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PUBLIC DEBT DYNAMICS AND POSSIBILITIES FOR ITS PROJECTION – THE CASE OF THE REPUBLIC OF MACEDONIA

Abstract

In case when an economy of a country is in crisis, the country by indebting itself creates a possibility of taking some investment projects into realization all for the purpose of having them act as stimulators of the economy. Excessive indebting or the irrational use of borrowed funds can have negative consequences for both the domestic economy and the future generations as well. Thus, it is of great significance to determine public debt dynamics and to establish basis for giving projections of its trends in future. The projections about the trends of the economic variables represent very complex operations. For the purpose of making such projections, the economics relies on econometric modeling. These projections are further subjected to additional practical and theoretical processing all for the purpose of obtaining as relevant and as precise results as possible. The research gives a detailed analysis of the public debt dynamics and its structure in the Republic of Macedonia for a period of 16 years. Then, a close inspection is given to the way certain factors influence the public debt in order to project its trend in the future by making use of an econometric model. The projections obtained in this manner can further represent a basis for further decision-making on behalf of the fiscal policy makers in the country.

Keywords: public debt, dynamics, Republic of Macedonia

1. INTRODUCTION

In many countries public debt grows steadily posing danger to their macroeconomic stability. In countries where the growth of public debt turns into a debt crisis, there is a risk of major disruptions and economic problems. However, paradoxically, it is because of a range advantages that shows public debt compared with taxation that many countries are not willing to give it up. Namely, public debt is an important source of public income, especially in periods of extremely high but short-term needs for Government spending.

Given the foregoing, it is clear that no one should see only the negative aspects of public debt. Namely, with the assistance of public debt, many countries were rescued when their economies faced war, political unrest or social problems. Also, it is well known that public debt is a segment of the complex structure of fiscal policy, which is a very important determinant of economic growth of any country. The belief that taxation, public debt, public investments and other aspects of fiscal policy can contribute to growth and cause stagnation is implemented in a number of models that have studied economic growth of developing countries over the past few decades (Aristomene 2007, p. 320).

The main goal of this paper is to study the dynamics of public debt of the Republic of Macedonia and the possibility of its projection in the near future, while putting emphasis on some of its features. The research covers the period 2000-2016. In this time framework, the public debt is viewed from the point of view of public finances. At the beginning of the paper, a brief overview of the impact of public debt on the economy will be given. Then, the focus will be on analyzing the dynamics of public debt in the time series of sixteen years. Finally, by creating econometric model an attempt to perceive the possibility of its forecasting will be made.

In the context of research analytical and synthetic approach and deductive method were applied. In order to strengthen the relevance of the research, secondary data sources were used.

2. PUBLIC DEBT AND ITS REFLECTION ON THE ECONOMY

In modern economic theory prevails the opinion that public debt is negative phenomenon with adverse effects on the economy. Modern fiscal theory suggests two negative consequences of public debt (Atanasovski, 2004, p. 60)

– First, public debt is to be paid by future generations despite the fact that they neither decide nor contribute to its occurrence;

– Second, public debt is a negative phenomenon because it causes the problem of crowding out the private sector in the field of investments.

There are several ways of crowding out the businesses' investments (Gevorkyan, 2011, p. 66)

–   If the Government makes large budget deficits and accumulates debt, it automatically means that it is wrong, and it invests more than the companies (business sector);

–   If the Government makes budget deficits that will be covered by taking loans, this consequently shall result in raised interest rates. High interest rates discourage companies to invest because the loans are now more expensive;

–   In a case when the Government covers deficits (liabilities arising from public debt) through the issue of bonds, the citizens and households will buy bonds because they have greater security, instead of investing their savings in private businesses.

3.   THEORETICAL APPROACH TO PUBLIC DEBT

The significance of public debt is especially true in the early 19th century when it gradually begins to make concessions to the rule of equilibrium and classical theories of public debt that had a strong negative attitude and a great resistance to public debt treating it as threat to the economy. Modern financial theories fundamentally change the view of public debt. For the classic economic school, public debt was a key element of the budget balance, but modern financial theory created new active role of public debt. In this sense, now the public debt is used not only for financing budget deficit, but stabilization, development and redistributive function were attributed to public debt as well. Modern economic theory treats public debt as regular source of public revenue such as taxes.

However, disagreements among economists about the positive and negative effects of public debt continue nowadays. According to Elmendorf and Mankiw (1999, p. 20), high public debt has a positive impact on disposable income, aggregate demand and aggregate output. These positive effects of public debt are greater when real output in the economy is far from the potential one.

On the other hand, Cochrane (2011, p. 19), indicated that the negative impact of public debt could be much greater if the high public debt increases uncertainty about the future or leads to incitement of inflation and financial repression. According to him, high public debt could have negative effects in the long and short term.

Westphal, Hallett and Rother (2012, p. 11) developed a theoretical model in which over the business cycle, debt can be used only to finance public investment, and the optimal level of public debt is determined by the relationship between the public and private capital. This model results in stimulation of economic growth. They found that the level of public debt that maximizes economic growth is a function of the elasticity of output of the changes in equity.

According to Greiner (2012, p. 65), permissive policies of public debt lead to monotonous and negative relationship between public debt and stable economic growth. The effect of debt on growth depends on the presence of rigidity of wages and unemployment in the economy. Greiner showed that in a model with elastic

labor supply and lack of rigidity of wages in the economy, public debt has negative effects on labor supply, investment and on economic growth. In the presence of wage rigidity and unemployment, public debt has no effect on the allocation of resources, but if it is used to finance productive investments, it can have positive effects in the economy as a whole.

4. DYNAMICS OF PUBLIC DEBT

Public debt portfolio of the Republic of Macedonia consists of: government debt and all financial obligations of municipalities and city of Skopje (capital of the Republic of Macedonia, with different status from other municipalities), as well as public enterprises.

After its independence in 1991, Republic of Macedonia succeeded part of the financial obligations of former Yugoslav federation according to her membership. The road to settling these obligations was difficult and long. It took many years for the Macedonian economy to stand on its feet.
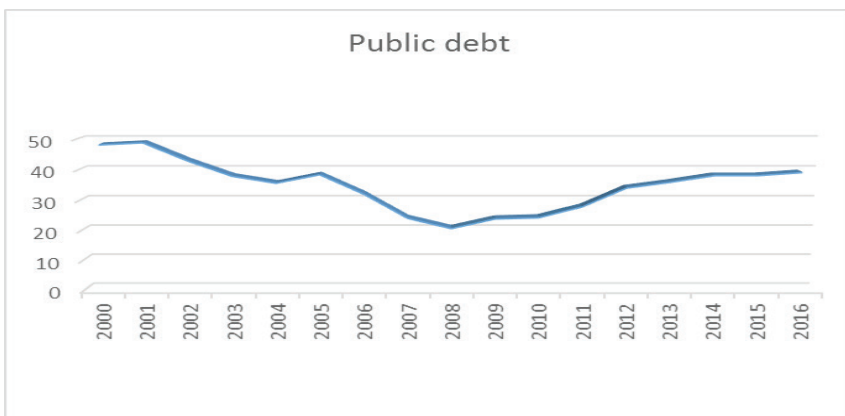

Figure 1 Public debt of the R. of Macedonia dynamics (2000-2016)

Source: Center for Economic Analyses. (2017). Economic data, http://www. mkbudget.org/drzavni-Opsti-Podatoci/list, [accessed at 01.04.2017]

Since gaining the independence until 2002, the public debt of the central Government was relatively moderate and ranged at around 40% of GDP. From 2003 it began to decrease gradually. It was due to cautious fiscal policy and good coordination between monetary and fiscal policy that was typical for the period after 2004. In fact, in 2006 the Government managed to restore much of its financial obligations while significantly reducing public debt. One of the main objectives of the Government in this period was the reduction of the share of external debt at the expense of domestic debt, in order to improve the debt portfolio of the country and to provide funds at the lowest cost and risk.

Fiscal policy in 2007 aimed at encouraging economic growth by stimulating

aggregate supply and demand. It is in thisyear that the situation was characterized by achieving significant budget revenues among which the most important was the concession inflow of 609 million denars (around 10 million euros) from the issuance of the operating license for the third mobile operator in Macedonia. Thus, in 2007 the share of public debt in GDP reduced to 24% which is significantly below the EU countries threshold.

The public debt of the Republic of Macedonia in 2008 was further reduced and amounted to 20.6% of GDP. It was the lowest level of public debt of the central Government since independence.

In 2009, there was interrupted the several-year trend of reducing public debt, because that year public debt increased by 211.6 million euros. Consequently, at the end of the year, it reached 23.8% of GDP. However, despite the slight increase of 3.2 percentage points compared to 2008, the public debt of the Republic of Macedonia in 2009 remained at a level much below the Maastricht criterion, according to which the debt must not exceed 60% of GDP.

The motion of public debt in 2009 was under influence of continued implementation of public projects in the sectors of: education, construction of housing for disadvantaged citizens, agriculture, health, road infrastructure, railroads and energy. In terms of currency structure of public debt, the predominated part of it (i.e. 65%) was denominated in euro.

In global terms, a feature of fiscal policy in 2010 was the beginning of the consolidation process. Thus, the focus of fiscal policy was flown by stimulating demand to gradually narrowing the budget deficit and reducing public debt. Central government debt in 2010 compared to 2009 increased by 0.4 percentage points and reached 24.2% of GDP.

Cautious nature of fiscal policy was maintained in the course of 2011 keeping up stable and relatively low budget deficit and relatively low level of public debt which still registered growth. The need for financing budget deficit conditioned moderate growth of public debt which continued to be held low at 27.8% of GDP.

In 2012, there was realized a budget deficit of 3% of GDP, which represented an increase of 0.5 percentage points compared to the previous year. The growing need for deficit financing conditioned further growth of public debt which at year-end was 34% of GDP.

Fiscal policy supported the recovery of the domestic economy in 2013 too. This year the central Government debt increased by 1.9 percentage points and accounted for 35.9% of GDP.

In the period 2014-2016, there was a continuous increase in public debt. So in 2016, the central Government debt increased and amounted to 39.1% of GDP while total public debt was around 47.8% of GDP. The growth of public debt in these three years was a result of increased public investment in infrastructure, the growth of wages of public administration, an increase in pensions and increase in the volume of subsidies allocated in the economy.

Throughout the reporting period, an important feature of public debt in Macedonia is the absolute dominance of foreign versus domestic public debt. In fact, in all the other years external debt is almost twice the inner.

5. MODELING PUBLIC DEBT OF THE REPUBLIC OF MACEDONIA

The level of public debt is influenced by many factors, with greater or lesser intensity, positive or negative direction. Hence in this part a model of impact of selected economic factors on the public debt will be created. Later on, this model could be used to predict the public debt movement.

The multiple regression model was used to study the impact of budget deficit or surplus, inflation and trade openness on the public debt of the central Government in the country. The model has the following form:

$$PD = C + \beta1 + \beta2 + \beta3 + u, \tag{1}$$

where:

PD – public debt
C – constant
$\beta1$ – budget balance
$\beta2$ – trade openness
$\beta3$ – inflation rate
u – residual.

Such a defined model will be subjected to examination whether it meets the basic assumptions under which it is valid and can be used for forecasting.

Table 1

Public debt and the factors that affect it (2000 - 2016)

Year	Public Debt	Budget Balance	Trade Openness	Inflation Rate
2000	48.1	2.5	92.9	5.8
2001	48.8	-6.3	82.6	5.5
2002	42.9	-5.6	80.4	1.8
2003	37.9	-1	75.2	1.2
2004	35.6	0	81.4	-0.4
2005	38.4	0.2	85.9	0.5
2006	32	-0.5	92.7	3.2
2007	24	0.6	103.2	2.3
2008	20.6	-0.9	107.3	8.3
2009	23.8	-2.7	81.3	-0.8
2010	24.2	-2.4	92.1	1.6
2011	27.8	-2.5	107.2	3.9
2012	34	-3	78	-1
2013	35.9	-4.1	87	2.8
2014	38,1	-3.5	113.9	-0.3
2015	38,1	-3	121.9	-0.3
2016	39,1	-0.3	114.3	0.1

Notes: amounts are given in % of GDP (excluding inflation)
Source: Center for Economic Analyses. (2017). Economic data, http://www.mkbudget.org/drzavni-Opsti-Podatoci/list*, [accessed at 01.04.2017]*

Table 1 lists data on public debt of the central Government in Macedonia and the factors that affect it. The analysis of the model will be conducted using the econometric software EViews.

It is well known that for a model to be qualified as relevant and in order to be used for forecasting, it should be examined following its features:

1. Is there a problem of multi-collinearity between individual variables or whether there is a linear function between the independent variables.
2. Whether the model is well specified;
3. Is there a correlation between residual standard sizes (autocorrelation);
4. Whether there is a problem of heteroskedasticity.

Table 2

Model of public debt with the factors that affect it (2000-2016)

Dependent Variable: PUBLIC_DEBT
Method: Least Squares
Date: 04/02/17   Time: 19:54
Sample (adjusted): 2000 2013
Included observations: 14 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	107.8881	21.14197	5.103028	0.0005
BUDGET_BALANCE	0.513639	0.819946	0.626430	0.5451
INFLATION_RATE	2.454139	0.910061	2.696676	0.0224
TRADE_OPENNESS	-0.888704	0.245244	-3.623754	0.0047

R-squared	0.583152	Mean dependent var		33.85714
Adjusted R-squared	0.458097	S.D. dependent var		9.028137
S.E. of regression	6.645975	Akaike info criterion		6.860856
Sum squared resid	441.6899	Schwarz criterion		7.043444
Log likelihood	-44.02599	Hannan-Quinn criter.		6.843954
F-statistic	4.663184	Durbin-Watson stat		1.450474
Prob(F-statistic)	0.027498			

Source: Authors' calculations with the program EViews.

After inserting the data, the model receives the following form:

Public debt = 107.88 + 0.51 x budget – 0.88 x trade openness + 2.45 x inflation.

One of the assumptions of multiple regression model is that none of the independent variables is a linear function of other independent variables i.e. that there is no problem of multi-collinearity. This means that there should be a linear relationship between the budget, inflation, external debt and trade openness of the country.

If t-statistics of the resulting model is greater than the selected critical value then the estimated coefficient is said to be statistically significant i.e. it is a proof that the coefficient is different from zero (Bucevska, 2009, p. 83).

The greater the P-value is the less significant independent variables are, or more precisely if the probabilities are greater than 0.05 (5%) then the variables are insignificant (Hansen, 2016, p. 72).

Observing the new probabilities of independent variables it can be concluded that two out of three variables have value less than 0.05, and that they are

significant i.e. they have significant impact on public debt. If implemented in practice, this means that inflation and trade openness have the greatest impact on the public debt in the Republic of Macedonia.

Having in mind the previously mentioned, it can be concluded that there is a strange and ambiguous situation where the budget balance does not have a significant impact on the public debt of the Republic of Macedonia. Namely, the budget deficit has less influence on the debt compared to the two other factors. However, in this context it should be emphasized that the political factor has played a dominant role in the observed period on one hand, and the borrowing from the Government for the same period was not strictly determined by the amount of the budget deficit, on the other hand.

5.1.   Specification of the Model

The coefficient of determination (R-squared) in the model was 58.3%, which is close to the normal limit of 60%. This is a basic signal that the model is well specified.

When talking about the specification of the models, it is very important to choose the right number of variables. For this purpose, in our case there will be used Akaike (AIC) and Schwarz (SC) criteria. When applying these criteria, more specifications or versions of the model should be tested with a different number of degrees of freedom. The main goal is to choose the best variant. Best version of the model will be one that has minimum value under both criteria. The lower the value of these two criteria in the model is, the model will be more accurate and the results arising from it will be more reliable (Nikoloski, 2013, p. 18).

For this purpose, testing of the model with one, two and three independent variables was performed. The first version of the model tested the impact of the budget on public debt. In the second option, the impact of inflation on the public debt was included, and the third model further included foreign trade openness of the country.

Table 3

Akaike and Schwarz Criterion

Model	I	II	III
Include	Budget	Budget and Inflation	Budget, Inflation and Trade openness
AIC	7,420	7,556	6,86
SC	7,512	7,693	7,043

Source: Authors' calculations with the program EViews.

Looking at the three variants of the model, it can be concluded that the third variant which includes three factors has the lowest value under both criteria. Therefore, this model is the best i.e. the most precise one and its results would be relevant. In other words, the best would be our ideal model to include three independent variables: inflation, budget deficit/surplus and trade openness of the country.

Based on the analysis of the final model we can point out that budget balance and inflation are directly correlated to the public debt, whereas the trade openness is inversely correlated to public debt.

In empirical literature there is considerable number of studies that has offered supporting evidence for the positive relationship between trade openness and foreign debt. For instance, Lane (2000, p. 56) empirically examined the determinants of external debt for 87 developing countries using data for the 1970-1995 period, and the results indicated that trade openness had a positive effect on external debt.

According to Combes and Sedic (2002, p. 12) trade openness increases country's exposure to external shocks (even if it is due to 'natural' openness or to trade policy). This enforces the negative impacts of the instability of terms of trade on budget balance. In addition, trade openness affects budget balance through many others channels. In this case, the additional effects on budget position of natural openness and trade policy are opposed. Trade policy seems to enhance budget surpluses. In the opposite case, natural openness seems to deteriorate budget deficits.

Bearing in mind all the previously mentioned the situation in the Republic of Macedonia regarding the observed period of time and under given preconditions could be seen as an inverse relationship between trade openness and the budget deficit. This is controversial to the knowledge acquired from most empirical researches in this field. In order to find the reasons for this, we need further investigation of the factors that affect trade openness of our economy.

Bildirici and Ersin (2007, p. 34) studied the relationship between inflation and domestic debt of nine countries for the period 1980-2004 using MOLS (Fully Modified OLS estimation) and VEC model. The results show that in countries that experience high inflation, inflationary process, in fact fed on increasing costs of domestic debt. As a result, the increasing debt to GDP ratios led these countries to borrow at higher interest rates and with lower maturity rates.

Lopes (2014, p. 123) analyzed the implications of public debt on economic growth and inflation in a group of 52 African economies between 1950 and 2012. By using time series of historical data for that period (1950-2012), he got results that indicate public debt has a positive impact on inflation. It means that high public debt leads to high inflation.

Based on the results obtained from the regression model, we can highlight the following conclusions:

1. If the budget grows by Euro 1 million, the public debt will rise to 513,639 Euros.

2. If trade openness decreased by Euro 1 million, the public debt would rise to 888,704 Euro.

3. If inflation increases by 1 percentage point public debt will increase by 2,454,139 Euro.

Of course, these conclusions were based on theoretical results of the econometric model. Their accuracy and relevance in practice remains to be tested by further research in this area.

Autocorrelation

When it comes to residuals, it is essential to examine whether there is serial correlation between them, or whether there is a problem of autocorrelation. Autocorrelation is a correlation between stochastic members of the model (Wooldridge, 2002, p. 455). For its examination Breusch-Godfrey serial correlation LM test was used.

Table 4

LM-test for Serial Correlation

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.299147	Prob. F(2,8)	0.7494
Obs*R-squared	0.974160	Prob. Chi-Square(2)	0.6144

Test Equation:
Dependent Variable: RESID
Method: Least Squares

Source: Authors' calculations with the program EViews.

The value of this test is 0.299. Since the resulting value is less than the critical value of χ^2 (0.05) (2) = 5.991, it can be concluded that there is no autocorrelation in the model.

Heteroskedasticity

Another prerequisite for the relevance of the classical regression model refers to random errors in the regression equation. Namely, they should have the same variance. When this assumption is violated i.e. when random errors have different variances then the problem of heteroskedasticity arises. To test this issue the Breusch-Pagan-Godfrey test was used.

Table 5

Testing Heteroskedasticity

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.552076	Prob. F(3,10)	0.2614
Obs*R-squared	4.447748	Prob. Chi-Square(3)	0.2170
Scaled explained SS	1.556331	Prob. Chi-Square(3)	0.6693

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares

Source: Authors' calculations with the program EViews.

The statistics of this test is 1.552. Because the resulting value of the test is less than the critical value (5.991), the conclusion is that the model has no heteroskedasticity or random errors in the regression equation have the same variance.

5.2.   Forecasting

One model has no significant value if it cannot be used for forecasting future developments of different economic variables. In this context, the next step in the research was to analyze the possibility for forecasting the dynamics of public debt in the future by means of the resulting model.

Given the fact that the economic environment is very complex and dynamic, it is very difficult to predict the movement of an economic variable. Hence, economic theory uses various models in order to obtain initial estimates on the dynamics and development of such variables. Of course, these estimates remain subject to practical and theoretical conclusion in order to obtain more accurate and more relevant results.

In our case, in order to check the model, there was acceded to the so-called ex-post forecasting using time series data from 2000-2016. Namely, based on movements of public debt in a time interval of the mentioned period, attempt was made to predict the dynamics of the public debt in the next time interval, again within the past period. In other words, based on the movement of debt from 2000-2013, a forecasting for the movement of public debt for the period 2014-2016 was made.

Firstly, the model for the period 2000-2013 was considered.

Table 6

Model of public debt with the factors that affect it (2000-2013)

```
Dependent Variable: PUBLIC_DEBT
Method: Least Squares
Date: 04/02/17   Time: 20:12
Sample: 2000 2013
Included observations: 14
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Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	107.8881	21.14197	5.103028	0.0005
BUDGET_BALANCE	0.513639	0.819946	0.626430	0.5451
INFLATION_RATE	2.454139	0.910061	2.696676	0.0224
TRADE_OPENNESS	-0.888704	0.245244	-3.623754	0.0047

R-squared	0.583152	Mean dependent var	33.85714
Adjusted R-squared	0.458097	S.D. dependent var	9.028137
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Sum squared resid	441.6899	Schwarz criterion	7.043444
Log likelihood	-44.02599	Hannan-Quinn criter.	6.843954
F-statistic	4.663184	Durbin-Watson stat	1.450474
Prob(F-statistic)	0.027498		

Source: Authors' calculations with the program EViews.

Since the major problem in case of the Republic of Macedonia is the availability of reliable economic data, we limited our analysis to a total of 14 observations. Namely, we did not have data for all the observed parameters before 2000 as well as semi-annual or quarterly data for the observed period of time.

If the new model has neither serial correlation nor heteroskedasticity and if the residuals are normally distributed then it can be used for forecasting

future trends of public debt. Two of the three independent variables (inflation and trade openness) are significant because their probabilities are less than 5%. Also F-statistic model is good because it is less than 5%. Also it is good that the value of R-squared is close to 60%, i.e. it amounts to 58.31%. It remains to investigate further whether there is serial correlation in the model.

Table 7

LM-test for Serial Correlation

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.299147	Prob. F(2,8)	0.7494
Obs*R-squared	0.974160	Prob. Chi-Square(2)	0.6144

Source: Authors' calculations with the program EViews.

From Breusch-Godfrey LM test a conclusion can be drawn that the value of the F-statistic is 0.29 and it is lower than the critical value χ^2 timetable (5,991). Consequently, there is no serial correlation in the model. The new model is relevant because there is no problem of heteroskedasticity and it can be used for forecasting.

Based on the new model, assumption can be made about the level of public debt for the period 2014-2016.
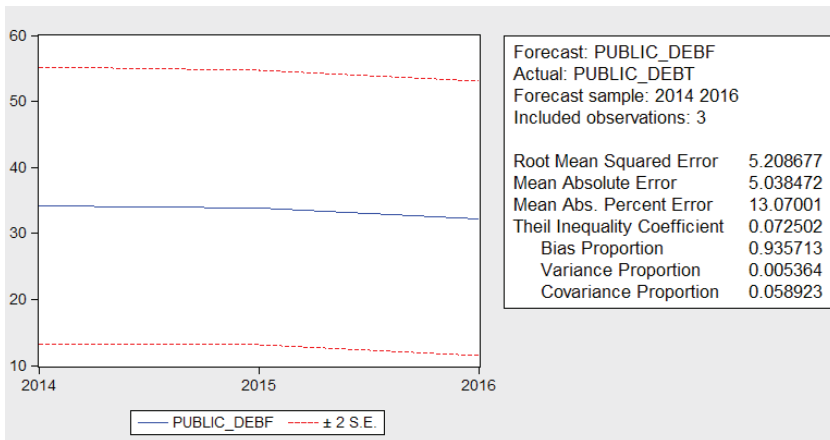

Figure 2 Forecasting of public debt (2014- 2016)

Source: Authors' calculations with the program EViews.

The blue line on the Figure 2 represents the estimated value of public debt for the reporting period of three years (2014-2016) while the red dotted lines represent the confidence interval of 95% (this means that the predicted values will be accurate to within 95%).

The blue line passes in the middle between the two red lines (i.e. two standard deviations) suggesting that the resulting model is satisfactory for forecasting or the power of the regression model to predict is very good.

The Root mean squared error is 5.208. Because this value is not very high, it can be concluded that the ability to forecast with a help of the model is satisfactory.

With the help of the previous analysis, forecasted values for public debt were obtained. The next step was to observe only real values of public debt and its forecast values. If the values for the particular variable and its estimation have approximate amounts, then the model is suitable for forecasting (Greene, 2012, p. 325).

Table 8

Public debt observations and its predicted values (2000 – 2016)

Observations	Public debt	Public debt f
2000	48.1	NA
2001	48.8	NA
2002	42.9	NA
2003	37.9	NA
2004	35.6	NA
2005	38.4	NA
2006	32	NA
2007	24	NA
2008	20.6	NA
2009	23.8	NA
2010	24.2	NA
2011	27.8	NA
2012	34	NA
2013	35.9	NA
2014	38.1	38.9458
2015	38.1	37.9324
2016	39.1	38.9562

Source: Authors' calculations with the program EViews.

The analysis shows that over the last three years of the analyzed period (2000-2016), the real values of public debt and their estimation (forecast public debt) are very close. This is yet another signal that the resulting model is good for forecasting.

Our prediction analysis could be further developed. Based on the forecasted values of factors affecting public debt (budget balance, trade openness and inflation), the dynamics of public debt in the forthcoming years could be predicted, or on the basis of the current movement of public debt, its trends in the near future could be forecasted. Of course, this will be subject to processing in our next economic analysis and research.

6.   CONCLUSION

During economic recession, Government usually tries to borrow finance in order to stimulate realization of investment projects that will positively affect the national economy. However, if the limits in borrowing are exceeded or if those funds are used irrationally and unproductively, then the consequences would be devastating for the domestic economy and for the future generations too (Fiti, 2008, p. 18).

Our model proved good opportunities for forecasting the future movements of public debt. Of course, with the help of further research, it is needed to address and study the impact of other potential factors on public debt in order to comprehensively test the relevance and accuracy of the conclusions reached.

Considering the current situation and the impact of a range of political and socio-economic factors in the country, our estimate of the level of public debt of the central Government in 2017 is approximately 40% of GDP. Of course, the analysis of the level of public debt must not overlook the fact that the process of borrowing should be economically justified i.e. the borrowed funds should be used for productive purposes with potential positive economic effects on the economy. Otherwise, borrowing for unproductive purposes will push the economy into a dangerous zone which is fatal not only for the present, but for future generations too.

Excessive spending of modern governments is a threat to the welfare of future generations, with increasing pressure on fiscal policy in a globalized world. Therefore the governments must reasonably plan the structure and volume of public debt and the reasons for its occurrence.

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