

Influence of Public Revenues on Economic Growth

The Case of the Republic of North Macedonia

Aleksandar Nikoloski

Ss. Cyril and Methodius University- Faculty of Economics- Skopje, North Macedonia

n.aleksandar1@hotmail.com

Abstract

The economy in each country performs different functions of a political, social and economic nature, in order to improve social and economic well-being. Public revenues affect economic growth by meeting various government needs. Taxes fully create discouraging effects on economic growth, especially those that reduce the incentive to invest in physical and human capital and innovation. The purpose of this research is to see the connection between public revenues and economic growth in the Republic of Macedonia and to determine the impact of tax and non-tax revenues on the growth of the country. With the help of econometric modeling, it was found that the observed public revenues as a whole affected the economic growth with 90, 2%, which is a high percentage. Individually, customs duties, VAT and direct taxes have a positive impact, and non-tax revenues and contributions negatively affect the economic growth of the republic.

Keywords

public revenues, economic growth, Republic of North Macedonia



I. Introduction

Each government performs different functions of a political, social and economic nature, in order to improve social and economic well-being. Public revenues can affect economic growth by creating a financial basis for meeting various government needs. Taxes as a whole create discouraging effects on economic growth, especially those that reduce the incentive to invest in physical and human capital and innovation. Hence, in this chapter it is of interest to see the connection between public revenues and economic growth in the Republic of Northern Macedonia and to determine the possible impact of tax and non-tax revenues on the growth of the national economy.

Taxes are the country's most important source of public revenue. These are mandatory fees paid to the country without any direct benefit from them to the taxpayer. Taxes collected by the country are further used to provide public goods and services for the benefit of all its citizens.

One of the most important roles of fiscal policy is to harmonize government revenues and expenditures. This role is essential for maintaining the price stability and sustainable growth of a country's production and thus encouraging economic growth. Fiscal policy through its measures and instruments can be used to prevent or mitigate fluctuations in production, employment and income in the short term. To create a healthy fiscal policy, it is crucial to have a good understanding of the relationship between government revenue and economic growth in the economy, especially in dealing with budget deficits. The structure of public revenues in a country determines the question of who will pay for public goods and services. By dividing income by individual instruments, the country can distribute the burden to a specific group of citizens and sectors of the economy. In all countries, taxes represent most of the public's revenue.

All costs and methods of financing do not have the same impact on economic growth. Economic literature suggests that the cumulative effect of taxes on economic growth is moderate, but a number of studies conducted in both developed and developing countries have shown that there is a significant link between individual types of taxes and economic growth. Consequently, the relationship between public revenues and economic growth in the Republic of Macedonia is the subject of further research.

II. Review of Literatures

2.1 The Relationship between Public Revenues and Economic Growth

Economic growth is often equated with the growth of the total production of goods and services produced by a country. It represents an increase in the economy's capacity to produce goods and services over a period of time compared to another. When it comes to economic growth, we mean an increase in the quantity of goods and services. The good functioning of institutions and markets contributes to the growth of technological innovation, the accumulation of capital and production, and thus to the stimulation of economic growth. The good functioning of financial markets reduces transaction costs and increases the share of investment savings, ultimately allowing capital to be allocated to those projects that generate the highest returns and stimulate economic growth.

Public revenues affect economic growth by meeting various government needs. By reducing tax revenue, taxes reduce workers' motivation to work and reduce private sector savings and investment.

Although taxes in general have destructive effects, those that reduce the incentive to invest in human, physical capital and innovation are particularly harmful. Numerous empirical evidence suggests that shifting the emphasis from income taxes and profit to consumption taxes to one tax system can significantly improve economic growth (Barrios and Schaechter, 2008). Consumption taxes can discourage operations and investment in human capital, but they have very little impact on long-term determinants of economic growth, such as education, investment, technical progress, and more (Bassanini, Scarpetta and Hemmings, 2001). Therefore, the goal of endogenous growth models is to simplify the differentiation of distorting taxes that affect investment decisions from non-restrictive taxes that have little impact on investment.

Public revenues affect economic growth by creating a basis for meeting various government needs. By reducing tax revenue, taxes reduce workers' motivation to work and reduce private sector savings and investment. In this way, taxes in general cause disincentive effects, and those that reduce the incentive to invest in human, physical capital and innovation are particularly harmful. Numerous empirical evidence suggests that shifting the emphasis from income taxes and profit taxes to consumption in the context of a single tax system can significantly improve economic growth (Barrios and Schaechter, 2008). Consumption taxes can discourage operations and investment in human capital, but they have very little impact on long-term determinants of economic growth, such as education, investment, technical progress, and more (Bassanini, Scarpetta and Hemmings, 2001). Therefore, endogenous growth models aim to simplify the differentiation of distorting taxes that affect investment decisions from non-restrictive taxes that have little impact on investment.

Initial costs can raise long-term growth rates by encouraging investment in physical capital, human capital and knowledge, research and development, and public infrastructure, especially when market failures lead to insufficient investment by the private sector. An

example of this would be government investment in physical capital that stimulates long-term economic growth in addition to private sector investment that encourages technological progress, i.e. if enterprise productivity increases as a result of other investments or innovations of overflow of knowledge (Bassanini, Scarpetta and Hemmings, 2001). The government can directly invest in infrastructure or physical capital, or it can encourage investment in the private sector. Investing in human capital can have a big impact on economic growth if education enables continuous progress in technological development and innovation.

2.2 Theoretical Approaches

Many economists have studied the public revenue system and its impact on economic growth. Thus, Niamongo (1987) studied public revenues and expenditures, emphasizing their trends. According to him, after the Second World War, the role of the public sector expanded significantly in most countries. This is confirmed by the fact that total government spending on GDP was 30% for developed countries and 25% for developing countries. The expanded role of governments, which are mainly funded by tax revenues, comes as a result of the power of the country / government to collect and allocate resources.

Paolo and Joao (2017) analyzed the share of tax revenues in GDP in developed countries and developing countries and found a negative relationship between GDP per capita and population growth in terms of tax rates.

Masgrave and Masgrave (2004) point out that the reduction in tax revenues between individual generations in developing countries makes it difficult to use taxes as a tool of fiscal policy to achieve the goals of economic development. However, some countries, such as Canada, the United States, and the United Kingdom, have significantly improved their economic development through tax revenue generated by profit tax, value added tax, and personal income tax.

According to the socio-political tax theory for which Bhartia was a strong supporter (2009), the social and political goals of the country should be the main factors in choosing the tax structure. According to this theory, tax systems should be designed to serve each individual and to cure evil in society as a whole.

Using cross-country analysis, Gordon (2005) showed that corporate tax rates are negatively correlated with the average rate of economic growth and as such have a major impact on other determinants of economic growth. Wildmalm (2001) also analyzed the relationship between income tax revenue and economic activity, and found that there was a negative ratio. According to her, the claims about the negative effects of indirect taxes on the economy have not yet been confirmed with certainty.

Arnold (2008) and Bhartia (2009) analyzed the OECD countries and pointed out the negative impact that corporate taxes have on productivity in the economy, and this negative impact is particularly pronounced in private corporations.

Analyzes often refer to specific countries. Thus, Arisoy and Unlukaplan (2010) analyzed the effect of direct and indirect taxes on Turkey's economic growth. They concluded that direct taxes do not have a significant impact on the country's economic growth.

Lutfunnahar (2007) studied the determinants of taxes and public revenues in several developing countries. Through the obtained data, he concluded that the money supply, foreign trade and foreign debt are significant determinants of tax revenues. His study found that many countries do not fully use the capacity to collect taxes, so they have the potential to finance budget deficits by increasing tax revenues.

Munir (2010) studied the determinants of low tax revenue in less developed countries. According to him, the collection of tax revenues is a significant problem for the economic growth of a country. His research has shown that the level of money supply, the openness of the economy and external debt are important determinants of tax revenue in an economy. The analysis emphasizes that the problem of low tax revenues in less developed countries largely depends on the narrow tax base, devaluation, low literacy rate and so on. Less developed countries face the problem of designing and implementing appropriate tax systems because they are characterized by large traditional agricultural sectors, diverse small businesses and a high level of gray economy.

Gacanja (2012) analyzed the relationship between tax revenues and economic growth. The results of his study revealed a positive relationship between tax revenue and economic growth. All tax forms have shown a positive effect on the gross domestic product. The most pronounced impact on GDP was shown by value added tax, while excise duties and import duties were the lowest. All of this suggests that governments should not focus on increasing tax revenues by raising tax rates, but on creating such a tax structure that will allow for the expansion of the tax base in order to stimulate the rate of economic growth. The need to improve the tax collection system and eliminate tax evasion should also be considered here.

III. Research Methods

The research uses secondary data sources for tax and non-tax revenues of the Republic of Macedonia for the period from 2006 to 2015. In order to determine the relationship between government revenue and economic growth, we will conduct multiple regression analyzes. In the analysis we will determine whether there is and what is the impact of tax revenues and the category of non-tax revenues on the real growth rate of the gross domestic product of Macedonia, as an indicator of economic growth.

Within the category of tax revenues, the most important representatives are income tax, profit and capital gains (as one category), social security contributions, value added tax and customs duties and other import duties. These categories are taken into account because they participate with the largest percentage in the total budget revenues of the Republic of Macedonia. The category of non-tax revenues includes:

- Entrepreneurial income and property income,
- Fines, court and administrative fees,
- Fees and charges,
- Other government services,
- Other non-tax revenues.

In order to simplify the analysis, we will observe all these items synthesized, covered by the category of non-tax revenues.

To test the strength of the model and the relationship between economic growth and public revenue categories, we will approach variance analysis (ANOVA). When determining ANOVA, we obtain the corresponding statistical value. We will conduct our tests in the confidence interval of 95% (i.e. with an accuracy of 95%), and a significance level of 5%. If the results obtained are less than $p\text{-value} = 5\%$, then we conclude that the model is important in explaining the relationship, otherwise the model is not significant.

IV. Discussion

In this segment, the analysis and research findings will be presented. The findings of the study are presented based on the relationship between public revenues and economic growth in the Republic of Macedonia.

In this segment, the analysis and research findings will be presented. The findings of the study are presented based on the relationship between public revenues and economic growth in the Republic of Macedonia.

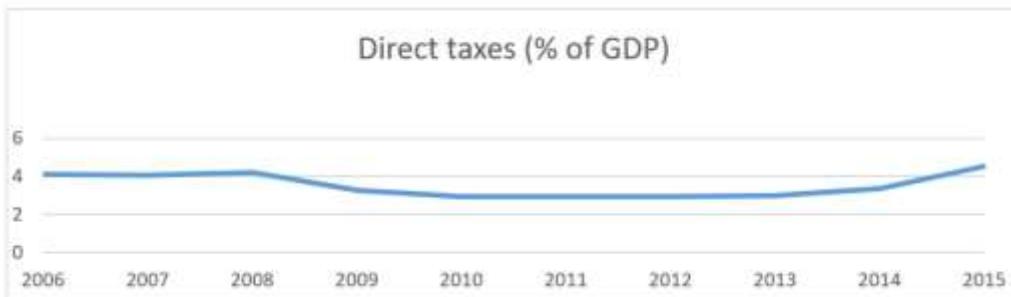


Figure 1. Income tax revenue dynamics, profit and capital gains (2006- 2015)

Source: Ministry of Finance of the Republic of North Macedonia

Income tax revenue, profit and capital gains are a significant source of funding for the country. In 2006, these revenues amounted to 13,200,931,413 denars, 4.12% of the republic's GDP. This category of revenues recorded an upward trend until 2008 when it amounted to 17,432,896,869 denars or 4.23% of GDP. In the coming years, income tax revenues, profits and capital gains will show a downward trend, which is close to 3% of GDP. In 2015, this category of revenues increased significantly and amounted to 25,151,600,807 denars or 4.51% of GDP.

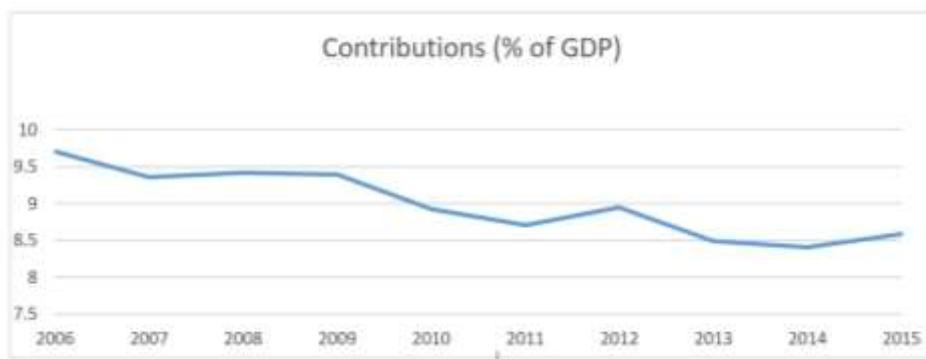


Figure 2. Dynamics of social security contribution revenues (2006-2015)

Source: Ministry of Finance of the Republic of North Macedonia

Within the group of tax revenues, social security contributions are the most important source of revenue in the country budget after value added tax. In 2006, the revenues from social security contributions amounted to denars 31,082,321,536, i.e. 9.71% of GDP. In the following years, this category of revenues registered a stable slight decline, and in 2015 they reached the level of 8.58% of gross domestic product.

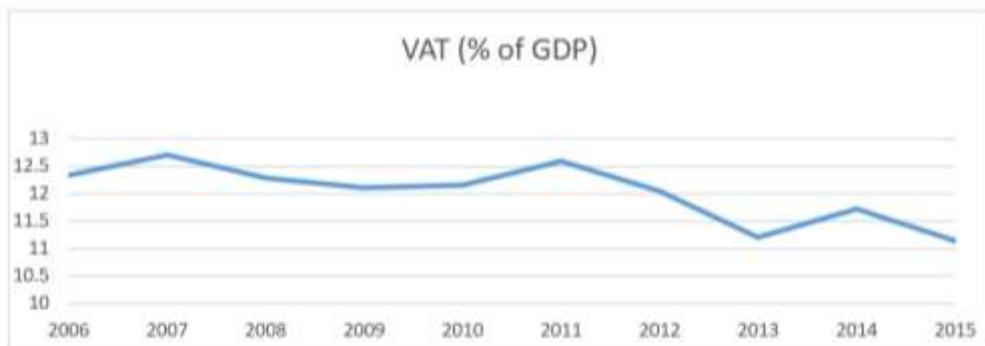


Figure 3. VAT Revenue Dynamics (2006-2015)

Source: Ministry of Finance of the Republic of North Macedonia

Value added tax revenue is most significant when it comes to total tax revenue. Most of the revenue generated by the country is due to the consumption tax. In 2006, the country collected 39,497,828,506 denars through this tax, which represents 12.34% of Macedonia's GDP. By 2013, this category of income has a stable trend and is moving approximately above 12% of GDP. Their dynamics are very similar to the trend of income from social security contributions, but at a higher level. In 2013, VAT revenues decreased below 12% of GDP, and in 2015, they amounted to 62,188,539,573 denars, i.e. 11.14% of GDP.

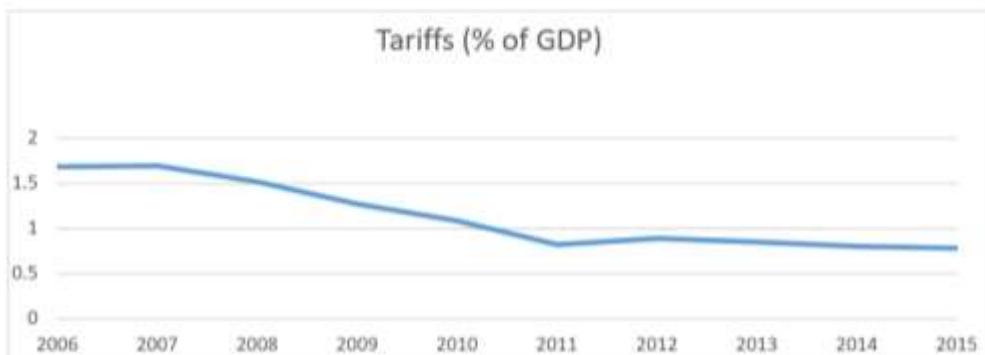


Figure 4. Dynamics of customs revenues and other import duties (2006-2015)

Source: Ministry of Finance of the Republic of North Macedonia

Revenues from customs duties and other import duties have a relatively low share in the total tax revenues in the Republic of North Macedonia. Although these revenues are lower than the previous ones, they are quite significant in the structure of the country's tax revenues. Their importance is supported by the fact that they have a great influence on the level of foreign trade in each country. Since 2006, revenues on this basis have been declining, and in 2011, they fell below 1% of GDP. In 2015, these revenues amounted to 4,330,397,745 denars, which is 0.78% of gross domestic product.

The declining trend in customs revenues and other import duties is a consequence of recent efforts to liberalize markets and reduce customs and other duties (except recent months when the US administration has seen a reversal of import barriers in many developed countries). At least so far, the Republic of Macedonia has been following this trend, increasingly seeking to open up to world markets, in line with its aspirations to join the European Union.

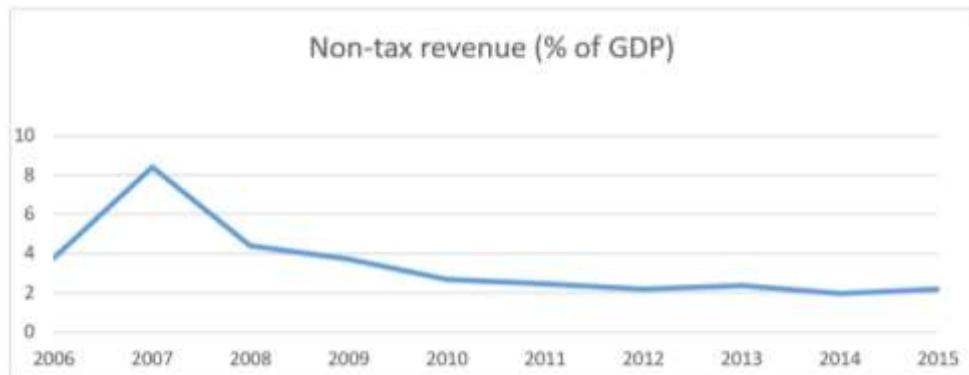


Figure 5. Dynamics of Non-Tax Revenues (2006-2015)
Source: Ministry of Finance of the Republic of North Macedonia

Non-tax revenues are a significant source of funds in the country budget. Taxes and fees, fines, court and administrative fees and other government services have the largest share in this group of revenues. In 2006 and 2007, non-tax revenues increased rapidly and in 2007, they reached their maximum and amounted to 30,726,292,738 and 8.42% of GDP, respectively. From 2008 to 2015, there was a continuous trend of a slight decrease in this type of income. In 2015, they accounted for 2.2% of GDP.

Through tax and non-tax revenues, in fact, funds are transferred from the private to the public sector, which enables a number of economic and social goals to be achieved. Such goals can be: increasing the level of employment, price stability, improving the balance of payments, encouraging priority sectors, increasing the level of economic activity, accelerated growth of gross domestic product, etc.

In the research, we will observe economic growth through the dynamics of the real growth rate of gross domestic product, as well as the most appropriate representative of economic growth.

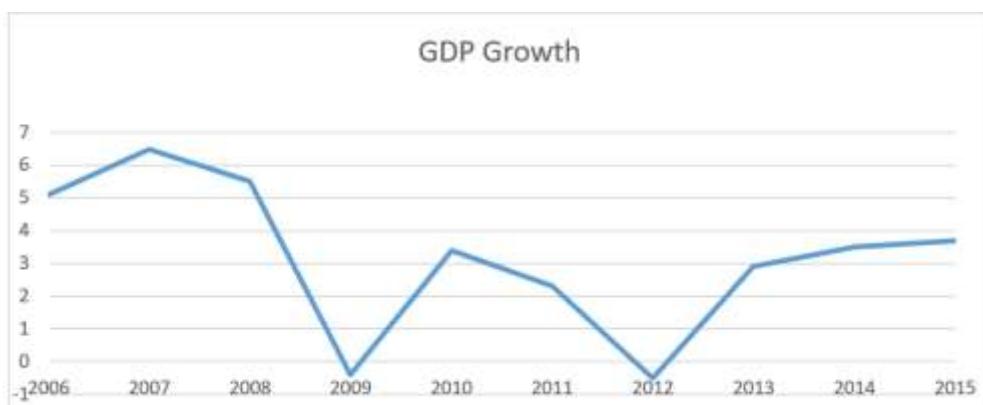


Figure 6. Dynamics of the real growth rate of gross domestic product (2006-2015)
Source: Ministry of Finance of the Republic of North Macedonia

The dynamics of the real GDP growth rate is followed by large declines and rises. In 2006 and 2007, the rate showed an upward trend. Then it started to decrease. The global economic and financial crisis in 2008 was significantly felt in our country as well. As a result, the economic growth rate in Macedonia was -0.4. And in 2012 the growth rate is negative,

i.e. -0,5. Also, the debt crisis in our southern neighbor Greece has had a negative impact on our economy, which is understandable given the fact that Greece is one of our largest trading partners. These moments are important to emphasize because they can have a big impact on the analysis and significantly distort it. These circumstances, but also other unpredictable factors in the analyzed model will be covered by the residual size.

Since 2013, it has started to grow. In 2015, the economic growth presented through the real growth rate of the gross domestic product was 3,7.

4.1 Regression Analysis

In order to see the relationship between economic growth, ie the real GDP growth rate, as a dependent variable and tax and non-tax revenues as independent variables, we will approach multiple regression analysis.

The multiple regression model will take the following form:

$$G = C + \beta_1 + \beta_2 + \beta_3 + \beta_4 + \beta_5 + u, \text{ where:}$$

G- real GDP growth rate

C- constant

β_1 - income tax, income and capital gains

β_2 - income from social security contributions

β_3 - value added tax revenue

β_4 -revenue from customs and other import duties

β_5 - non-tax revenues

u- residual

Table 1. Results from the econometric model

| Dependent Variable: GDP_GROWTH | | | | |
|--------------------------------|-------------|-----------------------|-------------|--------|
| Method: Least Squares | | | | |
| Date: 03/21/17 Time: 23:46 | | | | |
| Sample: 2006 2015 | | | | |
| Included observations: 10 | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 60.80745 | 14.00629 | 4.341439 | 0.0122 |
| CONTRIBUTIONS | -11.15653 | 1.808620 | -6.168530 | 0.0035 |
| DIRECT_TAXES | 1.922032 | 0.530768 | 3.621227 | 0.0223 |
| NON_TAX_REVENUE | -0.685521 | 0.275044 | -2.492405 | 0.0673 |
| TARIFFS | 15.48518 | 2.799380 | 5.531645 | 0.0052 |
| VAT | 1.712797 | 0.758418 | 2.258380 | 0.0868 |
| R-squared | 0.956467 | Mean dependent var | 3.200000 | |
| Adjusted R-squared | 0.902050 | S.D. dependent var | 2.302655 | |
| S.E. of regression | 0.720660 | Akaike info criterion | 2.466410 | |
| Sum squared resid | 2.077403 | Schwarz criterion | 2.647961 | |
| Log likelihood | -6.332052 | Hannan-Quinn criter. | 2.267249 | |
| F-statistic | 17.57679 | Durbin-Watson stat | 2.853333 | |
| Prob(F-statistic) | 0.007933 | | | |

Source: Own calculations using the EViews software program.

After presenting our model in the EViews software program, we get the following form:

$$\text{GDP growth rate} = 60,80 + 01,92 \text{ direct taxes} - 11,15 \text{ contributions} + 1,71 \text{ VAT} + 15,48 \text{ customs duties} - 0,68 \text{ non-tax revenues}$$

Table 2. Q-Statistics - Residual Cologram

| Correlogram of Residuals | | | | | | | |
|--------------------------|--------|---------------------|--------|--------|-------|--------|------|
| Autocorrelation | | Partial Correlation | | AC | PAC | Q-Stat | Prob |
| 1 | -0.448 | 1 | -0.448 | 2.6741 | 0.102 | | |
| 2 | 0.076 | 2 | -0.156 | 2.7604 | 0.252 | | |
| 3 | -0.026 | 3 | -0.073 | 2.7721 | 0.428 | | |
| 4 | -0.363 | 4 | -0.509 | 5.4125 | 0.248 | | |
| 5 | 0.375 | 5 | -0.070 | 8.7908 | 0.118 | | |
| 6 | -0.136 | 6 | -0.043 | 9.3461 | 0.155 | | |
| 7 | 0.020 | 7 | -0.173 | 9.3619 | 0.228 | | |
| 8 | 0.004 | 8 | -0.275 | 9.3629 | 0.313 | | |
| 9 | -0.002 | 9 | 0.061 | 9.3631 | 0.404 | | |

Source: Own calculations using the EViews software program

The null hypothesis in our case is: "There is no serial correlation in the model", while the alternative hypothesis is defined as: "There is a serial correlation in the model". Analyzing the probabilities in the choreography, it can be noticed that they are greater than 5%. This suggests that the null hypothesis cannot be rejected, that it is accepted. Hence, it is concluded that there is no problem of serial correlation in the observed model.

Table 3. Breusch-Godfrey LM Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:

| | | | |
|---------------|----------|---------------------|--------|
| F-statistic | 0.796962 | Prob. F(2,2) | 0.5565 |
| Obs*R-squared | 4.435051 | Prob. Chi-Square(2) | 0.1089 |

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 06/07/18 Time: 18:57

Sample: 2006 2015

Included observations: 10

Presample missing value lagged residuals set to zero.

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|-------|
|----------|-------------|------------|-------------|-------|

Source: Own calculations using the EViews software program

Observing the probability value of the LM test (Prob. Shi-Square), it is seen that it is greater than 5%, which once again confirms that the observed model lacks the problem of multicollinearity.

The coefficient of determination (R-squared) explains to what extent changes in economic growth are explained by changes in independent variables. The value of the determination coefficient in the model is 95.6%, which means that 95.6% of the changes in the GDP growth rate are explained by the changes in the revenues from direct taxes,

contributions, VAT, customs duties and non-tax revenues. The high value of this coefficient suggests that there is a very strong link between economic growth and individual independent variables.

Based on the coefficients of the obtained model, it can be concluded that there is a positive relationship between economic growth and customs revenues and other import duties, value added tax and income tax, profit and capital gains, while the relationship between economic growth and non-tax income and contribution income is negative. However, it should be emphasized that the funds raised in the form of various public revenues are concentrated in the same place, i.e. in the country budget, from where they are then redistributed for various purposes. Therefore, it is sensitive and delicate to emphasize the separate impact of different categories of public revenues on economic growth. However, the use of the model can help by analyzing the individual impacts of individual income categories to get a better idea of the synthetic impact of public revenues on the country's economic growth.

In addition, an analysis of the variance (ANOVA test) was performed in order to check the significance or significance of the model. This analysis was performed using the SPSS Statistic software program.

Table 4. Variance Analysis
(ANOVA)

| ANOVA ^a | | | | | |
|--------------------|------------|----------------|----|-------------|--------|
| Model | | Sum of Squares | df | Mean Square | F |
| 1 | Regression | 39,854 | 5 | 7,971 | 19,748 |
| | Residual | 1,615 | 4 | ,404 | |
| | Total | 41,469 | 9 | | |

a. Dependent Variable: ekonmski_rast

b. Predictors: (Constant), nedanocni_prihodi, direktne_danoci, pridonesi, ddv, carini

Source: Own calculations using the IBM SPSS Statistics software program.

Analyzing the results of the ANOVA test, it can be seen that the level of significance in the model (Sig.) is 0,006. Since this value is significantly less than 0,05, we conclude that the regression model is significant, i.e. significant in predicting the relationship between economic growth and the observed factors. At a significance level of 5%, the pre-measured F-value of the test was 19,748. This value is greater than the critical F-value of 5,4095, which once again indicates that the overall model is significant.

Table 5. Heteroskedasticity Test

| Heteroskedasticity Test: Breusch-Pagan-Godfrey | | | |
|--|----------|---------------------|--------|
| F-statistic | 0.516506 | Prob. F(5,4) | 0.7571 |
| Obs*R-squared | 3.923311 | Prob. Chi-Square(5) | 0.5605 |
| Scaled explained SS | 0.718040 | Prob. Chi-Square(5) | 0.9820 |

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 06/07/18 Time: 19:02
Sample: 2006 2015
Included observations: 10

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|-------|
|----------|-------------|------------|-------------|-------|

Source: Own calculations using the IBM SPSS Statistics software program.

It was previously established that there is no serial correlation in the analyzed model. If we want to use the model for additional testing hypotheses as well as for forecasting, then it must be examined whether there is a problem of heteroscedasticity, i.e. whether the random errors in the model regression equation have different variants. A Breusch-Pagan-Godfrey heteroscedasticity test will be used to investigate this problem.

The probability of the test (Prob. Chi-Square) is 0.56. Since it is greater than 5%, it can be concluded that the observed model lacks the problem of heteroscedasticity, i.e. random errors in the regression equation have the same variance.

V. Conclusion

When it comes to customs revenue and other import duties, it has previously been pointed out that over the years they have seen a downward trend. On the other hand, we have seen that customs duties and other import duties, in addition to increasing country revenues that can be further used to finance development projects, simultaneously discourage imports or stimulate domestic production. All this would have a positive effect on economic growth. The reduction of customs duties and other import duties would greatly increase imports due to the greater competitiveness of developed foreign companies. This would have a negative impact on domestic producers. If they are less competitive, they would have a hard time matching the domestic market, which would indirectly negatively affect the growth of the domestic economy.

In developed economies, the share of public revenues in GDP (fiscal burden) ranges from 25% to 40%, while in developing countries this percentage is relatively low. The growth of economic growth generally indicates an increase in this share, given that in countries with low growth in gross domestic product, public revenues accounted for 15,4% of GDP in 2016. In the Republic of Macedonia in the same year, public revenues accounted for 26,2% of GDP, but compared to 2010 (28,9% of GDP) that share decreased (World Bank).

With the introduction of value added tax in 2000, in addition to significantly increasing country budget revenues, the trade balance improved as well as the export of goods and services at the same time. Exports are not subject to taxation, thus encouraging the domestic industry to produce more, which has a positive effect on stimulating economic growth.

Most of the funds in the budget are collected as tax revenue. Therefore, all difficulties in collecting these revenues will indirectly negatively affect the public expenditures of the country, and through them the economic growth. Without sufficient revenue, the country will not be able to finance planned development projects and infrastructure investments that are key elements of a country's economic growth and development. Therefore, one of the important recommendations for tax policy makers would be to create effective and efficient control over the implementation and collection of taxes.

Contributions such as public duties provide funds to fill individual funds and agencies in the country (PDIF, Health Insurance Fund, Employment Agency). Because these funds do not go to the budget, they cannot finance some more significant development (capital) projects. Probably, this is the reason why in the observed model the contribution coefficient has a negative sign. Of course, this does not mean that the significant contribution of the income from the contributions and the funds financed by these funds can be neglected, especially since the financial sustainability of the Pension and Disability Insurance Fund and the Health Insurance Fund is in question. In fact, as a result of this situation, the need for continuous increase of these revenues is imposed (in April 2018, they amounted to 4,6 billion denars).

The analysis aimed to determine the relationship between public revenues and economic growth in the Republic of Macedonia. The impact of public revenues on economic growth is indirect by creating conditions for meeting various public needs. On the other hand, it is clear that taxes create disincentive effects, especially those that affect the funds from which investments in innovation, physical and human capital are made. To this end, shifting the focus from income taxes to consumption taxes can create positive results and improve economic growth in the economy. A possible focus on indirect taxes would impose a debate on raising the value-added tax rate in our country. Namely, a possible increase in the rate of this tax by 2 to 3 percentage points would generate significant funds in the budget, and hence the basis for financing various investment projects. Opinions are divided, but some economists in the country believe that the effect of such an increase would be great, and the consequences minimal because some products will become slightly more expensive, and some will remain at approximately the same prices. However, before taking such a step, an extensive analysis should be undertaken.

An important recommendation for the public revenue system in Macedonia is that it be under continuous supervision and control by the Ministry of Finance. Namely, the legislation related to non-tax and para fiscal duties should limit the opportunities for possible introduction of additional tax without the consent of the Ministry of Finance. According to some unwritten rule, in countries with flat taxes, the amount of non-tax and para fiscal duties increases exponentially, and the case of the Republic of Macedonia confirms that. In 2016, on the basis of this type of revenue, 251,5 million euros were collected in the budget. It should be noted that this is the amount that is officially paid into the country's budget, but there is no precise record of how much money is paid into the accounts of various agencies and regulatory bodies and authorities. These fees further burden the private business and citizens and have a destructive effect. In a country where there are flat taxes, total public duties should be limited within taxes, then the justification of introducing non-tax and para fiscal taxes should be analyzed and their amount adjusted so as not to imply negative consequences.

The study's findings show that monitored government revenues as a whole affect economic growth by 90,2%, a high percentage. Of course, economic growth is not only affected by the observed factors. Further research is needed to determine other factors that

affect economic growth and to establish a link between them. Further research is also needed to study the relationship between the tax collection system and its impact on the collection process. Proper study and understanding of the impact of economic policies on economic growth will allow policy makers to use appropriate measures and instruments to control the tax process.

References

Acemoglu D., Thierry V. and James R. (2004), "Kleptocracy and Divide-and-rule: A model of personal rule", *Jurnal of the European Economic Association*, p.163-190.

Arnold J. (2008), "Do tax structures affect aggregate economic growth?", *Empirical evidence from a panel of OECD Countries*, *OECD Economics Department Working Papers*, No. 643, *OECD Publishing*, p. 6-18.

Arisoy I. and Unlukaplan I. (2010), "Tax composition and growth in Turkey: An empirical analysis", *International Research Journal of Finance and Economics*, No.59, p.5-13.

Barbone L. and Polackova H. (1996), "Public Finances and Economic Transition", *Policy Research Working Paper No.1585*, *The World Bank Europe and Central Asia Country Department*, p.2-35.

Barro R. (1979), "On the Determination of the Public Debt. *Journal of Political Economy*", 87, p.940- 960.

Barrios S. and Schaechter A. (2008), "The Quality of Public Finances and EconomicGrowth", *European Economy Economic Paper 337*, Brussels: European Commission, p. 8-32.

Bhartia H.L. (2009), "Public Finance". 14th Edition, New Delhi: *Vikas Publishing House PVT Limited*, p.5-32.

Bassanini A., Scarpetta S. and Hemmings P. (2001), "Economic Growth: The Role of Policies and Institutions", *Panel Data Evidence from OECD Countries*, *OECD Economics Department Working Paper*, No. 283, p. 20-42.

Gacanja E. (2012), "Tax revenue and economic growth: an empirical case study of Kenya", *Unpublished MBA Project*, University of Nairobi, p.10-15.

Getachew W. (2018), "The Relationship between Inflation and Economic Growth in Ethiopia", *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, Vol. 1, No. 3, p. 264-265.

Lutfunnahar B. (2007), "A Panel Study on Tax Effort and Tax Buoyancy with Special Reference to Bangladesh", *Working Paper 715: Policy Analysis Unit (PAU) Research Department Bangladesh Bank*.

Munir F. And Scaudhy S.I. (2010), "Determinants of Low Tax Revenue in Pakistan", *Pakistan Jurnal of Social Scienses*, Vol. 30, No. 2, p. 441- 443.

Musgrave R.A. and Musgrave P.B. (2006), "Public Finance in Theory and Practice", New Delhi: *Tata Mc Graw- Hill Publishing Company Limited*, p.20-26.

Nyamongo C. B. (1987), "Government Revenue and expenditures In Kenya With Emphasis On Trends And Compositions", *International Academic Journal of Information Sciences and Project Management*, University of Nairobi, Kenya, p. 89-101.

Paolo D., Joao T.J (2017), How Buoyant is the Tax System? *New Evidence from a Large Heterogeneous Panel*, *IMF Working Paper*, WP/17/4, p.19-20.

Suryani M, Suhatman R. (2020), "The Effect of Government Expenditures, Domestic Investment, Foreign Investment to the Economic Growth of Primary Sector in Central

Kalimantan, Budapest International Research and Critics Institute- Journal (BIRCI-Journal), Vol. 3, No. 3, p. 1695-1696.

Sen A. (2011), "Oil Revenues and Economic Development: The Case of Rajasthan, India", Oxford Institute for Energy Studies, p. 10-20.

Turnovsky S. and Fisher W. (1995), "The composition of Government Expenditure and its Consequences for Macroeconomic Performance", Journal of Economic Dynamics and Control, p.740-750.

Winata B.H. (2020), "Development of an Integrated Inquiry Model the Value of Thought Economy of Mohammad Hatta in Social Studies Subject", Budapest International Research and Critics in Linguistics and Education (BirLE Journal), Vol. 3, No. 2, p. 1013-1014.

Wildmalm F. (2001), "Tax structure and growth: are some taxes better than others?", Public choice, 107, p. 200-220.