

THE IMPACT OF THE COVID 19 CRISIS ON THE FISCAL STABILITY OF REPUBLIC OF SRPSKA

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ABSTRACT

The consequences of the COVID-19 crisis have had a negative impact on the fiscal stability of Republic of Srpska. Although the crisis is not officially over yet, a large number of countries needed to implement fiscal consolidation.

Republic of Srpska is one of the small and open economies that are exposed to various negative market distortions. COVID-19 crisis of the most important foreign trade partners of the Republic Srpska has had a negative impact on the economy of Republic Srpska.

The basic idea of the paper is based on the need to analyze the impact of the COVID-19 crisis on the fiscal stability and public finances of Republic of Srpska. The subject of the research is the analysis of the implementation of the fiscal consolidation procedure in Republic of Srpska and the impact on its economic growth. For the implementation of fiscal consolidation, the choice of methods and instruments on which the process of implementing fiscal consolidation is based is very important.

Fiscal consolidation is necessary due to the consequences caused by the COVID-19 crisis and the enormous growth of the deficit. The analysis proves that the measures applied to rehabilitate the crisis have resulted in improved fiscal stability, which ultimately had a positive impact on economic growth. Fiscal consolidation will be successful and expansive if it is carried out by a combined method of increasing revenues and reducing expenditures and if the increase in revenues is caused by the growth of economic activity and not by the tax burden.

Keywords: *GDP, deficit, Fiscal consolidation, Fiscal stability.*

1. INTRODUCTION

Fiscal stability is one of the most important factors in the stability of a country and its public finances. It has been proven that crises caused by wars, financial and health crises lead to instability of public finances. This type of instability usually leads to the need for fiscal consolidation. Fiscal consolidation is a process of reducing the budget deficit in order to balance public revenues and public expenditures (Krajišnik, Gligorić, Gojković, 2019). The fiscal consolidation process is most commonly carried out on the basis of increased revenues, reduced expenditures or a combination of both methods. Depending on the results of the consolidation, the effect of its success and expansion, ie the impact on economic growth, will depend.

Republika Srpska is one of the small and open economies that are exposed to various negative market distortions. Also, Republika Srpska is one of the less developed countries, which significantly affects the possibility and capacity of financing public needs (Krajišnik, Gojković, 2017). Its economy is subject to the impact of changes in the world market, ie changes in the economy of its main foreign trade partners.

Thus, the COVID-19 crisis of the most important foreign trade partners of the Republika Srpska

has had a negative impact on the economy of the Republika Srpska.

The COVID - 19 crisis has had multiple negative effects on the public finances of the Republic of Srpska, as well as on public finances worldwide. Therefore, in 2021, the fiscal consolidation of public finances of the Republika Srpska was carried out.

1.1 THEORETICAL ASPECTS OF RESEARCH

Previous research examining the effects of fiscal consolidation has been conducted in countries with different levels of development and in different periods. Depending on the level of deficit and public debt, the methods and instruments used in the process of fiscal consolidation depend on the final effects, ie the effect of success and the effect of expansion.

There are opinions that the reduction of public spending, in order to achieve fiscal consolidation, leads to a reduction in economic activity (Guajardo et al. 2011) and negative rates of economic growth in the short term, with possible expansion in the long run (IMF, 2010).

Some authors point to the very positive effect of consolidation on economic growth. The results of fiscal consolidation generally depend on the way in which fiscal consolidation is carried out. Also, some authors believe that fiscal adjustments based on spending cuts are more effective than those based on tax increases (Alesina and Ardagna, 2012). The effects of wealth on aggregate demand mitigate the impact of permanent spending cuts. Static disturbances caused by constant tax increases cause greater shifts in aggregate supply under unfavorable prices (Alesina, A. et al. 2017). The results of the research also differ depending on the economic conditions in which the fiscal consolidation is carried out. Some authors argue that fiscal adjustments are more successful if implemented during or immediately after a recession (Drazen and Grilli, 1993). Many authors believe that the right time for consolidation is the time of expansion (Von Hagen and Strauch, 2001). At first glance, the results that indicate the negative effects of fiscal consolidation do not mean that it should not be implemented. It is necessary to know the initial negative effects of certain fiscal consolidations. Therefore, it is necessary to choose the right method and instruments for implementing the fiscal consolidation of each country individually (Blanchard and Leigh, 2013). Strong institutional support and sincere political will are needed to implement fiscal consolidation. In the long run, better institutional frameworks can help ensure that fiscal policy stays on track (Sutherland, D., Hoeller, P., Merola, R., 2012).

There is ample evidence that expansionary fiscal policy encourages economic growth, whereas reducing public spending and raising taxes as a basis for fiscal consolidation have a negative effect. However, there are numerous studies that prove the opposite.

The rule is that the greater the increase in public debt in the period before consolidation, the greater the probability of success of fiscal adjustment (Alesina and Ardagna, 1998). On the other hand, fiscal consolidation can affect the reduction of risk premiums, and thus interest rates on borrowing abroad (Krajišnik, Gligorić, Gojković, 2019).

There are studies that have shown that fiscal consolidation has a positive impact on economic growth, and these are: Denmark 1983-86, Finland 1992-98, Sweden 1993-98. and Ireland 2008-12. (Giavazzi and Pagano, 1990; Alesina, 2010; Perotti, 2011). However, there are studies that do not see clear effects of fiscal consolidation on economic growth, namely fiscal consolidation in: Austria (1996), Belgium (1992), Portugal (1983), Spain (1994), Sweden 1984) and the United Kingdom (1994). The positive effects of fiscal consolidation on economic growth are shown by fiscal consolidation in Portugal, Spain and the United Kingdom, and the negative impact of consolidation on economic growth is shown by fiscal consolidations in Austria and Belgium. Depending on the degree of development of the economy, the type of instruments and the conditions in which fiscal consolidation is carried out, the effect on economic growth also depends.

When entering the process of fiscal consolidation, it is necessary to determine the period of consolidation. Consolidations can be annual or cold shower and perennial or gradual consolidations.

In this paper, the period of consolidation is determined according to the definition of Alesina and Ardagan from 1998, which was subsequently adjusted for post-transition countries by Mirdala in 2013. The fiscal consolidation period is the year in which the cyclically-adjusted primary budget balance improved by at least 1.5% of GDP or the period of three consecutive years in which the cyclically-adjusted primary budget balance did not deteriorate by more than 0.5% of GDP (Alesina & Ardagan, 2009 & Mirdala, 2013).

Based on the final results, fiscal consolidation can be successful or unsuccessful.

If fiscal consolidation has a positive impact on GDP growth, it is considered expansive.

According to Alesina and Ardagana, fiscal consolidation is considered successful if:

- a) in the three-year period following consolidation the cyclically-adjusted primary deficit is reduced by an average of at least 2% of the share of GDP below the value in the year of consolidation, or
- b) three years after consolidation, the public debt-to-GDP ratio is at least 5% lower than the ratio in the year of consolidation.

Fiscal consolidation is expansive if the average GDP growth rate in the consolidation period and two years after that period is higher than the average growth rate at the beginning of the fiscal consolidation period (Alesina & Ardagana, 1998 & Mirdala, 2013).

The aim of this paper is to determine on the basis of the analysis whether in the observed period from 2011-2021. Republika Srpska carried out the procedure of fiscal consolidation and, if so, to determine according to the above criteria whether it was successful or unsuccessful.

In addition, the aim of this paper is to determine the effects of the expansionary fiscal consolidation of the Republika Srpska, and ultimately, whether the implemented fiscal consolidation has had positive effects on economic growth.

2. RESEARCH METHODOLOGY AND METHODS

The COVID 2019 pandemic, which struck the EU in early 2020, demonstrated how nonfinancial and non-economic factors can affect economic trends and the economy on a global scale and cause a recession at that. In the same way and with much greater effects, the crisis reflected on small open economies such as the Republika Srpska (Đukić A., Štaka M., Drašković D. 2021).

The impact of the COVID 19 crisis on the fiscal stability of the Republika Srpska is analyzed, ie the impact of the crisis on the enormous growth of the deficit and the measures for its reduction to the framework defined by the Law. The analysis will show whether the fiscal consolidation process has had an expansionary character to economic growth.

Based on regression and correlation analysis, the mutual connections and relations of two or more observed phenomena will be determined in order to quantitatively express the regular relationship of defined phenomena if such a relationship exists and to establish the degree and direction of their mutual connection. If we observe only two phenomena, then the analysis is reduced to a simple regression and correlation analysis (Komić, 2000).

The relationship between deficit trends and economic growth in the Republika of Srpska will be analyzed using a simple linear regression analysis. For the purpose of the analysis, the budget balance (deficit/surplus) of the Republika Srpska will be an explanatory variable as an independent variable, and economic growth (% GDP growth) a dependent variable:

$$Y = f(BB) \quad (1)$$

To determine the average regular quantitative relationship between the two observed phenomena,

it is necessary to determine the parameters of simple linear regression. A linear regression model is defined:

$$Y_i = \beta_0 + \beta_1 x_i + \varepsilon_i, \quad i = 1, 2, \dots, N \quad (2)$$

Where are:

Y_i : is a dependent variable, GDP RS,

x_i : is an independent variable, budget balance (deficit/surplus) RS;

β_0 and β_1 are unknown constants or regression parameters;

ε_i is sochastic member or a disorder;

N is the size of the basse set.

The analysis will use the estimated simple linear regression function based on the sample defined as follows:

$$\hat{Y}_i = b_0 + b_1 x_i \quad (3)$$

The value of the dependent variable which is exactly on the best-adjusted regression line is marked, and b_0 and b_1 are the estimates of the unknown regression parameters of the base set. Parameter estimates are based on the least squares method. This involves minimizing the square of the vertical linear deviation of the original data from the regression line. Thus, a system of normal equations for determining the parameters in the regression equation was obtained (Lovrić et al. 2006). The solution for the above system of equations enables direct calculation of parameter values in the regression equation:

$$b_1 = \frac{n \sum x y - \sum x \sum y}{n \sum x^2 - (\sum x)^2} \quad (4)$$

and

$$b_0 = \bar{y} - b_1 \bar{x}. \quad (5)$$

The parameter b_0 shows the expected value of the dependent variable Y, if the independent variable X has a value of 0. The parameter b_1 shows the average change of the dependent variable, with a unit increase of the independent variable.

In the analysis of the impact of the COVID 19 crisis on the fiscal stability of the Republic of Srpska, the Eviews 11 econometric program will be used, using the least squares method. For this type of analysis, this method is considered very reliable since it excludes possible errors. The analysis refers to standard deviation, mean, maximum and minimum value, distribution asymmetry and measure of serial distribution tendency. Regression analysis provides an estimate of the significance of these variables: probability (p), t-statistics, standard estimation error, and coefficient of determination r^2 . The statistical basis is the data of the Ministries of Finance of the Republic of Srpska in the period from 2011-2021 years.

3. RESEARCH RESULTS

Economic shocks are a risk for uncontrolled deficit growth. Thus, the crisis caused by the Corona virus pandemic affected the sudden growth of the deficit in the Republika of Srpska. This analysis determines the extent to which the COVID19 crisis affected the growth of the deficit and with the help of which methods and instruments the procedure of fiscal consolidation of public finances of the Republika Srpska was carried out.

The consequences of global economic developments have the greatest impact on small open economies such as the Republika of Srpska. Due to their capacities and fiscal limitations, they cannot significantly affect the movement of the world economy, but they feel the negative consequences very much. Thus, the last crisis had a very negative impact on the economy of the Republic Srpska. The crisis in the Republic of Srpska was largely reflected through its main foreign trade partners. The consequences of the crisis are most easily noticed if the growth of the deficit and / or public debt is evident in the year after it. If, however, there is a sharp increase in the deficit and / or public debt, the country must enter the process of fiscal consolidation. Depending on the approach to consolidation, the effects of its implementation are also different.

Since the COVID 19 crisis is still not over, its current impact is determined by the methods, instruments and effects of the fiscal consolidation of public finances of the Republic of Srpska in 2020 and 2021. Since the analysis covers a period of 10 years, it is possible to analyze possible fiscal consolidations in the previous period as well.

The basis of fiscal consolidation is the reduction of the budget deficit and the balancing of public finances of the Republika Srpska. How and with what instruments the Republika of Srpska completed the fiscal consolidation procedure will be presented in this paper.

The Law on Fiscal Responsibility in the Republika of Srpska establishes general and special fiscal rules. In this way, fiscal rules represent a kind of mechanism for conducting responsible fiscal policy. Consistent application of defined general and special fiscal rules is an important prerequisite for improving fiscal discipline, which is necessary for the macroeconomic stability of the Republika Srpska.

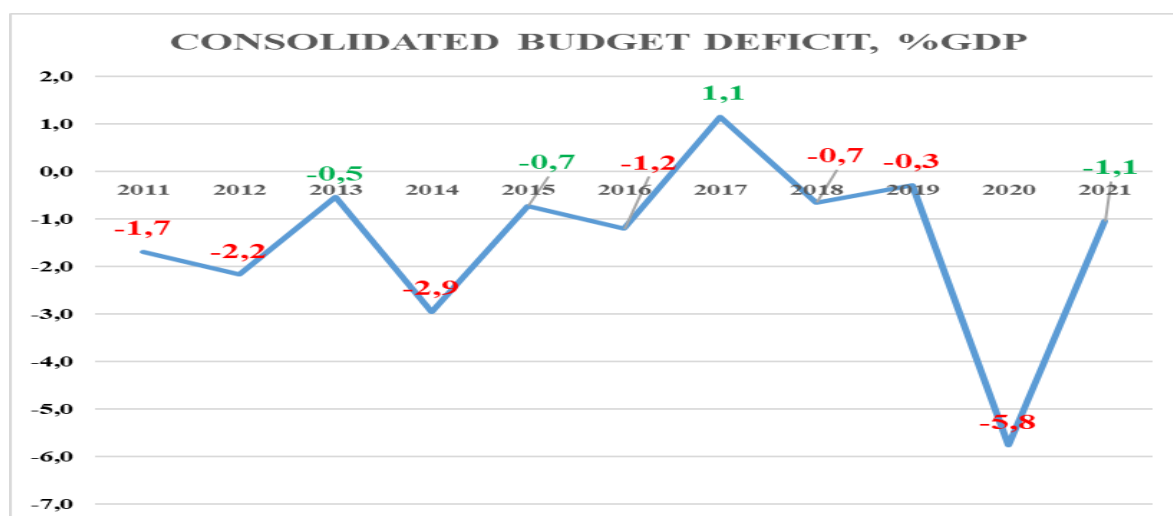
The Law on Fiscal Responsibility in the Republika Srpska defines:

1. general and special fiscal rule on debt and
2. general and special fiscal rule on consolidated budget deficit.

The general rule on the consolidated budget deficit defines that the consolidated budget deficit at the end of the fiscal year cannot exceed 3% of the realized GDP in that budget year. A special fiscal rule implies that if the consolidated budget deficit at the end of the fiscal year reaches 2.5% of the realized GDP in that year, the budget for the next year must be with a budget surplus.

The general rule on public debt stipulates that the public debt of the Republika Srpska at the end of the fiscal year cannot exceed 55% of the realized GDP in that year. Within the special fiscal rules, a debt threshold has been defined, which means that if the public debt of Republika Srpska at the end of the fiscal year reaches 50% of GDP in that year, the budget for next year must be with a budget surplus.

The following table provides an overview of the share of the deficit in GDP in the period 2011-2021

Figure 1. Consolidated budget deficit/surplus, % of GDP of Republika Srpska, in the period 2011-2021.

Source: Author's creation.

The consolidated budget deficit in 2011 and 2012 was -1.7 and -2.2% of GDP, respectively. In 2013, the first fiscal consolidation was recorded with a deficit of 0.5% of GDP. Next year, 2014, there was a sharp increase in the deficit of -2.9% of GDP. In 2015, the second fiscal consolidation was recorded with a deficit of -0.7%, and the year after that, in 2016, the deficit increased again by -1.2%.

In 2017, the third fiscal consolidation was carried out with a surplus of 1.1% of GDP. After that, the realization of the deficit in all years until the end of the observed period is evident. The realized deficit in 2020 is the result of the Covid-19 crisis.

Despite the improvement in the outlook for the recovery of global economic activity since the beginning of 2021, the projections of the world economy more than a year after the beginning of the pandemic are very uncertain. Therefore, the projections of the basic macroeconomic indicators of the Republika Srpska are exposed to a high degree of uncertainty, which is higher than usual during the projections in the conditions of normal cycles of economic activities.

In addition to the uncertainties related to the further course of the pandemic, the economy of Republika Srpska, ie its industrial production and foreign trade, is exposed to external risks. The aforementioned risks are directly related to the risks of economic movements of the most important foreign trade partners. The above was reflected in the realization of a high deficit in 2021. The fourth fiscal consolidation was then carried out.

The first step in the implementation of the fiscal consolidation procedure in 2021 is the adoption of the Decision on approving a temporary deviation from the fiscal rules in accordance with the Article 12 of the Law on Fiscal Responsibility in the Republic of Srpska. The success of fiscal consolidation has the greatest effects when fiscal consolidation is carried out using a combined consolidation model.

As a rule, the most efficient model for implementing fiscal consolidation is primarily reducing expenditures and then increasing revenues. Only in this way is it possible to carry out successful fiscal consolidation which, in addition to establishing a fiscal balance, will result in expansive growth.

Expansive growth allows the average GDP growth rate in the consolidation period and two years after that period to be higher than the average growth rate at the beginning of the fiscal consolidation period. Such fiscal consolidation will ensure the stability of the public finances of the Republika Srpska in the coming period. The fiscal consolidation carried out in 2021 is the result of reduced expenditures. At the same time, there was a decrease in revenue. The results of this consolidation can be seen in the realization of the budget for the next fiscal year.

The following table shows the period from 2011-2021 and defined years of fiscal consolidation:

Table 1. Aggregate statistics of variables for analysis.

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
GDP, nominal, in millions of KM	8.703,12	8.614,70	8.792,92	8.887,31	9.205,04	9.630,57	10.077,02	10.679,61	11.251,32	11.019,64	12.293,16
GDP,% changes		-1,02	2,07	1,07	3,58	4,62	4,64	5,98	5,35	-2,06	11,56
GDP,% real growth	80,0%	-1,1%	1,9%	0,2%	2,8%	3,5%	3,1%	3,9%	2,5%	-2,5%	6,1%
Public debt, in millions of BAM	3.568,90	3.770,20	3.822,80	4.090,60	4.295,48	4.346,87	3.861,66	4.048,92	4.223,42	4.726,05	5.014,90
Public debt, in% of GDP	41,01%	43,76%	43,48%	46,03%	46,66%	45,14%	38,32%	37,91%	37,54%	42,89%	40,79%
Total debt, in millions of BAM	4.249,40	4.669,00	4.734,70	5.055,20	5.277,10	5.439,98	4.967,93	5.178,50	5.388,53	5.833,45	6.159,9
Total debt, in% of GDP	48,83%	54,20%	53,85%	56,88%	57,33%	56,49%	49,30%	48,49%	47,89%	52,94%	50,11%
Consolidated budget deficit / surplus	-147,51	-187,05	-47,37	-261,90	-65,99	-115,69	115,61	-69,42	-31,93	-635,84	-129,55
Consolidated budget deficit / surplus as % of GDP	-1,7	-2,2	-0,5	-2,9	-0,7	-1,2	1,1	-0,7	-0,3	-5,8	-1,1
Budget revenues, in millions of BAM	1.544,35	1.555,83	1.520,64	1.596,69	1.608,27	2.484,06	2.598,71	2.783,20	2.846,14	2.814,73	2.673,03
% changes revenues		0,74	-2,26	5,00	0,73	54,46	4,62	7,10	2,26	-1,10	-5,03
Budget expenditures, in millions of BAM	1.454,92	1.391,02	1.399,62	1.492,12	1.532,05	2.338,80	2.384,14	2.580,24	2.662,35	3.045,09	2.432,03
% changes expenditures		-4,39	0,62	6,61	2,68	52,66	1,94	8,23	3,18	14,38	-20,1

Data from the Ministry of Finance of the Republic of Srpska. Note: For 2021, the data defined by the Budget Rebalance for 2021 were used. The final results of the Consolidated Budget Execution Report are not available.

Source: Author's analysis.

The common feature of all four completed fiscal consolidations is that they were of a one-year character. In all years of consolidation except 2021, there was no reduction in expenditures. For that reason, it is clear that the consolidations carried out did not have a long-term character. In 2022, it will be possible to see what effects of the reduction of expenditures the consolidation carried out in 2021 had. As an instrument of fiscal consolidation, an increase in revenues was recorded in 2015 and 2017, and a decrease in revenues was recorded in the consolidation in 2013 and 2021.

The analysis of expansiveness shows that the implemented fiscal consolidations had an expansive character in all consolidations except 2013. In 2013, the necessary growth defined by the criteria of expansiveness was not achieved. Whether the fiscal consolidation carried out in 2021 had an expansive character will be known in the coming fiscal years.

The conclusion is that the process of fiscal consolidation is very important. In addition, the economic growth of the Republic of Srpska is largely influenced by the export / import capacity and the openness of the economy to the main foreign trade partners.

However, it is important to note that fiscal consolidation is very important for stable public finances, especially for small and open economies such as the Republic of Srpska. For this reason, it is very important to carry out fiscal consolidation because it establishes a balance between the realization of the deficit and real budgetary possibilities.

Regression analysis shows that there is a significant direct correlation between the fiscal stability of the Republic of Srpska and its economic growth because the correlation coefficient $r = 0.61$. The results of the regression analysis of the fiscal stability of the Republic of Srpska and its economic growth show that the coefficient of determination $r^2 = 0.37$, i.e. that changes in GDP are determined by variations in the budget balance of 37%. This shows that more than a third of GDP is determined by the fiscal stability of Republika Srpska. Therefore, for stable public finances and economic growth, a stable fiscal policy and stable public finances of the Republic of Srpska are necessary. Thus, it is very important to establish a balance between revenues and expenditures and prevent the creation of excessive deficits.

Table 2. The impact of the fiscal stability of the Republika Srpska on its economic growth.

Dependent Variable: GDP
Method: Least Squares
Date: 04/28/22 Time: 15:21
Sample: 2012 2021
Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.375990	1.319371	4.074661	0.0036
DEF	1.267062	0.579356	2.187017	0.0602

R-squared	0.374171	Mean dependent var	3.579081
Adjusted R-squared	0.295942	S.D. dependent var	3.890518
S.E. of regression	3.264462	Akaike info criterion	5.380923
Sum squared resid	85.25369	Schwarz criterion	5.441440
Log likelihood	-24.90462	Hannan-Quinn criter.	5.314536
F-statistic	4.783042	Durbin-Watson stat	1.052355
Prob(F-statistic)	0.060200		

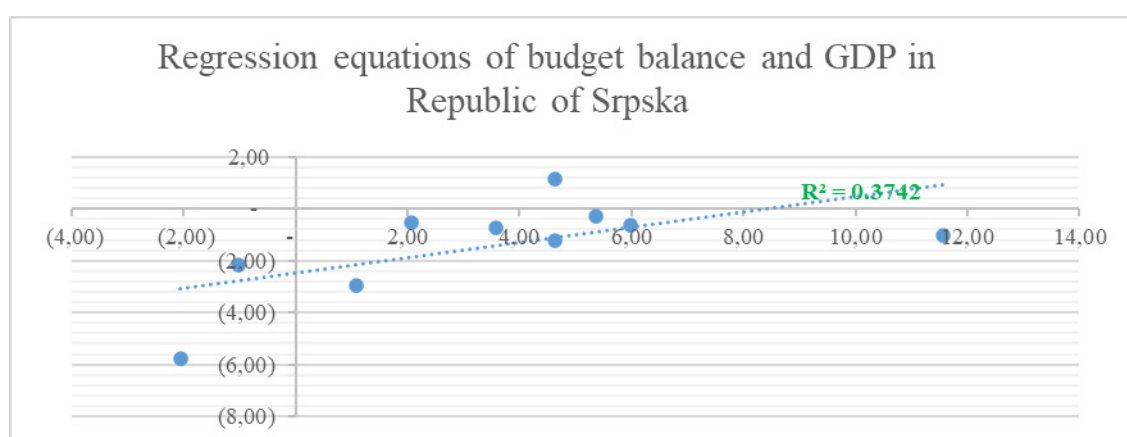
Data from the Ministry of Finance of the Republic of Srpska (2012-2021).

Note: For 2021, the data defined by the Budget Rebalance for 2021 were used. The final results of the Consolidated Budget Execution Report are not available.

Source: Author's analysis.

F-test results, standard errors and probabilities of less than 6% confirm the significance of the model that measured the impact of fiscal stability of Republika Srpska on its economic growth. Graph 2. Graph of the regression equation of the structural budget balance and GDP in the Republic of Srpska.

Figure 2. Regression equations of budget balance and GDP i Republic of Srpska.



Source: Author's creation.

The regression equation $Y = 5.31x + 1.26 \cdot (BB)$ shows that any successful fiscal consolidation in Republika Srpska that results in a 1% improvement in the budget balance leads to a 1.26% increase in GDP. It is clear that stable public finances, which are the result of successfully implemented fiscal consolidation, have a very positive effect on the GDP growth of Republika Srpska.

4. DISCUSSION

This research aimed to show the extent to which the consequences of the COVID-19 crisis are being measured. In addition, it is shown how the Republika Srpska carried out fiscal consolidations in the period 2011-2021. With the help of the criteria of success and expansiveness of fiscal consolidation, the period, methods and effects of its implementation have been determined.

Based on the analysis of connectivity, fiscal stability and GDP growth rate, it is evident that Republika Srpska, as well as other countries with a lower level of development, measured by GDP per capita, have a greater need for stable public finances (Gojković, 2021).

The impact of the fiscal stability of the Republika Srpska on its economic growth was determined with the help of regression analysis and EVIEWS 11 statistical software.

Similar to other surveys of less developed countries, fiscal consolidation carried out primarily by reducing expenditures has been found to be more efficient than consolidations based on increasing revenues. Therefore, the fiscal stability of the Republika Srpska is very important. The expansiveness of the fiscal consolidation carried out in 2021 can be seen in the coming fiscal years.

This analysis, as well as the analysis conducted in other countries, showed that stable public finances are very important for small open economies such as the Republika Srpska. Stable public finances are especially important in times of crisis such as COVID-19. The results of previous research show that small economies also require stricter fiscal rules. Stricter fiscal rules would allow for stable public finances, especially in times of recession.

5. CONCLUSION

The fiscal consolidation of the public finances of the Republic of Srpska was necessary due to the consequences caused by the COVID-19 crisis and due to the enormous growth of the deficit. The analysis proves that the measures applied to remedy the crisis have resulted in an improvement in fiscal stability, which was reflected in the basic macroeconomic indicators in the first part of 2022. According to the used criteria, the analyzed fiscal consolidations in the Republic of Srpska were successful and in a certain part expansive. They were implemented mostly through a reduction in expenditures, but also in an increase in revenues.

The consolidation carried out in 2015 was based on an increase in revenues, as well as an increase in expenditures. In contrast, the fiscal consolidation carried out in 2021 by significantly reducing expenditures reduced the huge deficit achieved in 2020, which is largely the result of the COVID-19 crisis.

The analysis showed that stable public finances with 37% contributions affect the GDP growth rate. Also, the analysis shows that the measures implemented during the fiscal consolidation process in 2021 significantly helped in resolving the crisis caused by the COVID-19 crisis. For the implementation of the Fiscal Consolidation Program of the Republic of Srpska envisaged for the period from 2021 to 2023, it is necessary to improve budget management and provide additional impetus to economic growth. Given the obligation of fiscal consolidation in the coming period, it is necessary to take into account the further process of borrowing and ensure the implementation of fiscal consolidation measures in a way that does not violate the fiscal rule related to public debt.

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