



## **Imbalance of the public finance in the context of Keynesian and Non-Keynesian effects of fiscal policy limitation**

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**Abstract:** The purpose of this article is to point out the importance of the size of public debt and deficit in the context of Keynesian and non-Keynesian effects of fiscal policy limitation. To achieve this objective primarily were used methods of analysis of the available literature and presentation of statistical data. Considerations include, among others, the presentation of public debt and deficit in the context of economic growth. Expansionary fiscal policy often caused by economic fluctuations contributes to the deepening of public finance imbalance with frequent decline in GDP growth. The restrictive policy has an influence on improving the situation of the public finance sector in the long-term with at least moderate economic growth.

**Keywords:** Fiscal policy, Public finance imbalance, Financial crisis

### **1. Introduction**

In the economy, there are mechanisms which cause that the budget deficit is formed in a pro-cyclical way (Mackiewicz, 2010; Stawska, 2014). This is a relatively common phenomenon. As shown by empirical research, as far as fiscal policy in developing countries tends to be pro-cyclical, so in the G7 countries, fiscal policy is conducted in a rather anti-cyclical way (Talvi and Vegh, 2000). Similar results of studies conducted on different samples reached the Lane (2003), Alesina, Tabellini (2005) and others. C. Adam and D. Bevan indicate that sustained in the long-term budget deficit contributes to a slowdown in economic growth (Adam and Bevan, 2005). C.Reinhart and K. Rogoff give significant results of the analysis covering 44 countries highly economically developed and developing countries. In their opinion, the high level of public debt in relation to GDP (over 90%) is associated with lower levels of GDP growth (Reinhart and Rogoff, 2010). Disputes about the negative or positive impact of the public finance imbalance on the economic growth are taking place for many years, but recently have been intensified. Hence, the purpose of this article is to point out the importance of the size of the general government debt in the context of Keynesian and non-Keynesian effects of fiscal policy limitation.

### **2. Reflections on Keynesian and Non-Keynesian effects of limiting public finances**

Public debt is a consequence of the budget deficit (a negative balance of the consolidated balance sheet of the public sector). The literature mentions several reasons for the budget deficit among others: 1) there is a lack of synchronization between budgetary expenditure and revenue from taxes and other sources; 2) too extended functions of the state; 3) between the tax burdens which do not reduce the rate of economic growth and the size of government spending is difficult to find the optimum relationship; 4) adverse demographic trends; 5) use of fiscal intervention in the conditions of economic recession, for example: "Fiscal packages"; 6) often politicians in pre-election declarations consist society promises that at the moment of require of funds they are higher than obtained in a natural manner through taxes;7) over developed welfare state mainly in relation to GDP growth and ability to raise budget revenues (excessive social policy, social privileges) (Bukowski, 2013).

The budget deficit and the public debt, occurring in the economy, impact on economic growth in different ways. Many economists have on this topic completely different opinion and theories. One of the popular models describing the

influence of Keynesian demand of the public sector on economic growth is P. Samuelson model. Based on the model it was noted that the increase in demand of the public sector contributes to GDP growth, while the decline in the demand by tightening fiscal policy to drop the product. In this model, it is assumed that the total demand is below the potential level, and the prices have excellent rigidity. Hence with such assumptions the aggregate demand determines the amount of product in the economy. Therefore, higher public spending *ceteris paribus* cause an increase in global demand and product, and lower public spending, *ceteris paribus*, lead to a decline in global demand and product. In addition, in the Samuelson model is pointed out that the increase in savings contributes to the decline in demand, *ceteris paribus*, and a decline in savings causes an increase in demand - this is called. the paradox of savings. Samuelson model and other Keynesian models are used in the analysis of economic processes in the short term. As a result of fiscal expansion (increase in budgetary expenditure), occurs the output growth in the short term - but this does not mean growth in the long term. This is due to the fact that in the long term the economic growth influenced by many fiscal factors such as: the structure of public expenditure, the level of public spending, the amount and types of taxes and the scale of imbalances in public finances (Rzońca, 2007).

In the 80s of the twentieth century, there have appeared studies on the positive effect of reducing public spending or raise taxes on the growth of aggregate demand in the short term. These studies related to non-Keynesian effects of fiscal tightening can occur when public finances stand before the crisis, taxes are high and despite this the public debt is growing rapidly. It turns out, however, that to appearance the Keynesian effects may lead the sufficiently strong deficit reduction. In the literature, there are also opinions that the occurrence of non-Keynesian effects of the tightening of fiscal policy significantly influenced not the size of the original imbalances in public finances but rather a way of their reduction. Deficit reduction may be accompanied by acceleration of the product, not by raising taxes, but by cuts in expenditure, mainly in spending on public sector wages and social transfers (Rzońca, 2004a).

Blanchard model is, among others, an interesting model describing non-Keynesian effects of fiscal tightening (1985;1990). This model connects non-Keynesian effects with changes in the uncertainty felt by households caused by fiscal impulses. In this model, the probability of the occurrence of uncertainty of households is addicted to not only the rate of tax burden and public debt levels but also to the degree of development of the financial system or the horizon of maximizing of the utility by the household (Rzońca, 2007).

Analyzing the assumptions of Blanchard model should be noted that households may have a certain myopia that results from continuous risk of death or expiration of the family, or the underdevelopment of the financial system, which in turn prevents the smoothing consumption over time. Decisions taken by households are within the range of choices from the Keynesian (only the current period) to the Ricardian (infinite time horizon). Among the assumptions in the model is also listed zero level of tax rate, which the exceeding result in the permanent decline of the product. Moreover, in each period the probability of carrying out the consolidation of public finances is the same. The consolidation is understood as a reduction of the deficit, which will affect the stabilization of the public debt in relation to the product. Taking this into account, tax increase produces two effects: a) First of all it is related to the increase in the expected value of lifelong household assets, which determines their consumption possibilities. It also allows to stop the accumulation of public debt to the size at which it would be necessary to raise tax rates to a level causing abnormal lowering the product; b) Tax increase ensures households in the current period that taxes will not increase in the future above the critical level. However, such an increase, assuming maximizing the utility by households in a finite time horizon, is the same as the increase in the expected value of the total tax burden. With the deposition of consolidate on are increasing the chances of at least a partial shift of the debt cost for the next generation. As a result, the first effect dominates the effect of the other. This is due to the fact that tax increase contributes to the growth of private consumption and aggregate demand only in extraordinary circumstances - i.e. when bringing closer to the bearing the extraordinary costs in the process of balancing public finances (public debt reaches high levels and still increases despite the tax rate close to the critical value). A. Rzońca adds that the range of tax rates, in which achieve fiscal balance as a result of tax increases could lead to an increase in private consumption, is relatively narrow (Rzońca, 2004a).

Based on Blanchard model it can be concluded that the fiscal tightening rarely may lead to non-Keynesian effects, so to an increase in aggregate demand. In order for that happen, the rate of tax burden and public debt should be at a sufficiently high level. Then a further tax increase may contribute to non-Keynesian effects (Rzońca, 2004b).

Among other Alesina and Perotti (1996); Alesina and Ardagna (1998) or Alesina, Ardagna, Perotti and Schiantarelli (2002), who conducted empirical research on non-Keynesian effects of fiscal tightening, emphasized that the increase in aggregate demand in the time of consolidation of public finances seems more likely if they are balanced by cuts in public spending and not by raising taxes. On the base of the modified Blanchard model can be concluded that the probability of non - Keynesian effects of fiscal tightening is higher in countries where: 1) the financial condition is bad, the public debt is substantial and it continues to grow despite high taxes; 2) Households are aware of the impossibility of postponing fiscal consolidation and thus they know about the negative consequences for the level of the product by raising taxes; 3) the persons responsible for fiscal policy - according to households - as the only form of balancing the budget they see an increase in taxes (and not a limitation of expenditure); 4) as a result, the government surprises households and reduces the level of state spending. Thus, the reduction of public expenditure does not mean worse results than a tax increase (Rzońca, 2004b).

In the short-term reduction of the deficit in public finances may reduce the rate of economic growth but not always which is indicated by the theory and empiricism.

### 3. Analysis of economic situation in Poland, with particular emphasis on public finances

Recent economic and financial crisis, which began in 2008 contributed to the need to pay attention to the public finances of many countries. Typically, the tendency to increase budget deficits and debts of public finances are intensified by the recession phenomena. In order to analyze the situation of public finances and the size of the economic growth in Poland, in Table 1 are presented the revenue, government expenditure and the general government deficit and GDP in Poland in the years 2000-2014 in current prices.

**Table 1:** Public finances revenues and expenditure, General Government deficit and GDP in million zloty, in Poland

Year	Public finances revenue_nominal	Public finances expenditure_nominal	GG DEF_nominal	GDP_nominal
2000	271 641,9	293 115,8	-22 194	747 032
2001	291 491,0	329 682,6	-37 309	779 975
2002	304 822,9	351 064,8	-39 280	810 617
2003	319 955,5	365 252,8	-51 408	845 930
2004	345 933,7	387 834,6	-47 796	927 306
2005	382 496,8	412 130,7	-39 288	984 919
2006	420 411,1	442 609,5	-38 228	1 065 209
2007	484 853,3	483 182,4	-21 972	1 186 773
2008	515 204,6	535 837,6	-46 369	1 277 322
2009	539 890,2	590 019,8	-99 666	1 361 850
2010	551 098,5	635 774,3	-109 728	1 437 357
2011	604 203,0	660 082,1	-76 174	1 553 582
2012	651 121,5	689 280,6	-60 433	1 615 894
2013	650 315,1	699 177,5	-66 735	1 662 052
2014	677 159,0	716 857,5	-55 241	1 724 723

Source: own elaboration based on Central Statistical Office of Poland

The largest increase in the deficit of the general government in Poland took place during the financial crisis in the years 2009 - 2010. Then the increase in spending was much higher than the increase in public revenues. In the years 2000 - 2014 only two times the general government deficit was below 3%, which meant meeting the fiscal rules. In Poland there are fiscal rules contained at international level, namely in *the Treaty on European Union (Maastricht Treaty)* of 7 February 1992 and in the accompanying *Protocol on the excessive deficit procedure*. They set the maximum level of public debt at 60% of GDP at market prices and the deficit at 3% of GDP at market prices (Taktat o Unii Europejskiej, 1992). On the other hand, national fiscal rules have been enshrined in *the Constitution of Republic of Poland* of 1997 and in *the Public Finance Act*. In *the Constitution* was placed a provision that prohibits the granting the loans or guarantees

and financial sureties in the aftermath, the amount of public debt would exceed 3/5 of GDP (Konstytucja RP, 1997). Similarly, the Public Finance Law stipulates that the public debt cannot exceed 60% of the annual GDP (Ustawa o finansach publicznych, 2013).

In periods of decline in GDP in the economy were also noticeable increases in deficits of general government (although the increase in the deficit of public finances was a factor mitigating the impact of the crisis on the Polish economy).

**Table 2:** General Government debt and deficit and GDP growth (% GDP) in Poland

Year	GG debt	GG deficit	GDP growth
2000	-36,5	2,97	4,3
2001	-37,3	4,78	1,2
2002	-41,8	4,85	1,4
2003	-46,6	6,08	3,9
2004	-45,3	5,15	5,3
2005	-46,7	3,99	3,6
2006	-47,1	3,59	6,2
2007	-44,2	1,85	6,8
2008	-46,6	3,63	5,1
2009	-49,8	7,32	1,6
2010	-53,60	7,63	3,9
2011	-54,80	4,90	4,5
2012	-54,40	3,74	2,0
2013	-55,70	4,02	1,6
2014	-50,10	3,20	3,3

Source: own elaboration based on Central Statistical Office of Poland

Observing the dynamics of economic growth in Poland since 2000 we notice that while in 2000 recorded the growth of 4.3%, in 2001-2002 there was a drop in GDP and fluctuated between 1.2-1.4%. In subsequent years 2003-2006, GDP in Poland was on a path of moderate growth reaching even in 2006 the level of 6.2%. Analyzing the level of GDP in Poland, especially in the period approaching the financial crisis it must be noted that since 2007 onwards until mid-2008 we observed a relatively high level of GDP, oscillating in individual quarters in the range from 7.5% to 6.1% and the average from 6.8% in 2007 to 5.2% in 2008. In the second half of 2008 it was seen a significant slowdown in economic growth (GDP in 2009 increased by about 1.8%). The years 2010 - 2014 was a period of many changes in GDP growth because, while in 2011 was an increase of 4.5%, already in 2013 - a decrease of 1.6% (Table 2).

In 2009 this deficit was 7.3% of GDP and in 2010 already 7.6% of GDP. This debt began to fall in 2011 from 4.9% of GDP to 3.2% of GDP in 2014 (Table 2). The increase in the deficit of public finances among others, had its roots in the activities of anti-crisis measures of the government. Fiscal authorities reduced the burden on tax, social security contributions, administrative barriers, and raised the spending on public investment.

The variables presented in the table 3 are in real terms by the CPI ( $I_1 = 2000 = 100$ ). Analyzing the results in Table 3, we note that in 2007, in Poland has performed a significant increase (change of 12.51%) in government revenues (compared to 2006), the increase in spending of public finances (change of 6.5%), and slight decline in public debt and a significant decrease in the deficit of General Government (change of -43.93%), with sustained high economic growth of 6.8%. During the crisis, there was a slight increase in government revenues (1.96%) in 2008 compared to 2007, the increase in spending of public finances (change of 6.41%), the increase in public debt (change of 8.95%) and a significant increase in the GG deficit (change of 102.5%), with slightly lower, but still high GDP growth rate (5.1%). In turn, the year 2009 was characterized by low economic growth of 1.6% with a much lower gain public revenues (change of 1.27%) compared to 2008., increase in spending of public finances (change of 6.41%), a higher deficit (change of 10.10%) and public debt (change of 107.71%) compared to the previous year. However, in 2014 (compared to 2013) observed decrease in the

deficit (change of -17.22%) and public debt (change of -6.44%) with an increase in public revenue (change of 4.13%) and growth public expenditure (change of 2.53%). On the other hand, economic growth in 2014 was higher (3.3% ) compared to 1.6% in 2013.

**Table 3:** Percentage changes of selected variables in Poland (change year to year).

Year	Public finances revenue_real	Public finances expenditure_real	GG debt_real	GG deficit_real
2000				
2001	1,71	6,61	1,35	59,34
2002	2,63	4,50	14,14	3,32
2003	4,09	3,18	15,40	29,79
2004	4,46	2,59	2,90	-10,17
2005	8,25	4,04	7,19	-19,52
2006	8,87	6,37	8,16	-3,62
2007	12,51	6,50	1,93	-43,93
2008	1,96	6,41	8,95	102,50
2009	1,27	6,41	10,10	107,71
2010	-0,49	5,04	10,72	7,33
2011	5,15	-0,43	5,99	-33,42
2012	3,89	0,67	-0,54	-23,52
2013	-1,03	0,51	4,47	9,43
2014	4,13	2,53	-6,44	-17,22

Source: own elaboration

It seems that it is difficult to indicate at which point there were strictly Keynesian and non-Keynesian effects of fiscal tightening in Poland in the period under review. This is partly due to the economic fluctuations, as the economic slowdown of 2001-2002 and the recent financial crisis, which began in 2008.

## 4. Conclusion

The considerations discussed in this article focus on the relationship between the deficit and the debt of public finance sector and economic growth in Poland. The deficit and public debt are the key indicators of the direction of fiscal policy in the country. The time of the restrictive fiscal policy necessary to reduce the level of debt was interrupted in 2008 with the arrival of the global financial crisis. As a result, in 2009-2010, many countries applied expansive fiscal stimulus, which had a base in the Keynesian approach to stimulate the economy. In Poland, even before the crisis was limited deficit and public debt, with high economic growth, while during the crisis increased the imbalance of public finance at a lower rate of economic growth. Since 2011 began the process of tightening fiscal policy which the effects of improving public finances, with moderate growth (3.3% of GDP), are visible since 2014. Expansionary fiscal policy often caused by economic fluctuations contributes to the deepening of public finance imbalance with frequent decline in GDP growth. The restrictive policy has an influence on improving the situation of the public finance sector in the long-term with at least moderate economic growth.

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