THE IMPACT OF PUBLIC DEBT ON THE ECONOMIC DEVELOPMENT OF NORTH MACEDONIA

Kristina Velichkovska[1], Nehat Ramadani[2]

[1]*International Balkan University-Skopje, kristina.velickovska@ibu.edu.mk*
[2]*University of Tetovo-Tetovo, nehat.ramadani@unite.edu.mk*

ABSTRACT

Public debt is an alternative choice for the countries to fund their projects, and also serves as an effective option in terms of budget deficit or in terms of financial crisis. The amount and the composition of public debt varies from one region to another. Different attitudes and insights regarding the effect of the public debt on the economic growth have emerged throughout the years, hence the differences in the opinions about public borrowing as a method of financing. While some view it as an instrumental feature of the public finances, and an indicator about the efforts a country is putting in the process of economic development; others view it as a sign of fiscal irresponsibility and poor budget planning. Overall, there is still a debate whether it is safe to classify public borrowing as a positive feature in a country's finances or not. The purpose of this study is to provide a better insight of the public debt and its impact on the economic growth in North Macedonia. Secondary data from the World Bank and the Ministry of Finance will be used in order to provide insight. Data that will be used for observation is public debt as percentage of GDP and in its nominal form, as well as GDP growth rate and real GDP per capita, in the period around the global financial crisis and prior to the pandemic crisis in order to understand the causes of the excessive borrowing of a country.

KEYWORDS: public debt, public finance, North Macedonia.

JEL CLASSIFICATION CODES E60, O11

1. INTRODUCTION

Public debt is a concerning issue for governments around the world and a hot topic of discussion among scholars and critics. Most of the countries today, regardless of whether they are developing or developed, they are or have been burdened with a certain level of indebtedness. Some countries insist to maintain low level of indebtedness, while other countries use it regularly for realizing long-term projects for economic development, or consumption.

While mixed attitudes exist regarding this issue, in the end it all depends on the purpose of borrowing, and the way those funds are spent. In some cases, countries borrow funds to accomplish governmental projects such as building roads, improving infrastructure and similar projects that improve the standard of living. These are value-added investments that boost economic growth. In other cases, countries use the borrowed funds for consumption or as a last option for avoiding deeper financial crisis. This kind of borrowing is counterproductive, since it does not create value for the country (Myley, n.d.). Its use is for filling a financial void in a country's budget. As history has shown so far, these net-borrowers are most likely to default on the debt repayment, since the lending instances increase the interest rate to match the risk of the lending, thus increasing the probability of the borrowing country to default on its debt.

The financial crises of the previous decade, being an example of such a situation, was felt around the globe. This global financial crisis, followed by sovereign debt crises, caused debt accumulation and hindered the global economy. The Maastricht criteria, that states that the public debt of a European Union member state should not reach above 60% of the GDP, was exceeded by 12 European Union member states (www.dw.com, 2019). The lending instances, during the crisis increased the interest rates due to the enlarged risk to the countries that looked most likely to default on debt repayment. Some countries tried to respond to the crisis with increasing tax rates and undergoing austerity measures, that backfired quickly, as social unrest inside the countries occurred, such as Greece (SPIEGEL, 2011).

The situation in the Western Balkans, although much less severe, still left an impact on the economics. With the crisis affecting the EU, its member states decided to undertake austerity measures, and with this the FDI's and all other activities in the Balkans stopped. The crisis caught North Macedonia with delay too. The country tried to handle the situation with domestic borrowing which showed in the level of the public debt. In 2008 the public debt was 23% of the GDP, while the excessive borrowing from foreign sources led it to increase to 38% of the GDP in 2014 (Ministry of Finance of North Macedonia). Other countries in the Western Balkans were also hit by the crisis with delay. The spillover effect from the developed countries caused the North Macedonia, just like the rest of the Western Balkan countries, to witness an abrupt halt to the GDP growth, with budget deficits as consequences from the crisis. This led toward an accelerated increase of the public debt, which will be tackled and analyzed in details in this paper.

2. PROBLEM STATEMENT

Public debt has been a growing concern throughout the years. It is a burden that few countries are free of. Often public debt is characterized as safe option as long as the borrowed funds are invested properly for long term objects. However, when this is not the case, the public debt could be a huge problem.

Knowing that public debt is a broad phenomenon, this study will try to narrow the topic upon the specifics of the reasons of borrowing and the sources from where the funds have been borrowed in North Macedonia. Another point of discussion will be whether an unpractical management of certain sectors was an additional cause to an increased percentage of debt to GDP. Worthy facts to mention here are the rapid increase of employment in the public administration, increased pension funds, increased salaries etc. These are some of the events that occurred in most of the WB countries in the time of the last financial crisis, when the GDP growth rate started to decline in almost every country of the region.

On the other side, North Macedonia at the same time tended to create optimal conditions of business environment with the aim to attract foreign capital by increasing the subsidies, offering tax havens and other forms of aid to the FDI's. This, altogether with the above-mentioned practices would lead to extended spending that in turn leads to budget deficits.

3. RESEARCH OBJECTIVES AND METHODOLOGY

The objective of this paper is to analyze and explain in details the structure and the nature of the public debt in North Macedonia. The main goal will be to use these data to see if public debt has an effect on the GDP growth and/or the real GDP.

The hypotheses of the study are the following:

H0: Public debt has significant impact on the GDP per capita growth in North Macedonia.
H1: Public debt does not have significant impact on the GDP per capita growth in North Macedonia.

H0: Public debt has significant impact on the real GDP in North Macedonia.
H1: Public debt does not have significant impact on the real GDP in North Macedonia.

For this study, secondary data are used from the World Bank and the Ministry of Finance of North Macedonia. The observed period is the pre-crisis period, during the financial crisis and the EU debt crisis, and the period after the financial crisis and prior to the pandemic crisis.

4. LITERATURE REVIEW

The effect of the public debt on the economic growth of a country varies by many factors, that further creates various scenarios. Based on these factors, the public borrowing may prove to be beneficial to the GDP growth, harmful, or it may have no effect on the economic growth of a country. In order to assess the impact of the public borrowing on the GDP growth, a division between the domestic and foreign public debt should be made. The analyses that have been conducted regarding the relationship between the GDP growth and the domestic public debt are classified as

Traditional and Ricardian point of views. The traditional view states that domestic public debt has a negative impact on the GDP growth, since it crowds out the capital from the private sector, assuming that the amount used from the savings to fund the borrowings is usually higher than the income. Based on this scenario, the government would be forced to borrow at higher market rates (Ismihan and Ozkan, 2012).

On the other hand, there are scholars that state that borrowing from domestic sources enables the government to borrow in favorable conditions as low interest rates that would offer safe loans and bonds. (Karazijienė and Sabonienė, 2009). This would stimulate the economy, since according to these beliefs, the internal borrowing represents the collection of future taxes (Barro, 1974).

Overall, it is safe to say that domestic public debt does have an impact on the economic development of a country. Whether it is a positive or negative impact, depends on the way the borrowed funds have been used. These outcomes further vary on size of the economy and whether the borrowing country is a developed, developing or underdeveloped country.

For example, Schclarek (2004) in his research that covered 24 developed and 59 developing countries in the period 1970-2002 found out that external debt has detrimental effects on GDP growth. The author has reached a conclusion that the relation was significantly evident on the group of developing countries, while there was no significant relationship between the external debt and the GDP growth in the group of industrialized countries.

Reinhart and Rogoff (2010) reached a similar conclusion in their research. The authors stratified the debt-to-GDP ratios on 0-30%, 30-60%, 60-90% and above 90%, and used two different samples of 20 developed and 24 developing countries for the period of 1790–2009. They concluded that the developed countries with debt-to-GDP ratio beyond 90% have lower growth for 0.9%-2% from the countries with debt ratio on the lower strata. For the group of developing countries, the gap was even wider, as the countries with debt ratio exceeding 90% had a lower growth for 3.1–3.3% than the countries with debt ratios in the lower strata.

Presbitero (2012) states that developed countries are more effective when it comes to utilization of the funds borrowed, and on managing the crowding-out effects, market volatility, and disincentive environment to investment. In his study of 140 developing countries, it was found that a debt ratio that exceeds the benchmark of 90% has adverse effects on the growth.

Calderón and Fuentes (2013) provide a statistical link of the disastrous effect the external debt has had on the South American countries in a research study for the time period of 1970-2010.

All these studies conclude that developed countries can handle better significantly higher level of debts without significant adverse effect on the GDP growth. Furthermore, various modern authors, especially after the last financial crisis, study the benchmark ratio that serves as a breakthrough point that actually defines whether there is, and if so, whether it is a positive or negative effect of the debt on the GDP growth. While most of the studies have concluded that the debt ratio of approximately 90% hinders the economic growth, Minea and Parent (2010) in their research found out that the public debt can have a positive effect for the countries with debt ratio of over 115%, however they cannot provide an explanation on their finding.

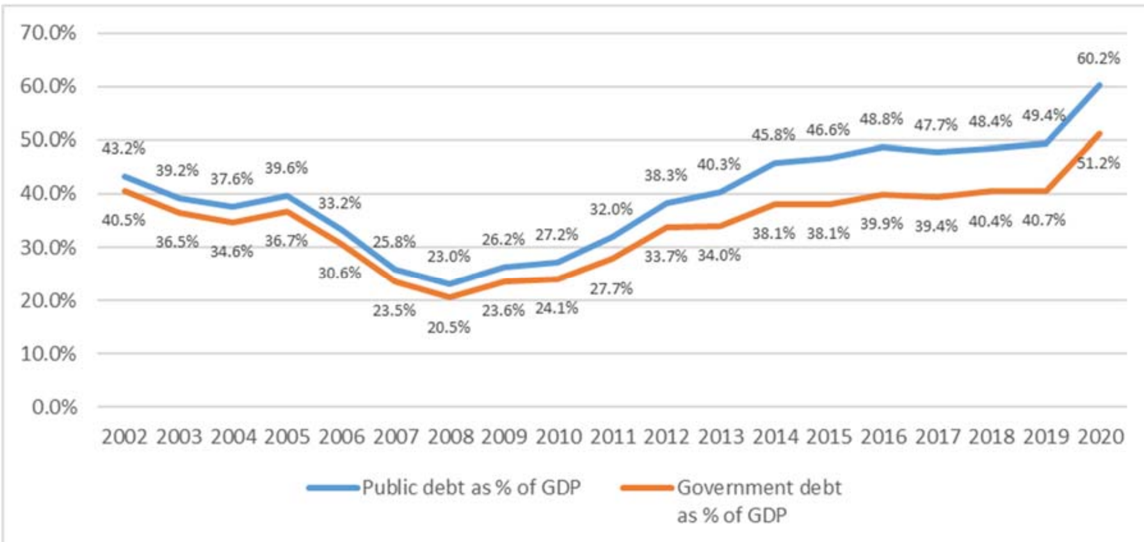
Szabó (2013) in his study of 27 EU member-states reached a conclusion that one percentage point increase in the debt-to-GDP ratio decelerates economic growth by 0.027 percentage points. However, the author as well states that the effort made by the developed EU countries to keep the debt ratio within the limits of the Maastricht criteria, could negatively result on their GDP growth, as their fiscal adjustment is stronger above 86%. This implies an idea that the developed countries can tolerate higher debt-to-GDP ratio.

If a conclusion is to be made based on the mentioned findings and the given thresholds in order to define the effect the public debt has on the GDP growth. While the developing countries have a lower thresholds ratio of debt within which the effect is positive and can actually stimulate growth, the developed countries have higher tolerance, thus higher threshold. Countries of the latter group have a better credit rate; therefore, the interest rate of the borrowings are lower, which means that lower portion of their funds need to be committed for the debt service. The negative effect of the debt upon the GDP growth would be the crowding out effect and the debt overhang, where a country reaches a point where it is unable to repay its debt, where austerity measures such as cuts in savings, spending and investments are required in order to repay the debt. This causes the quality of the public services and institutions to decrease, and the activities that stimulate growth to halt. At the worst case, a country would default on its debt repayment, causing long term consequences that damage the GDP growth, and cause other effects that will be further discussed.

5. PUBLIC DEBT IN NORTH MACEDONIA

Despite being the poorest country to emerge in the region following the collapse of Yugoslavia, and its economic growth being hindered by the military conflicts within its borders and in the neighboring countries, North Macedonia did enjoy the development that was typical for the region in the pre-crisis period of the last global financial crisis. With a downward trend of the public debt, North Macedonia reached the minimum point of indebtedness of 23% of the GDP. The period that followed the crises, told a different story. North Macedonia was definitively affected by the crisis, in the context of decreased exports, FDIs and remittances that were flowing in the country, that resulted in decrease of the GDP growth rate, which introduced the need of new loans. The upward trend of the public and the government debt continued through the years until 2020 when it reached its pick due to the new pandemic crisis that made a severe hit on the economy (Table 1).

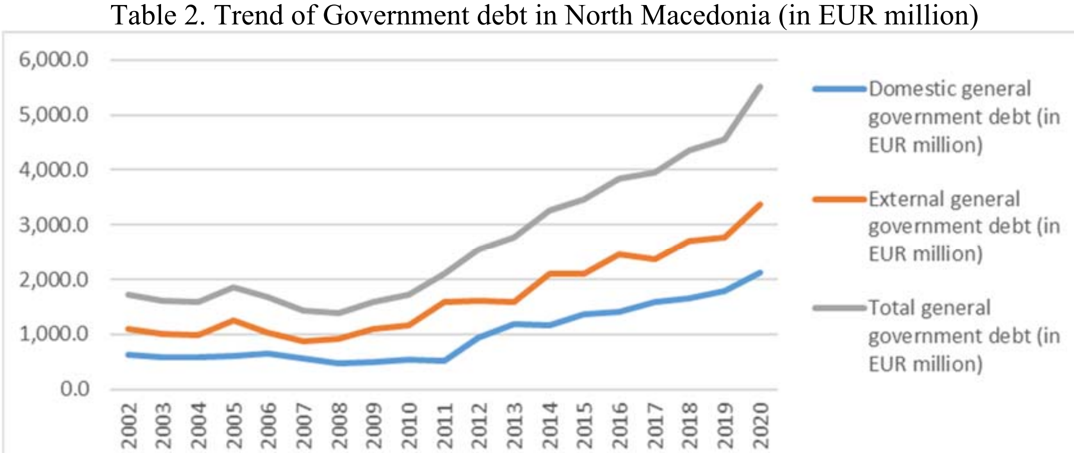
Table 1. Public and Government debt in North Macedonia



Source: Ministry of Finance in North Macedonia

The situation in the government debt is slightly different since it notices a rise several years after the global financial crisis. In 2011 and 2012 the country marks the highest borrowing through government securities on the domestic market. This results in an increase in the domestic general government debt which follows that upward trend in the following years. The external government debt follows a similar trend, which picks in 2014, 2016, 2018 and 2020 which are the years of the largest borrowings of Eurobonds (OpenFinance, 2021).

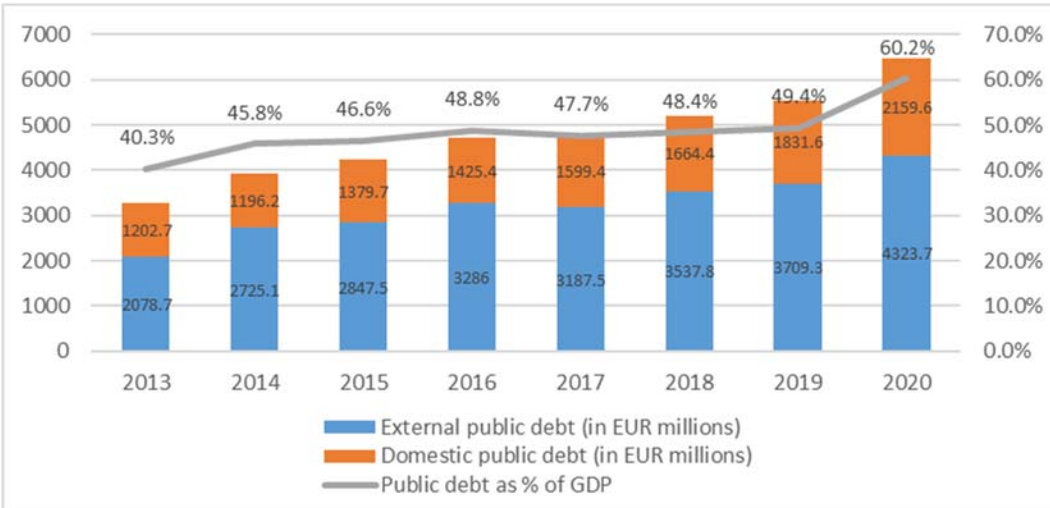
Table 2. Trend of Government debt in North Macedonia (in EUR million)



Source: Ministry of Finance in North Macedonia

The trend of the public debt as % of GDP, as well as the external and domestic public debt in EUR million can be seen in Table 3. The external public debt notices a more significant increase in 2016 as a result of the issuance of the fifth Eurobond on the international capital market in an amount of 450 million EUR for the purposes of financing the budget needs and refinancing the liabilities which matured in 2016 and 2017. Still the most significant increase in both the domestic and the external public debt was in 2020 when due to the economic stress caused by the Covid-19 crisis, the government undertook new loans from the World Bank, IMF and the EU for tackling the consequences brought by the pandemic crisis.

Table 3. Trend of Public debt in North Macedonia



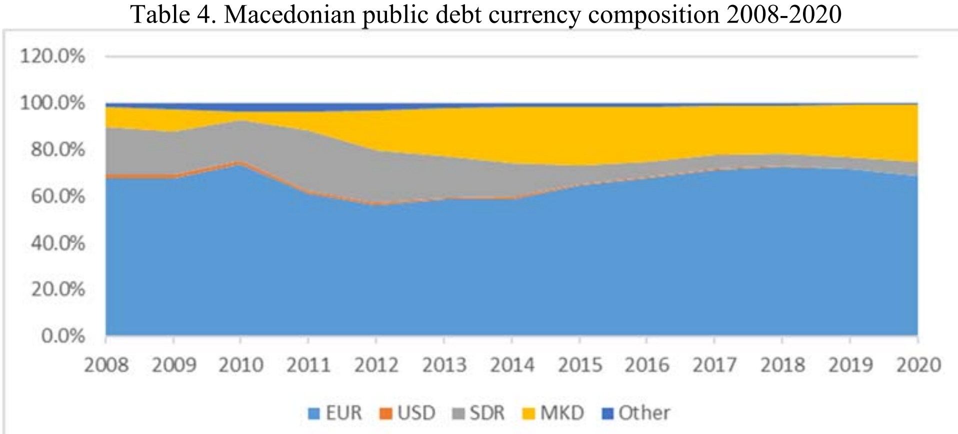
Source: Ministry of Finance in North Macedonia

It is a fact that there is an accelerated accumulation of the public and the government debt in North Macedonia in the last 15 years, reaching even an alarming level of 60.2% in 2020 which is higher than the recommended ceiling ratio of the convergence criteria.

Another real problem related to the debt in North Macedonia is that borrowed funds are often not invested into productive projects that yield return, which implies the irresponsible borrowing and spending of the funds borrowed, since the main purpose of borrowing is investment into projects that would further spur the economic growth and create future value that would outweigh the costs of borrowing (Hristovska and Spasova, 2019).

In Table 4, the public debt is broken down based on the currencies in which was denominated in the period 2008-2020. Majority of the debt through the years continues to be in EUR which clearly shows the ties of the country with EU and the euro currency. From 2008 until 2012 the second largest portion of the debt was in SDRs, and on third position was the debt in the domestic currency MKD. The situation changed after 2013 when the debt in the SDRs started and continued to decrease, while the domestic debt in MKD started to significantly increase.

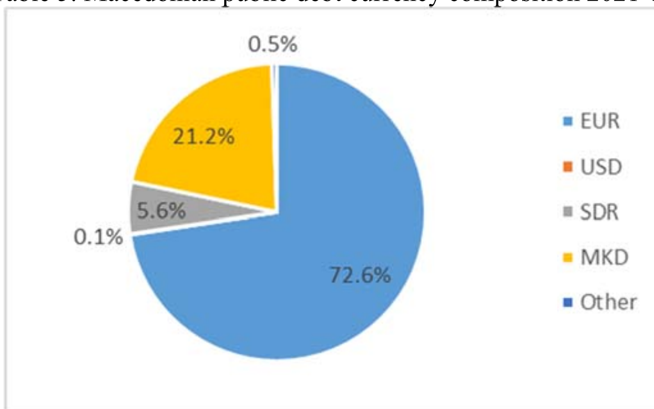
Table 4. Macedonian public debt currency composition 2008-2020



Source: Ministry of Finance of North Macedonia

Table 5 represents the current public debt currency composition for the first quarter of 2021. The major part continues to be in Euros, comprising 72.6% of the debt, followed by 21.2 % of the debt denominated in domestic currency, while SDRs consist 5.6% of the total debt.

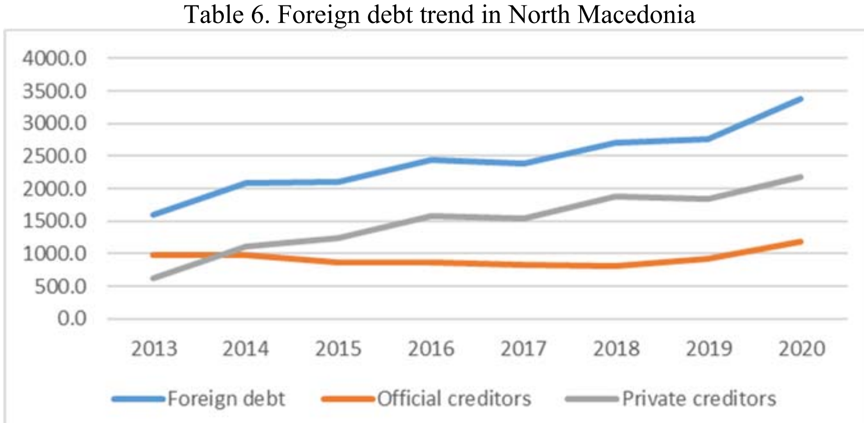
Table 5. Macedonian public debt currency composition 2021 Q1



Source: Ministry of Finance of North Macedonia

The Euro currency comprised 88.8% of the external debt in 2020. The internal debt is denominated in both MKD and EUR. Approximately 37.2% of the domestic debt was in euros, while 62.8% is in the domestic currency in 2020 (Ministry of Finance of North Macedonia). The external debt of the country outweighs the domestic debt. The total foreign debt of North Macedonia in 2020 was approximately 3,382.5 million Euros, while the internal debt of the country is 2,133.4 million Euros. The difference between the foreign and domestic debt has been increasing, especially during the post-global financial crisis period, as well as during the pandemic crisis period.

Table 6. Foreign debt trend in North Macedonia

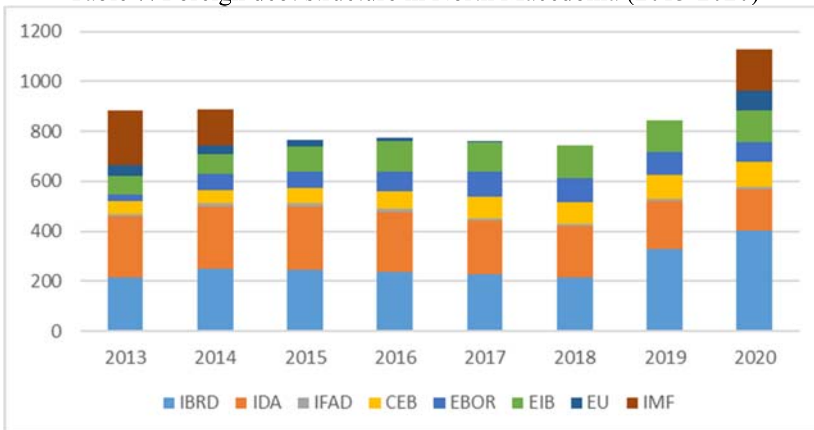


Source: Ministry of Finance of North Macedonia

In Table 6 is represented the foreign debt trend in North Macedonia over the years. Even though before 2014 official creditors were more dominant in terms of the foreign debt, a change of the borrowing preferences of the country can be seen ever since which continues today. Private creditors in the last several years own the major part of the foreign debt. The largest share of the debt are Eurobonds, which saw a significant increase in the last 10 years. In 2013, 150 million EUR of the debt were Eurobonds. In 2018 this debt reached 1628 million EUR, an increase of approximately 1085%. However, the debt toward other private creditors have been decreasing in the given period.

The trend of the debt toward the official creditors (both bilateral and multilateral agreements) has been decreasing in the post financial crisis period until the beginning of the pandemic. The country managed to decrease the borrowings from the European institutions such as EBRD and IDA, multilateral creditors that own large share of the North Macedonian foreign debt. The country completely repaid the debt toward the IMF in 2015, but took out another loan again in 2020 (Table 7).

Table 7. Foreign debt structure in North Macedonia (2013-2020)



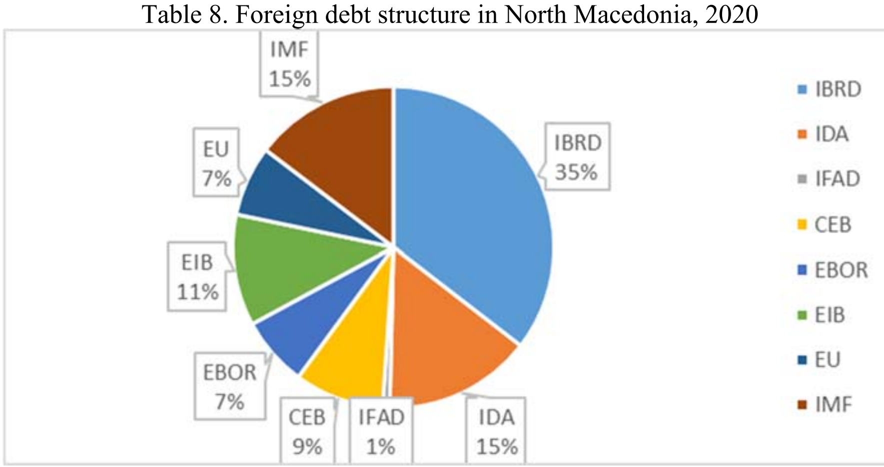
Source: Ministry of Finance of North Macedonia

A small increase of the debt toward other European institutions has been noticed, but overall, the debt toward official creditors has been decreased before the pandemic crisis.

Before the pandemic crisis, the major borrowers were IBRD and IDA, followed by EIB, EBOR and CEB, while the loans to the EU and IMF were completely repaid. The situation changed in 2020 as a result of the Covid-19 crisis when North Macedonia had to undertake new borrowings in order to face the economic consequences. These new borrowings where from the IMF and the EU which changed the structure of the foreign debt situation in North Macedonia.

In order to take a closer look at the latest foreign debt structure in the country, Table 8 looks at the exact representations of the shares of debt from all multilateral creditors. In the current situation IBRD continues to be the biggest owner of the foreign debt with 35% of the debt, followed by IDA and IMF with 15% of the debt each, then EIB with 11%, CEB 9%, EBOR and EU both 7% and lastly IFAD with 1%.

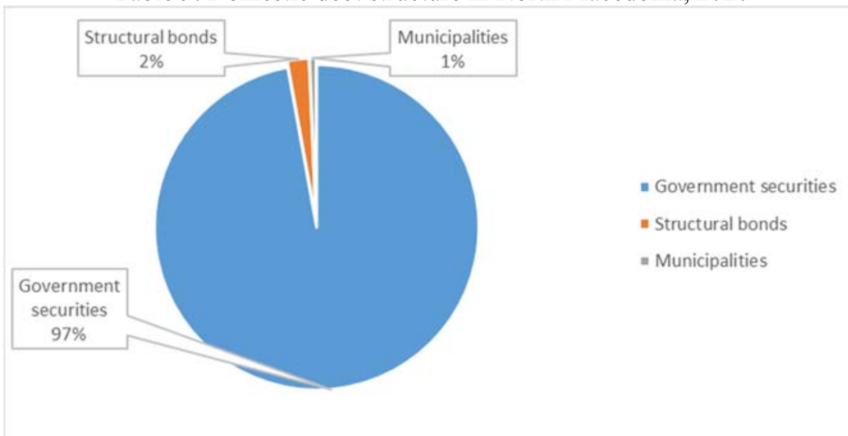
Table 8. Foreign debt structure in North Macedonia, 2020



Source: Ministry of Finance of North Macedonia

On the other hand, the domestic debt is estimated at 2159.6 million EUR in 2020. Almost the whole share, around 2133.4 is issued by the central government. This amount is mainly comprised by continuous government securities, that have an accumulated value of 2072.6 million EUR. Around 46.5 million euros from the total domestic debt is amounted for structural bonds, while only 14.4 million euros are borrowed by the local government and municipalities.

Table 9. Domestic debt structure in North Macedonia, 2020



Source: Ministry of Finance of North Macedonia

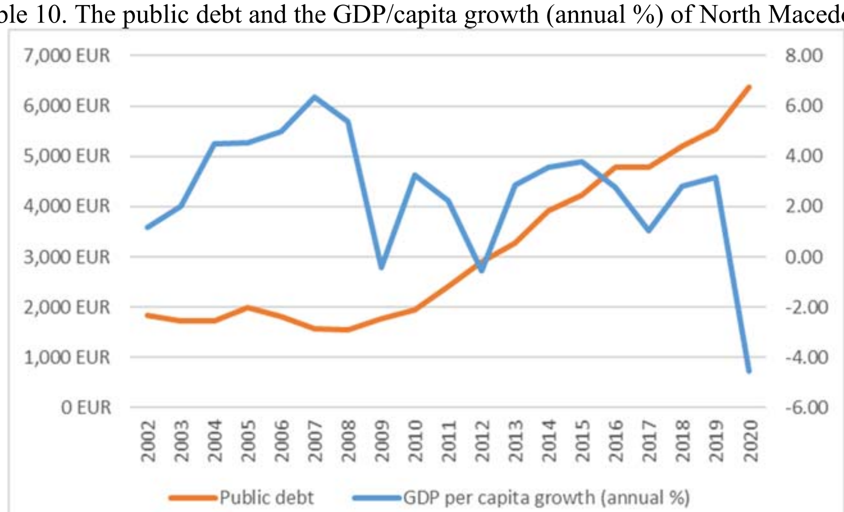
6. THE IMPACT OF PUBLIC DEBT ON THE NORTH MACEDONIAN ECONOMY

Although there are various theories based on empirical researches that scholars have provided through the years for the relationship between public debt and the economic development, the outcome may vary, depending on the region that is the subject of the research.

6.1 The Impact of Public Debt on The GDP Per Capita Growth

Table 10 shows the trends of public debt in millions EUR and GDP/capita growth (annual %) of North Macedonia, and at the same time it gives an implicit explanation of the connection of these indicators. It is important to mention the fact that the GDP per capita growth % is an indicator that does not sum the accumulated values from the previous years, so it only shows a value for that particular year. For example, if the previous year the growth % has been 3, this year might be -2%.

Table 10. The public debt and the GDP/capita growth (annual %) of North Macedonia



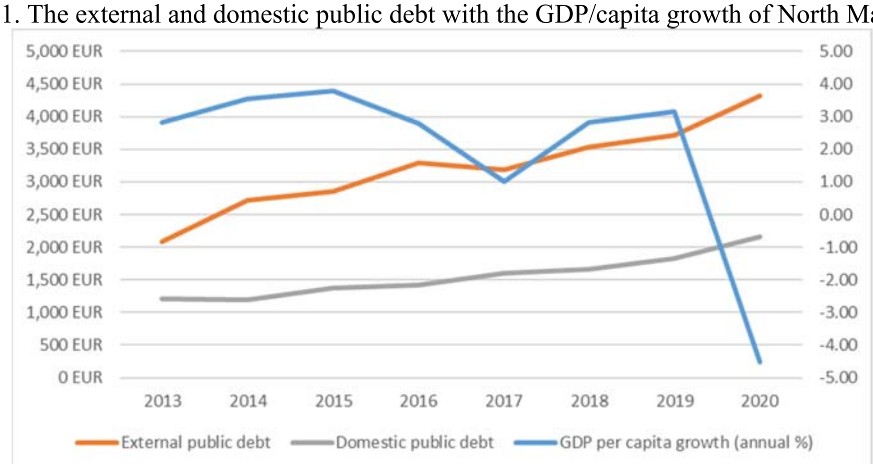
Source: Ministry of Finance of North Macedonia

From the table it can be seen that the country struggled to maintain a stable percentage of GDP per capita growth, as a lot of fluctuations can be noticed. The highest point of this economic indicator for the given period was reached in 2007, marking a percentage of 6.36% while the public debt was decreasing during the same period. This simultaneous diverging movement of these two particular indicators is logical and expected since, an increase of GDP pushes down the debt-to-GDP ratio. This relation continued even in 2009, when, the public debt started to increase, while the GDP per capita growth dropped to the lowest point of the given period, since it marked a negative record of -0.44%, and this pushed the debt ratio upwards. The same situation happens in 2010 and 2011, when the decrease in the GDP per capita growth was followed by an increase in the total public debt of the country. However, in the following period, the law of "higher GPD, lower debt-to GDP" is abandoned. This unusual pattern can be noticed in the period starting from 2012, when the GDP per capita growth percentage starts to mark unusual fluctuations in the following years, while the debt ratio maintains a gradual increase of the rate for the same period.

Therefore, is it safe to say that the statement by various scholars that public debt affects the percentage change in economic growth is partially true for North Macedonia.

From the table below it can be seen that both internal and external debt grow with an accelerated pace in North Macedonia over the last decade. While the internal debt may lead to the elimination of the potential inflation due to excess of the money in circulation, the external debt which is also on the rise for the given period, is of a more concerning nature.

Table 11. The external and domestic public debt with the GDP/capita growth of North Macedonia



Source: Ministry of Finance of North Macedonia and the World Bank

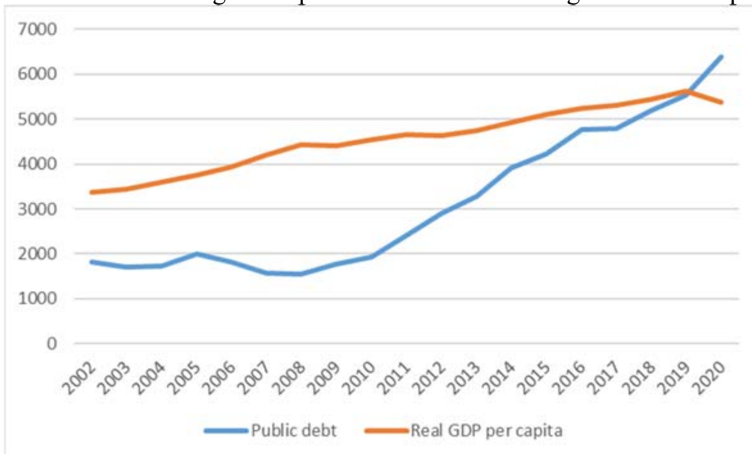
At this point, it is important to mention the theories of (Schclarek, 2004), and (Reinhart and Rogoff, 2010), that the external debt has detrimental effects on the economy of a country. So, this theory is partially supported by the statistics of the country, for the years when the debt ratio, and the GDP per capita growth percentage are negatively correlated. This is noticeable in the period after 2015, while the period before 2015 and shortly during 2017 and 2018 has an opposite outcome to the given theory, showing no connection between the GDP per capita growth percentage, and the public debt to GDP of the country.

6.2 The Impact of Public Debt on The Real GDP Per Capita

It is important to reiterate that, while the GDP/capita growth represents the annual percentage change, the real GPD/capita shows the real value of the GDP divided by the number of citizens of that country. Furthermore, unlike the GDP/capita growth that only shows the growth/decrease of the value for the chosen year, the real GDP/capita inherits the value of the previous year, while adding the difference of the current year (if the value has increased or decreased from the last year). The table below shows the total public debt and the Real GDP/Capita of North Macedonia through the years. Also, there is an implicit explanation about the connection between the two mentioned indicators.

In Table 12, it can be noticed that while the debt ratio of North Macedonia was decreasing, the real GDP/capita was increasing, and this behavior continued during 2008, and during this year, the gap between the two indicators has been in the highest point for the given period. In the period between 2008 and 2009, while the GDP/capita marks a decrease, the debt ratio increases. During the following years, simultaneous rise of both values is noticed, up to 2019 when they are in an overlapping position. After 2019, as the real GDP/capita decreases, the debt ratio increases and the contrary movements of the two indicators is noticeable again.

Table 12. The average total public debt and the average real GDP/capita



Source: Ministry of Finance of North Macedonia and the World Bank

The movements of the debt ratio and the GDP during the period 2005-2009, as well as after 2019, back up the general rule of the negative correlation between the two indicators. Ceteris paribus, the gap between these two indicators in 2008 would mean that the country is marking a great economic growth and development. After 2009, while the negative correlation is still visible, although it is weaker it gives an impression that the country is actually "biting more than it can chew", which means that the increase of the GDP/ capita that portrays the economic growth is not big enough for the borrowing rate it was opting for.

Nevertheless, it would be a mistake to conclude that these two indicators affect each other so directly and in such a simple way, as there are various factors that might have affected the trend of the indicators in Table 12.

As it can be seen from the previous tables, the country's debt has been increasing, both internally and externally. And incidentally, the given period is also the aftermath of the global financial crisis, and it halted the growth that the countries were enjoying. On the other hand, despite the call of industrialized countries for austerity measures, North Macedonia seems to have ignored these calls, and it kept borrowing.

To the potential increase or decrease of the real GDP/capita, amid the other factors, might be the change of the size of the population. Increasing population might push down the real GDP/capita down, while the decrease of population's size would have a contrary effect. However, it is safe to say that according to Table 10, there is a pattern of negative correlation between the two indicators, in which an impact of the public debt upon the real GDP/Capita can be noticed.

CONCLUSION

Public debt has been an unresolved issue for centuries, with different parties having different opinions regarding it. On the one side, there are viewpoints that oppose the idea of borrowing, especially from the outside sources, with the claims that it harms the economy, and it gives away the autonomy of the state. On the other, there are viewpoints that believe that public debt helps the country to expand its activities that, in return would boost economic growth, and that enlarging the GDP would put a downward pressure to the debt. The truth is that, there are no definite and ultimate outcomes from the public debt, as the result varies from country to country, depending from many factors that may highly influence the impact that the borrowing could have upon the borrowing country. These factors may be debt management, the economic size of the borrowing country, the fiscal policy of the country, the cultural background of the country etc.

Therefore, the impact that public debt may have on a developed country is not the same as the impact it may have on a developing country. Coming from the fact that North Macedonia is a developing country, that has been isolated, and out of the international markets, the public debt has impacted it differently from the countries of the west. One example comes from the noticeable difference in the movement of the public debts of North Macedonia compared to the those of the EU countries. This can be especially seen during the global financial crisis when the EU countries lowered their debt levels, while in North Macedonia, as well as the whole Western Balkan region, the debts have increased.

The level of indebtedness in North Macedonia has continued to increase through the years, which is becoming a matter of a major concern, however of even higher concern is the lack of the benefits and positive changes from the public spending. Moreover, the country is vulnerable, as it is exposed to the risk of a potential financial crisis that would cause uncertainty and would skyrocket the prices of the public loans. The last global financial crisis resulted in doubling the size of the public debt for this country, creating a possibility for the next financial crisis to engineer a desperate situation, with the possibility of putting the country into a debt crisis. Currently this exploitation is the most fragile point of the whole Western Balkans region regarding the public debt.

In order to prevent this, North Macedonia needs better fiscal policies and fiscal responsibility, so that the borrowed funds would be distributed into the sectors which would yield more effective results. Effective and efficient spending would cause the country to grow and would lead to an economic development, offsetting the debt by the benefits from the projects that were financed by debts, keeping the reserves untouched on debt repayment. An efficient debt management plan and an effective implementation of it leads to a higher credit rating and it increases the trustworthiness of the country in the international markets. In this way the risk coming from the exposure of debt crisis in case of financial recession would be eliminated, while the possibility of debt overburden would be minimized.

REFERENCES

(www.dw.com), D. (2019). "Debt and doom loops: The Eurozone's Italian nightmare". Available at: https://www.dw.com/en/debt-and-doom-loops-the-eurozones-italian-nightmare/a-50019077 [Accessed 1 October 2021].

Barro, R. J. (1974). Are Government Bonds Net Wealth? Journal of Political Economy, 82, 1095-1117

Calderón, C., and Fuentes, J. R. (2013) "Government debt and economic growth". InterAmerican Development Bank.

Hristovska, B. and Spasova, T. (2019). "Analysis of Public Debt Republic of Macedonia". p.6.

Ismihan, M. and Ozkan, G. (2012). "Public debt and financial development: A theoretical exploration", Economics Letters, Elsevier, vol. 115(3), pages 348-351.

Karazijienė, Ž. and Sabonienė, A. (2009). "The Structure of the National Debt and State's Borrowing Influence for the Lithuanian Economy". Economics and Management, 14, 271- 279.

Minea, A. and Parent, A. (2012) "Is High Public Debt Always Harmful to Economic Growth?". Reinnhart and Rogoff and Some Complex Nonlinearities. CERDI Working Paper. No. 2012/18. February 2012

Myley, R. (n.d.) "Public Debt: Meaning, Classification and Method of Redemption". Economics Discussion. Available at: http://www.economicsdiscussion.net/debt-2/public-debt-meaning-classification-and-method-of-redemption/17472 [Accessed 1 October 2021].

Open Finance (2021) Available at https://javendolg.open.finance.gov.mk/en [Accessed 1 October 2021].

Presbitero, A. F. (2012) "Public Debt and Economic Growth: Is There a Causal Effect?" POLIS Working Paper. No. 198. April 2012

Reinhart, C. M. and Rogoff, K. S. (2010) "Growth in a Time of Debt". NBER Working Paper. No. 15639

Schclarek, A. (2004) "Debt and Economic Growth in Developing and Industrial Countries". Lund University Department of Economics Working Paper. No. 34.

SPIEGEL (2011). "The Ticking Euro Bomb: How the Euro Zone Ignored Its Own Rules". Available at: https://www.spiegel.de/international/europe/the-ticking-euro-bomb-how-the-euro-zone-ignored-its-own-rules-a-790333.html [Accessed 1 October 2021].

Szabó, Z. (2013) "The Effect of Sovereign Debt on Economic Growth and Economic Development," Public Finance Quarterly, State Audit Office of Hungary, vol. 58(3), pages 251-270