of these macroeconomic indices that affect the performance of Albanian economy during the years 1996-2010.

Key words: Inflation; Gross Domestic Product; Budget Deficit; Public Debt

### I. Introduction

In this study we attempt to determine the long-run relationship between budget deficit and inflation. This paper is a research study based on statistical data of the Albanian economy for the period 1996-2010. With special purpose the relationship of macroeconomic indicators as the budget deficit and its impact on the trend of inflation in the economy over the years.

### II. Review and Related Literature

Are deficits in the government's budget inflationary? In the monetarist framework, deficits tend to be inflationary. This is because when monetization takes place, it will lead to an increase in money supply and, *ceteris paribus*, increase in the rate of inflation in the long run (Gupta, 1992). This quantity theory result is widely accepted and need not be explored in further detail. Politically, it has been a strong concept that high amount of budget deficit is unacceptable. Usually, many political leaders think that the current budget deficit to be unacceptably high because it will attract serious attention from opposite parties and citizens. Academically, the concern of the existing body with empirical evidence regarding the issue does not resolve the controversy. The controversies deal with the importance of budget deficits to find out its effect on inflation, money growth, interest rates and others economics variables.

For the developed countries as the United States, Niskanen (1978); Hamburger and Zwick (1981); Dhakal et al. (1994) present supportive evidence of the effects of budget deficits on inflation. For the developing countries,

Aghevli and Khan (1978) found a positive relationship between inflation and budget deficit. Hondroyannis and Papapetrou (1994) suggested that there is a long-run relationship between government budget and price level and support the hypothesis of a bi-directional causality between the two variables. The analysis is employed in analyzing the government budget-inflation relationship in Greece. However, Darrat (2000) suggests that besides controlling for money growth, higher budget deficits have also played a significant and direct role in the Greece inflationary process. In general, the result indicates that fiscal deficits caused slight inflation due to the issue of public bonds. Hondroyannis and Papapetrou (1994) employ analysis in analyzing the government budget-inflation relationship in Greece by using annual data for period 1960-1992. Based on the concept of central banks' independence, deficit should cause inflation in developing countries since the central bank are not autonomous (Brown and Yousefi, 1996). They began with a monetarist's premise that excessive injection of money into the income stream, in which the rate of growth of money supply exceeds the economy's rate of growth of output, is inflationary in the long run. The absence of political independence of central banks, particularly in LDCs, implies that monetary policy and price stability are undermined in these countries.

### II. Empirical Data and Results

The study is focused in data analyzing of a 15-years period from 1996 to 2010, focusing primarily on the years 1996, 1997, 2001 and 2009, both years related to specific events

affecting the country's economic climate and growing government budget deficit.

During this study-period are found yearly macroeconomic indicators of inflation and government deficits, which are summarized and presented in the following tables, and graphics showing the purpose of this study research.

**i. Budget Deficit in terms of GDP**

During the years 1996-1999, the government budget deficit resulted in high levels from 10.4% to 13.4%. During the years 2000-2004 and 2008-2009 resulted in levels from 4.9% to 9.5%.<sup>1</sup> While in the following four years respectively in 2005, 2006, 2007 and 2010 resulted in the optimum levels of approximately 3%. The economy observed a negative trend growth of GDP from 5.5% in 2008 to 7% of GDP in 2009.<sup>2</sup>

So, note that the budget deficit has increased respectively in 1997, 1999, 2001, 2004 and in 2009, years which relate to specific events that cause significant increases in government spending and consequently higher levels of deficit budget.

Fluctuations in the Albanian economy have led to the destruction of macroeconomic balances during the years 1996-2010 (Table 1).

- *Period 1996-2000.* Lack of experience, political problems, poor governance of the previous years, significant institutional shortcomings, the pace of structural reforms, not set rates objectives, etc. were the first symptoms of economic and financial crisis that began appearing in 1996. Increased government spending in the electoral campaign of 1996 and not-good tax administration made that budget deficit rose to 12.9% at the end of the year.<sup>3</sup>

The organization of pyramid schemes in 1997 with the high rates offered, led to an increase in money supply by offsetting the monetary policy of the Bank of Albania, increasing inflation at the level of 13.4% and resulting out of control even other variables.

General crisis that involved the country in 1997 was largely reflected in all economic and financial indicators. Inflation rose quickly during the first half of the year and the situation of overall weakening of the public order led to a fast and large drop of trust in domestic currency, speculation with the foreign currencies, higher population saving reserves to cope with unexpected situations, decreased trust in the banking system, collapse in domestic production, etc.<sup>4</sup>

In conditions when in Albania (in 1997) the financial market was in its initial stages and the banking system had great difficulty to provide liquidity and was at the insufficient level to support the requirements of the Government, the budget deficit was financed almost by the Bank of Albania directly or indirectly, bringing thus increase of the money supply. This in turn resulted in a further increase in the rate of

inflation and devaluing the exchange rate against the most important foreign currencies.

From September of this year, the situation of gradual re-establishment of public order began to improve fiscal policy, mainly in terms of government revenue collection and expenditures limitations.<sup>5</sup>

Characteristic for this period as a result of financing the high budget deficit with entirely monetary stock was the increased money in circulation with inflationary consequences for the subsequent periods. During this period real economic growth was almost insignificant and the increase of money supply led to accelerating inflation.

The severe recession of 1997, associated with total anarchy, lead to the loss of public confidence in the safety of bank deposits. The financing of the budget deficit growth was made by the Bank of Albania. Consequently the level of inflation at the end of the year reached the highest level of 42.1%.<sup>6</sup>

During 1998, macroeconomic stability was significantly improved. The optimal coordination and harmonization of monetary and fiscal policies of Government, made that the budget deficit to be lowered by 3% compared with the previous year and the price level at the end of the year had an annual increase of 8.7% (moderate inflation) or 1.3% below the programmed level.<sup>7</sup>

In 1999, while the budget deficit increased by 1.4%, inflation remained surprisingly low recording deflation of -1%, even lower than the standard level of industrial countries. The sharp reduction of inflation to negative figures brought to a release of monetary policy by lowering the interest rates.<sup>8</sup>

Only in the year 2000, the budget deficit could fall below 10%. The target of the Post-crisis Program during this period was the reduction of the deficit, by raising the level of income, ameliorating further the fiscal legislation and fiscal administration, bringing the budget deficit at the level of 9.1% in the end of the year 2000.<sup>9</sup>

- *Period 2001-2010.*<sup>10</sup> As the year 2001 was the election year, there was a growing budget deficit compared to 2000, reflecting the impact of elections on fiscal policy implementation. After 2001 until 2003 there was a reduction of fiscal deficit as a result of a higher revenue growth rate than expenditure growth rate. This fiscal control was reflected in a low inflation rate for 2003. While the year 2004 restores the growth of the budget deficit because of the high growth of expenditures in social transfers and investment in health and education.

<sup>1</sup> Annual Reports of Bank of Albania, 1996-2010.

<sup>2</sup> Increasing the budget deficit during these years was due to public investment of the road Rrëshen-Kalimash. Deficit was financed by the foreign debt of the Albanian government of 250 million euros from "Deutsche Bank" and "Alpha Bank".

<sup>3</sup> Dhori Kule, Sulo Haderi, *Macroeconomic Consolidation, Achievements and Challenges*, web publications, 126\_1.

<sup>4</sup> Annual Report of Bank of Albania, 1997.

<sup>5</sup> This process continued under the Finance Program Emergency Assistance of the International Monetary Fund and initially requested an increase in VAT from 12.5% to 20% (from 1 October 1997)

<sup>6</sup> Annual Reports of Bank of Albania, 1997.

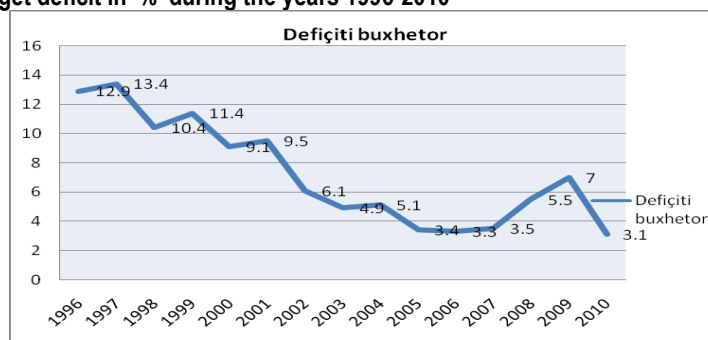
<sup>7</sup> Ibid., 1998.

<sup>8</sup> Ibid., 1999.

<sup>9</sup> Ibid., 2000.

<sup>10</sup> Annual Reports of Bank of Albania, 2001-2010.

Figure 1. Budget deficit in '%' during the years 1996-2010



Source: Ministry of Finance<sup>1</sup>

## ii. Macroeconomic Developments and the Main Effects

Table 1. Inflation, Government Revenue and Expenditure- Deficit, GDP (in %, million)

	1996	1997	1998	1999	2000
Inflation %	17.4	42.1	8.7	-1	4.2
Gov. Deficit mln	-36, 249	-45, 788	-42, 882	-54, 069	-48, 231
Gov. Deficit %	12.9	12.9	10.4	11.4	9.1
Incomes mln	49, 175	6,1 506	99, 370	111, 458	120, 844
Total Income %	18.3	16.9	20.3	21.3	22.8
Expend. mln	85, 424	107 ,294	142, 252	165,527	169 ,075
Expend. %	30.3	29.4	30.7	32.7	31.9
GDP mln	280, 998	341, 716	456,766	474 ,291	530, 016

Source: Ministry of Finance & INSTAT<sup>2</sup>

Table 2. Inflation ('%'); Incomes; Expenditures & Deficit, GDP (in % and in million lek).

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Inflation	3.5	2.1	3.3	2.2	2.6	2.5	3.1	2.2	3.7	3
Def. mln	-55 420	-37 922	-33 928	-38 084	-28 176	-29 372	-34 119	-60 245	-80 100	-38 067
Def. %	9.5	6.1	4.9	5.1	3.4	3.3	3.5	5.5	7	3.1
Income s mln	130 675	154 595	167 224	184 355	204 163	229 444	251 555	291 246	299 502	333 700
Income s %	22.4	24.8	24.1	24.5	25.1	25.7	25.9	26.8	26.1	27.1
Expend. mln	186 095	192 517	201 152	222 439	232 339	258 816	285 674	351 491	379 602	371 767
Expendi t. %	31.9	30.9	28.9	29.6	28.5	29	29.4	32.4	33.1	30.1
GDP mln	583369	622711	694098	750785	814797	891000	971255	1088132	1145340	1228068

Source: Ministry of Finance & INSTAT<sup>3</sup>

<sup>1</sup> Macroeconomic indices in years.

<sup>2</sup> Ministria e Financave, Treguesit Makroekonomik ne Vite; INSTAT, Publikime- Inflacioni ne Vite.

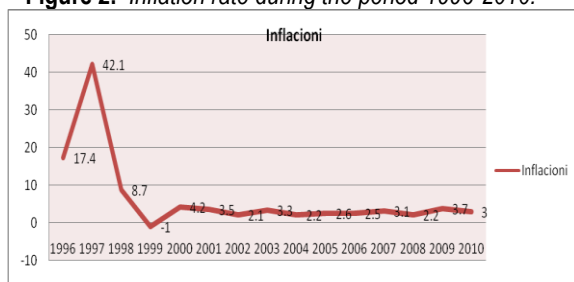
<sup>3</sup> Ministry of Finance, Macroeconomic in Years, INSTAT, Publications- Inflation\_in-years.

The years 2005-2006 marked the biggest decline in budget deficit since 1997 as a result of successful implementation of political measures for its reduction. The main importance was stressed on revenue growth, but above all on the reduction of costs. Since 2006, there is a steadily increasing rate of deficit, which reaches its maximum value in 2008 (5.5% of GDP) and in 2009 (7% of GDP), due to the expansionary nature of fiscal policy. These rates are among the highest deficit rates ever experienced by the Albanian finances, caused by a huge increase in investment expenditures, mainly financing the road Rrëshen-Kalimash<sup>389</sup>. While the year 2010 shows a level of stabilized deficit as well as a stabilized inflation rate compared to the previous year.

### iii. Inflation

The growth rate of inflation, especially during the two years 1996 and 1997 is of a two figure rate in the form of "hyperinflation" and specifically 17.4% in 1996 and 42.1% in 1997 (from the Table 2). In the period after 1998 inflation can be estimated to normal levels in the rates that can be considered "moderate inflation" and respectively during the years 1998, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009 and 2010. In this period we emphasize that in the year 1999, exist the phenomenon of "deflation" or the decrease of prices with -1% level.<sup>390</sup>

**Figure 2.** Inflation rate during the period 1996-2010.



Source: INSTAT<sup>391</sup>

### IV. Are deficits in the government's budget inflationary?

The existence of a deficit in the economy requires a financial source to fund it. In Albania, the financing of budget deficit is realized mainly through three ways: Emission of new money; The income from the public privatizations, and financing with debt which is in the form of:

- government loans in the domestic financial market through instruments as treasury bills or obligations.<sup>392</sup>
- government loans in the foreign financial markets

Money emission for financing the deficit is definitely a cause for inflation consequence in the economy. But on the other hand, debt financing represents also tendency toward inflation:

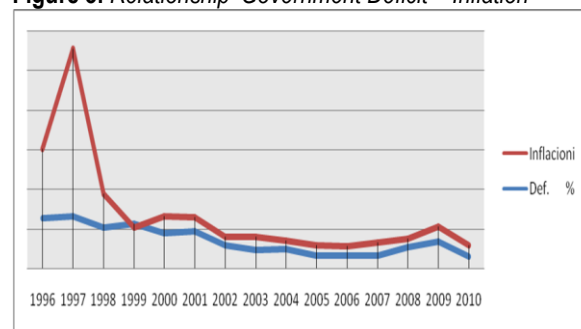
➤ Borrowing means an increased demand for government funds, which is associated with a decline in the market prices of bonds and with an increase in interest

rate. Also the fact that individuals own bonds that in a future time they will convert into cash, thus increasing their wealth. This effect will be reflected toward an increased individual future consumption and consequently a growing aggregate demand. In terms of an unchanged aggregate provided offer will be caused the rise of the general level of prices in near future.

➤ The above emerged situation and the fact of increased interest rates affect the growth of debt payments. Accumulated debt will most probably force the government to use the method of financing through the current issue of money, since debt financing might be not optimal to afford the emerged situation. The economy will be injected large sums of money that will stimulate the growth of aggregate demand conditions in conditions of a fixed offer of goods and services. This affects the price level in the economy towards a further increase, thus creating a situation even more inflationary than in the case of government debt financing. We know that inflation has to do with raising prices in the market as result of growing of overall aggregate demand.

It is precisely this positive relationship between inflation and budget deficit as presented by Figure 3. Exactly approximation in direct proportion to the progress of budget deficit and inflation expressed by the two lines on the graph identifies the existence of such a link in years. So, despite that the budget deficit is not the only cause affecting the phenomenon of inflation in economy of a country (many other factors also affect inflation), it causes inflationary trend. This materialized through the data analysis discussed above that correspond to similar fluctuations of the budget deficit and inflation over the years by economic circumstances. Statistical data of this Figure show the positive relationship between the two macroeconomic indices studied in Albanian economy during the years 1996-2010.

**Figure 3.** Relationship 'Government Deficit – Inflation'



Source: INSTAT (Inflation); Ministry of Finance Government Budget)

"There is a link (correlation) between inflation and significant budget deficit, suggesting that fiscal imbalance, is financed largely by monetary means. Lack of other means of funding explains why governments address to inflationary finance and emphasize the close relationship between fiscal and monetary policy"<sup>393</sup>

<sup>389</sup> The public investment end financing is associated with a decrease in budget deficit in the year 2010 with 56%.

<sup>390</sup> Annual changes of indices in percentage, www.instat.gov.al.

<sup>391</sup> Ibid.,

<sup>392</sup> Treasury Bills are issued in terms of 3, 4, 6, and 1 year. Are offered for both the banking sector, private sector and individuals.

<sup>393</sup> Charles Wyplosz, 'Macroeconomic Stabilization during transition period; Riccardo Faini; CEPR, p.48.

## V. Conclusions

In this study we attempt to determine the long-run relationship between budget deficits and inflation. From statistical analysis of historical data of the government budget deficit and inflation rates over the years 1996-2010, used to verify the study purpose "Are deficits in the government's budget inflationary?", materialized for Albania economy can draw the following main conclusions: credit to the government and money emission result in critical variables in determining inflation. As a result of increasing budget deficit and the huge demand for cash

during specific political or economical events affecting the finances of the state, the phenomenon of inflation acceleration occurs. Events such as the expansion of government expenditures in big public investments or during the election campaign accelerate the growth of the general price level. Government budget deficit is associated with inflation and stimulates it in the short term and especially long term. To the extent of this influence, a role plays the way of deficit financing. Prolonged deficits become a distressing phenomenon for the economy, so their reduction is central to many economic policies.

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