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FISCAL CONSOLIDATION: PRECONDITION FOR GROWTH

Fiskalna konsolidacija:
preduslov za rast

Abstract

The fiscal multiplier shows to what extent fiscal consolidation (reduction of public expenditure) slows down economic activity. In extreme cases, large fiscal multiplier may lead to significant reductions in GDP and public revenues after fiscal consolidation – so much so that, instead of the expected reduction, it results in an increase of the public debt-to-GDP ratio and a deterioration of the fiscal position of the country. We have shown that fiscal multipliers in Serbia are much lower than in developed European countries – they are almost insignificant in the period of expansion, and may reach 0.5-0.6 in times of crisis. Therefore, in Serbia, fiscal consolidation would exercise lower negative impact on economic activity and, undoubtedly, improve the health of the public finances. Moreover, although fiscal policy in Serbia was far less prudent than in other countries in the region (considerably larger fiscal deficit and a much faster increase in public debt), the decline in economic activity was not mitigated, hence also pointing to low fiscal multipliers. On the other hand, the expansionary fiscal policy makes the public debt crisis threat quite probable in Serbia. Therefore, fiscal consolidation in Serbia is not only economically desirable, but it is also now the only option that Serbia has.

Key words: *fiscal consolidation, fiscal multipliers, critical fiscal multiplier, public debt*

Sažetak

Fiskalni multiplikator pokazuje koliko fiskalna konsolidacija (smanjenje javnih rashoda) usporava privrednu aktivnost. U ekstremnim slučajevima, veliki fiskalni multiplikator može da dovede do znatnog umanjenja BDP-a i javnih prihoda nakon fiskalne konsolidacije – toliko da umesto očekivanog smanjenja učešća javnog duga u BDP-u dođe do njegovog povećanja i pogoršanja fiskalne pozicije zemlje. Pokazali smo da su fiskalni multiplikatori u Srbiji znatno niži nego u razvijenim evropskim zemljama – gotovo su beznačajni u vremenu ekspanzije, a u vremenu krize mogu da dostignu 0,5-0,6. Dakle, fiskalna konsolidacija bi u Srbiji imala manji uticaj na privrednu aktivnost i nesporno bi poboljšala zdravlje javnih finansija. Dodatnu potvrdu malog uticaja državne potrošnje na rast nalazimo i u kretanjima fiskalnih i ekonomskih indikatora u prethodnih pet godina. I pored toga što je fiskalna politika u Srbiji bila daleko manje odgovorna nego u drugim zemljama regiona (osetno veći fiskalni deficit i mnogo brži rast javnog duga), pad privredne aktivnosti nije bio manji. Sa druge strane ekspanzivna fiskalna politika je dovela do toga da mogućnost izbijanja krize javnog duga u Srbiji postane realna opasnost. Stoga, fiskalna konsolidacija u Srbiji je ne samo ekonomski opravdana već trenutno i nema alternativu.

Ključne reči: *fiskalna konsolidacija, fiskalni multiplikatori, kritični fiskalni multiplikator, javni dug*

Introduction

There is no single answer to the question of what drives high and sustainable economic growth. Government spending is only one of many factors that have some impact on economic growth. This paper offers some economic analysis and the survey results which show that in Serbia the impact of government spending on economic activity is not large. Therefore, its considerable decrease (fiscal consolidation) would have a very limited impact on the reduction of economic activity. On the other hand, absence of a strong reduction in public spending would inevitably result in public debt crisis and a plunge of GDP. This is why fiscal consolidation is currently the only possible and economically feasible fiscal policy in Serbia – even in the conditions of slow growth or stagnation.

In the past five years, Serbia had expansive rather than restrictive fiscal policy. Despite the odd austerity measures such as limiting pension and public sector salaries rise, as well as tax rate increases, the true character of fiscal policy was reflected in the overall trends of fiscal deficit and public debt – and these increased in Serbia. The explanation for this partly lies in increased government spending for covering losses of public and state-owned enterprises and banks, which cancelled the above mentioned savings achieved. The interventions in the banking sector alone cost the country more than 800 million euros, and approximately same amount government guarantees for borrowings of public utility Srbijagas (which represents an implicit subsidy and the actual government expenditure).

Expansive fiscal policy, however, did not solve the problems in the economy nor did it spur economic growth. Regional analysis (the first section) shows that, in the past five years, the average fiscal deficit in Serbia was higher by 1.5% of GDP than in the region, and the debt to GDP ratio grew almost twice as fast than in comparable countries. According to the rate of GDP growth achieved in the previous five years, however, Serbia was quite an average country in the region. Therefore, fiscal policy in Serbia could be evaluated as less prudent than in other countries in the region, and by no means as a thoughtful economic policy response to the crisis.

On the other hand, expansionary fiscal policy resulted in a situation that Serbia is now seriously threatened by a public debt crisis. The size of public debt of more than 63% of GDP and its growth of over 30 percentage points of GDP in just five years indicate that the continuation of unchanged fiscal policy is unsustainable. In 2014, the annual appropriations of funds for interest payments on the debt will amount to around one billion euros – representing their increase by more than five times compared to 2008. The increasing government borrowing to finance the structural deficit, but also for servicing previous debts is unsustainable in the medium term.

To reverse these trends and avoid a public debt crisis, we must make a shift in the following years – implement fiscal consolidation, and sharply cut public expenditure and the deficit. Even that, however, will not be sufficient to reduce the debt to GDP ratio and avoid the crisis if the problems in the banking sector and the performance in public and state-owned enterprises are not resolved as well.

Significant reduction of fiscal deficit in the EU, however, initiated numerous debates about whether excessive fiscal tightening may be counterproductive in times of recession and slow economic growth. Namely, the reduction in public expenditure (or increasing public revenues), has a certain influence on the reduction of economic growth, which in some countries (such as Greece, for example) in the end may result in an increase, not a reduction in the debt to GDP ratio after austerity. In these cases, fiscal consolidation is said to be self-defeating, since it produces opposite effects to those intended.

We have however shown that this cannot be the case in Serbia (the second section). The standard measure that shows how changes in government spending affect GDP is the fiscal multiplier. Although there isn't accurate econometric estimate of fiscal multipliers for Serbia, there are a number of studies that lend opportunity to assess the size of the multipliers in the country with similar characteristics as Serbia. Therefore, we can say with considerable certainty, that the fiscal multipliers for Serbia are significantly lower than those for the EU countries and that in times of economic expansion they probably range between 0 and 0.2, and may reach 0.5-

0.6 in times of crisis. The relatively low fiscal multipliers explain why expansionary fiscal policy in Serbia did not bring faster economic growth in the past.

Analysis, thus, shows that fiscal consolidation in Serbia would undoubtedly improve the health of its public finances and have a limited impact on economic growth. Therefore, the best and most powerful economic policy response to slow economic growth and a number of problems that the Serbian economy is facing should not be sought in the level of public expenditure nor in the amount of tax rates. The truly supportive measures for growth would be those related to the improvement of business environment, reforms (which have been a subject of talks for years, but have never been implemented) and the attraction of foreign direct investment – and there is empirical evidence for this. In Serbia, government expenditure can best contribute to economic growth by preventing public debt crisis and ensuing collapse of output and that means cutting expenditure.

Fiscal policy and economic growth in Serbia and the region in the period of 2009-2013

The escalation of the global economic crisis has significantly affected the Southeast Europe region, which resulted in the contraction of economic activities with strong growth of unemployment, increase in the fiscal deficit and public debt growth. Serbia was no exception in this respect, and some trends were more pronounced than in other countries in the region. In order to analyse the regional context of fiscal policy and achieved economic growth in Serbia, we have taken a sample of countries that, we consider, can be useful in describing regional trends. Apart from Serbia, this sample also comprises its neighbouring countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Macedonia, Montenegro, and Romania (the Region). The observed indicators for these countries were their economic growth, fiscal deficit and public debt growth since 2009.

After 2009, all the countries of the region faced the same or nearly the same issues as Serbia. The decline in economic activity and particularly pronounced decline in

public revenues¹ resulted in a large increase in the fiscal deficit and public debt. Reactions to the deteriorating fiscal trends, however, were different in individual countries. We wished to explore how fiscal policy in Serbia differed from that in the region and if possibly different fiscal policy making had an impact on economic growth.

The analysis of regional data indicates that, in the past five years, Serbia led less prudent fiscal policy as compared to other observed countries. In the past five years, Serbia had significantly higher fiscal deficit and considerably faster growth of the public debt than other countries in the region. Serbia did limit the rise of pensions and public sector salaries and it also rose some taxes rates (VAT, income tax), but other countries had even more aggressive adjustment of public finances. Perhaps somewhat extreme, but certainly an indicative example is Romania, which increased the VAT rate from 19 to 24%, reduced public sector salaries by 25%, froze pensions and reduced some of the rights and appropriations of funds for unemployment and child benefits. Furthermore, Serbia also had an escalation of other problems related to the poor performance of public enterprises and local banks which contributed to the fact that the national debt grew much faster than in any of the neighbouring countries.

At the onset of the crisis (2009), Serbia had an arrangement with the IMF; therefore, in the period of 2009-2010, it realized a smaller fiscal deficit compared to other countries in the region. After that, the trends in Serbia diverged from those in other countries in the region, as the deficit in Serbia grew, while in most other countries it dropped significantly.

The regional analysis showed that despite significantly higher fiscal deficit and much faster growth of public debt, GDP growth in Serbia was similar to that in other comparable countries in the region. This suggests that, if observed separately, government spending in Serbia probably does not have as big an impact on economic activity, such as for example is the case in developed countries – which will be explained in more detail in the following parts. Therefore, it is economically justified for Serbia to significantly increase fiscal tightening in the

1 As a result of the change of the growth model that in the pre-crisis period relied on domestic demand which generates abundant tax revenues

coming years, since it is already lagging considerably behind other countries in the region in terms of the implementation of such measures.

Trends in economic activity in Serbia and in the region in the period of 2009-2013

Trends in economic activity in the countries of the region were estimated based on the average GDP growth in the five-year period of 2009-2013. Despite the slightly higher average growth rates of GDP, economic growth of Serbia was not significantly different from that in other countries of the region. Table 1 shows average GDP growth in Serbia and other countries of the region.

Table 1: Serbia and the region, average GDP growth rates, 2009-2013

	Average GDP growth rates in the period of 2009-2013 (%)
Albania	2.6
Bosnia and Herzegovina	-0.2
Bulgaria	-0.4
Croatia	-2.4
Hungary	-1.1
FYR Macedonia	1.4
Montenegro	0.2
Romania	-0.6
Serbia	-0.1
Regional average (weighted)	-0.6

Source: IMF World Economic Outlook (9), data for Serbia Statistical Office of the Republic of Serbia

The table shows that, in the observed period, the average growth rate in Serbia was -0.1%, and that three countries had higher, while four countries had lower economic growth than Serbia, whereas Bosnia and Herzegovina had approximately the same growth as Serbia. The realized weighted average growth of the entire region was slightly lower than in Serbia and amounted to -0.6%. The difference in growth of 0.5 percentage points, however, is significant only in the long term, and in a period of several years, it can be changed by adding one or two years and is not considered to be significant.

A more detailed analysis, on the other hand, also indicates that the trend of economic growth in Serbia was nevertheless average compared to other observed countries and that, in terms of economic activity, Serbia did not have much better experience than the region. Namely, the higher growth (i.e. smaller decline in economic activity) in

Serbia can almost completely be explained by exogenous factors, which include the investment and the launch of production at Fiat Automobiles Serbia. Over the past five years, about 2% of the realised GDP in Serbia was the result of the investment and net exports of this company, which increased the average rate of GDP growth by about 0.4 percentage points.

The projections of GDP growth for 2014 are slightly lower in Serbia than in other countries in the region. According to the EBRD projections of January 2014, it is expected that, in 2014, all the countries in the region, save Croatia, will have a higher rate of GDP growth than Serbia. If we included the forecast for 2014 into the existing data for the period of 2009-2013, over the extended period, the average growth rate of Serbia would become even closer to the regional. Therefore, it could easily be concluded, given the arguments outlined in the previous paragraph, that from 2009, the trend of GDP in Serbia was essentially at the level of the regional average, and that it might even be that it was slightly lower.

Trends in fiscal deficit in Serbia and in the region in the period of 2009-2013

In contrast to economic growth, according to which Serbia was no different from other countries in the region, in the observed five-year period, Serbia's fiscal deficit was noticeably higher than in all other observed countries. Similarly to the previous part, Table 2 shows average fiscal deficits in the period of 2009-2013 for Serbia and other countries in the region.

Table 2: Serbia and the region, average fiscal deficit, 2009-2013

	Average fiscal deficit in the period of 2009-2013 (% GDP)
Albania	-4.8
Bosnia and Herzegovina	-3.3
Bulgaria	-1.8
Croatia	-4.6
Hungary	-1.9
FYR Macedonia	-3.1
Montenegro	-4.4
Romania	-4.6
Serbia	-5.3
Regional average	-3.8

Source: IMF World Economic Outlook (9), data for Serbia Ministry of Finance of the Republic of Serbia

Table 2 shows that, in the five-year period, the average deficit in Serbia amounted to 5.3% of GDP and was higher than in all other observed countries. Compared to the regional average, fiscal deficit in Serbia was significantly higher and the difference was 1.5% of GDP.

As with the analysis of the trends in GDP, we have analysed data on fiscal deficit to a more detailed level, taking into account the methodological and other factors that could affect the conclusion of the analysis. The definition of fiscal deficit in Serbia is particularly subject to different interpretations depending on how state intervention “below the line” is treated.² In other countries, we have also analysed the impact of certain one-off factors on their average deficit during the observed period.³ In addition to all that, we have also varied different assumptions for calculating the average value of the regional deficit (weighted and unweighted average)⁴. All the analyses have shown that the fiscal deficit in Serbia was significantly higher than in all other observed countries and that the measure of this deviation is around 1.5% of GDP on average per year.

It is important to note that Serbia is also one of the few countries in the region in which, with some oscillations, fiscal deficit increased since the crisis began. Thus, in 2009, Serbian fiscal deficit amounting to 4.5% of GDP was lower than the average in the region. The trend after 2009 was that fiscal deficit in Serbia grew, while in most other countries (Hungary, Romania) it dropped strongly due to the implementation of various programs of fiscal consolidation (from 2009 to 2013, Romania reduced its deficit by as much as 5 percentage points of GDP).

2 Our intention was to remove any suspicion that methodological factors are the reason why fiscal deficit in Serbia was significantly higher than in other observed countries. It was one of the reasons why we used the data from the Ministry of Finance on the deficit for Serbia, which in some cases indicate lower deficit than the IMF methodology (2013).

3 For example, in 2011, Hungary had one-time fiscal surplus of over 4% of GDP due to the nationalization of private pension funds.

4 In contrast to the economic growth of the region, which we calculated as the weighted average of the growth of individual countries, an appropriate measure for the deficit is the non-weighted average, because it in itself already takes into account the level of GDP of individual countries (deficit is measured as a percentage of GDP).

Trends in public debt in Serbia and the region in the period of 2009-2013

The third macroeconomic indicator for Serbia that we have analysed in further detail in the regional context is the public debt. According to this indicator, Serbia was by far the worst in the region (at the wider region level, only Slovenia had a similar increase). The reason for this deviation lies in larger fiscal deficit, but also a large increase in the public debt apart from the deficit – to finance the inefficient operations of public and state-owned enterprises and ruined banks. Table 3 shows the change in the debt to GDP ratio in Serbia and the region in the period of 2009-2013.

Table 3: Serbia and the region, increase of public debt from 3 December 2008 to 31 December 2013

	Changes in public debt from 2008 to 2013 ^{*)} (% GDP)
Albania	10.1
Bosnia and Herzegovina	11.1
Bulgaria	0.6
Croatia	28.5
Hungary	6.8
FYR Macedonia	14.8
Montenegro	26.5
Romania	24.5
Serbia	32.5
Serbia (comparative methodology)	31
Regional average	17.4

^{*)} End of period

Source: IMF World Economic Outlook (9), data for Serbia Fiscal Council of the Republic of Serbia

Table 3 clearly shows that the increase of public debt in Serbia was by far the highest compared to all other countries in the region. Compared to the regional average, in the period of 2009-2013, public debt growth in Serbia was almost twice as high, and stood at 32.5 percentage points of GDP compared to 17.4 percentage points of GDP.

Part of this difference (about 1.5 percentage points of GDP) can be attributed to methodological factors. Serbia, unlike other countries in the region, has a conservative methodology for calculating public debt, which initially includes all of the issued government guarantees for debts of other legal entities. In other countries, guarantees are included in the public debt only if activated (the EU methodology) [6]. The largest portion of the guarantees that the Serbian government has issued since 2009, however, have already been activated (Srbijagas, JAT, Galenika,

Zelezara Smederevo) – thus, they would be included in Serbia's public debt by both methodologies. Only a small portion of the guarantees that the government has issued since 2009 in the amount of about 450 million euros (about 1.5% of GDP), have been paid off independently by the companies that took the loans (EPS, Fiat Automobiles Serbia, the Air Traffic Control) – and these are loans that would not be included in the public debt in other countries in the region. Therefore, the Table 3 has an additional row which includes calculated increase in public debt in Serbia since 2009 if Serbia used the same methodology for calculating public debt as the rest of the observed countries.⁵

Another exogenous reason due to which public debt in the region could increase more slowly than in Serbia are the changes in real exchange rates. Namely, Serbia and all other countries in the region mainly borrowed in euros or dollars. If the currencies of the countries in the region had had substantial real depreciation or real appreciation – it would have led to a change in the debt to GDP ratio irrespective of all other factors. Available data⁶, however, indicate that this did not happen either in Serbia or in the region. From 2009, Hungarian currency lost about 5% of its real value, the currencies of Romania, Bulgaria, Serbia, and Bosnia and Herzegovina remained almost unchanged in real terms, and the Croatian kuna and Macedonian denar had a real appreciation by about 2%. Only Montenegro had somewhat greater real appreciation of about 5%.

Although there are some factors that could affect the changes in public debt (government deposits, privatization), it can be argued with great certainty that the real reason for the more rapid increase of public debt in Serbia compared to the region lies in less responsible fiscal policy making. As already shown in the previous section (Table 2), in the observed five-year period, Serbia had a significantly larger fiscal deficit in relation to other countries in the region. Larger fiscal deficit in general increases borrowing of the

government in order to finance it – and, consequently, leads to a more rapid increase of public debt. Fiscal deficit alone, however, could not account for all the differences in the increase of Serbia's public debt in relation to the remainder of the region. Namely, on average the fiscal deficit of Serbia was higher by 1.5 percentage points of GDP compared to other countries observed (Table 2) – which means that on this ground, in the past five years, Serbia's public debt could have risen by about 7.5 percentage points of GDP faster than that in the region.⁷ However, in the observed period, public debt in Serbia increased by as much as 14 percentage points of GDP faster than in the region (comparable methodology) – which is why we have further investigated the causes of this strong increase.

Basic causes of the increase of public debt in Serbia in the period of 2009-2013

As shown in the previous part of the paper, a significant portion of the extremely high growth of public debt in Serbia cannot be explained solely by the high fiscal deficit. Based on actual fiscal deficit in the past five years, the debt to GDP ratio in Serbia could have increased by about 25 percentage points.⁸ The actual increase in public debt would, however, have to be somewhat lower than that, since, in the past five years, Serbia had about 730 mln euros revenues from privatization (sales of NIS, etc.), so the government did not have to borrow funds in this amount. It follows that, from 2009, almost 10 percentage points of the increase in the public debt of Serbia (about 30% of the total increase) originated independently of the fiscal deficit.

Table 4 shows a detailed quantification and ranking of all the causes of the strong increase of public debt in Serbia over the past five years. Some of them will be analysed separately further on in the paper.

First, we are going to explain the one-off and objective factors that contributed to the change in the debt to GDP ratio in the past five years, these being changes in deposits and exchange rate changes. In the late 2013, by means of issuing euro-bonds, the government borrowed in the amount of USD 1 billion. Since this money could not be spent in

⁵ It is possible that, in the near future, public debts of Croatia and Montenegro will increase due to assuming the debts of shipyards and the Aluminium Plant Podgorica.

⁶ The data for the EU member states were taken from Eurostat, and for other countries the data of their central banks. We have found no available data for Albania.

⁷ The calculation is greatly simplified, but it is approximately accurate.

⁸ A detailed calculation has been used in this calculation.

Table 4: Serbia, reasons for increase in public debt from 31 December 2008 to 31 December 2013

	Reasons for public debt increase from 31 December 2008 (p.p. GDP)
Fiscal deficit	25.3
Issued government guarantees for borrowings	4.3
Off budget state interventions (ruined banks, settling defaults, recapitalisation)	2.5
Changes in government deposits	2.5
Changes in exchange rate	0.8
Revenues from privatisation	-2.2
Total increase December 2008 - December 2013	32.5

Source: The author's estimate based on the data from the Ministry of Finance of the Republic of Serbia

the last month of 2013, the year ended with unusually high deposits of the state, estimated at around EUR 1.2 billion. Although we do not have accurate information about the actual status of the deposit of the state at the end of 2008 (nor for 2013), we estimate that the change in the deposit contributed to the observed increase in the debt to GDP ratio with around 2.5 percentage points (since in 2008, there must have been several hundred million euros in deposits).

The largest part of Serbia's public debt (about 80%) was denominated in foreign currencies, and GDP is realised in dinars. Therefore, real exchange rate changes result in changes in the debt to GDP ratio. The real depreciation of the dinar from end of 2008 until end of 2013, however, was only about 1%, meaning that it increased the public debt in Serbia by about 0.8 percentage points. Therefore, changes in the dinar exchange rates⁹ and deposits of the state did contribute to somewhat faster growth of public debt in the past five years, but their impact was lower (exchange rate) and temporary (deposits).¹⁰

Apart from financing deficit, a significant part of the explanation for the growth of the public debt of Serbia in the past five years are government expenditures for funding inefficient operations of public and state-owned enterprises and ruined banks. Compared to the end of 2008, the share of issued government guarantees in GDP increased by 4.3 percentage points of GDP and other "below the line" interventions increased the public debt by 2.5 percentage points of GDP (Table 4). Converted to nominal

values, this corresponds to an increase in public debt by more than EUR 2.2 billion on these bases.

From 2009, there was a rapid expansion in the issuance of government guarantees on borrowings of legal entities (primarily public and state-owned enterprises – the majority of them for Srbijagas). According to the current definition of public debt in Serbia, all issued government guarantees are included in the public debt. From 2009, the share of the guaranteed debt increased by 4.3 percentage points, which, in most cases, were implicit government subsidies that were used to finance inefficient operations of public and state-owned enterprises (Srbijagas, Zelezara Smederevo, JAT, Galenika). The fact that the issuance of these guarantees really represents actual government expenditure was proven in 2013 and in 2014 when the guarantees were activated and the state took upon itself the obligation of servicing this debt.

In some other instances, the state directly borrowed to help its inefficient public enterprises, and also to solve problems at different levels of government, and it was not reflected in the deficit. These transactions were recorded "below the line", which, to put it simply, means that they increased public debt, and did not increase the deficit. Thus, for example, during 2009, the state borrowed 21.1 billion dinars [12] so that Public Enterprise "Roads of Serbia" could service their arrears to suppliers¹¹. Similarly, in early 2013, the state took over the liabilities of the health care institutions and local self-governments as well.

The government had an additional expenditure for covering the losses made by the ruined banks. Before

⁹ For reasons of simplification, we only observed a change in the exchange rate against the euro, but it should be noted that a certain portion of the public debt is indexed in dollars, so the calculation is not entirely accurate.

¹⁰ Similar conclusion can be found in [10].

¹¹ Roads of Serbia were included in the consolidated state although it is a public enterprise. Paying off their arrears in 2009 was not booked as a deficit item (nor were arrears repayments for the health care system and Environmental Protection Fund a few years later for that matter either)

closing Agrobanka, PBB, and RBV, the government had several unsuccessful attempts of recapitalization, and then the expenditure for returning the deposits of the closed banks.¹² It is interesting to note that a portion of the expenditures incurred for closing the banks have still not formally affected the public debt, but it will happen in 2014. The portion of the expenditure was funded by the Deposit Insurance Agency. Therefore, the Deposit Insurance Agency lost its funding, so that in 2014, it will recapitalize and borrow (with government guarantees) about 350 million euros, which will increase public debt in 2014.

In addition to all of the above, over the past five years, there were other government interventions that increased public debt, but not the deficit as well. Thus, during the 2012, the government borrowed the amount of 100 million euros to recapitalize Komercijalna banka. It is possible that there were some other expenses and government interventions that were not recorded as deficit, but such an analysis would require additional research.

Challenges and feasibility of implementing fiscal consolidation in Serbia

At the end of 2013, the debt to GDP ratio of 63.7 % (estimated by the Fiscal Council) and its rapid growth by over 30 percentage points of GDP in just five years indicate that the continuation of unchanged fiscal policy is unsustainable. In 2014, the annual appropriations for the payment of interest on the debt alone will be around one billion euros - representing an increase by more than five times compared to 2008. In response to the worsening fiscal flows, low economic growth and the absence of reform, credit agencies have lowered credit rating for Serbia, which makes new government borrowing more expensive and increases caution among investors when investing in government securities.¹³ If investors completely lost confidence in the ability of Serbia to repay its debts (which will inevitably happen at some point should these

fiscal trends continue), the government would not have enough funds to service its liabilities, which would result in a public debt crisis – a plunge of GDP (by more than 5%), loss of value of the local currency, high inflation and a big drop in living standards.

Despite the obvious need for a shift in fiscal policy, public opinion (even that of economists) often is that restrictive fiscal policy does more harm than good to Serbia and that it deepens the problems. Restrictive fiscal policy implies the tax rate increases and restricting the raises of pensions and salaries (which were the main measures to reduce the deficit used in the previous years). However, simultaneous increase in other government expenditures, as a rule, is not considered in the same context. Trends in the overall deficit reflect the synthetic nature of fiscal policy, and as the deficit grows, this is no longer restrictive, but expansive fiscal policy. In particular, we would like to draw attention to the enormous fiscal problems and expenditures that arise due to poor performance of public and state-owned enterprises and banks. In 2014, these expenses will, for example, be twice the size of all the savings that will be achieved by introducing the solidarity tax and the increase in the lower VAT rate – which best illustrates the fact that the savings (which are criticized) in fact was not even achieved, if we consider all the revenues and expenditures. With this in mind, it is obvious that without straightening the operations of state-owned enterprises and banks, any implementation of fiscal consolidation in the coming years is unlikely to succeed.

The question is whether the controversies in the global professional community caused by the implementation of fiscal consolidation in times of crisis and slow growth could even apply to Serbia. The wrongly interpreted echo of these discussions could be recognized in the local public as well in the platitude: “austerity or growth”. However, neither are austerity and growth two mutually excluding concepts, nor does Serbia have much choice with the current state of public finances. For Serbia, it could rather be said “austerity as a prerequisite for growth”, because without austerity, public debt crisis and a sharp drop in economic activity are imminent. Despite this quite obvious relation, it is our opinion that the causal link between reducing public spending and the impact that

¹² During the closing of Universal Bank, for the first time the government paid off insured deposits only (EUR 50000), and before that, it paid off all deposits.

¹³ The latest decrease was in January 2014, when Fitch credit agency lowered credit rating for Serbia from B+ to BB-

it has on the public debt and economic activity deserve a thorough and sound analysis.

Justification of fiscal consolidation in Serbia – Is fiscal consolidation self-defeating?

Under pressure from the rapid growth of public debt almost all EU countries have launched programs of fiscal consolidation. The goal of these consolidations is first to slow down and then to reverse the rising trajectory of debt to GDP ratio. Significant reduction of fiscal deficit in the EU, however, initiated numerous debates about whether excessive fiscal tightening may be counterproductive in times of recession and slow economic growth. Namely, the reduction in public expenditure (or increasing public revenues), has a certain influence on the reduction of economic growth, which in some countries (such as Greece, for example) in the end may result in an increase, not a reduction in the debt to GDP ratio after austerity. In these cases, fiscal consolidation is said to be self-defeating, since it produces opposite effects to those intended.

Since Serbia is facing similar, if not greater, problems of high and rapidly growing public debt, we have analysed whether the implementation of fiscal consolidation in Serbia can be self-defeating. We have shown that even in case of stagnation of economic growth in the coming years (zero growth rate), a reduction in fiscal deficit undoubtedly has a positive impact on the reduction of the debt to GDP ratio - and that, in this respect, there is no alternative for austerity.

The dynamic functions between deficit, debt and GDP can be derived from a simple identity set: public debt at the end of the year is equal to the debt at the end of the previous year plus the deficit in the current year.¹⁴

$$\text{Debt} = \text{Deficit} + \text{Debt}_{t-1} \quad (1)$$

where symbol „-1“ denotes the level of debt at the end of previous year. To get the value as a percentage of GDP, we have divided both sides of the equation by GDP. Some more exact equation would imply that the deficit is further cut into primary deficit and real interest rate

expenditures, but for the purposes of this analysis, it is not necessary. Other analyses of self-defeating effects of fiscal consolidation also use this correct, but somewhat simplified formula [7].

$$\text{Debt}/\text{GDP} = \text{Deficit}/\text{GDP} + (\text{GDP}_{t-1}/\text{GDP})(\text{Debt}_{t-1}/\text{GDP}_{t-1}) \quad (2)$$

It is obvious that $\text{GDP}_{t-1}/\text{GDP}$ is in fact inverted growth rate which can also be represented as $1/(1+g)$, where g is GDP growth rate in percentage. Now the relation is decomposed to basic factors affecting the change in the debt to GDP ratio.

$$\text{Debt}/\text{GDP} = \text{Deficit}/\text{GDP} + (\text{Debt}_{t-1}/\text{GDP}_{t-1})/(1+g) \quad (3)$$

The debt to GDP ratio depends on the size of fiscal deficit, debt to GDP ratio at the end of the previous year and the rate of economic growth (Gross 2011).

It is now necessary to examine what happens to the debt to GDP ratio if the government implements fiscal consolidation, i.e. reduces public expenditure. It is not so easy to calculate the impact of austerity on the reduction of public debt, as it may seem at first glance, since the reduction of public expenditure has multirole effects on the deficit and GDP.

First, lower public expenditures decrease fiscal deficit and thus directly reduce the growth of public debt. Namely, fiscal deficit is the first summand in equation (3), and its increase/decrease is reflected in the size of public debt.

Second, a reduction in public expenditure results in a reduction of GDP, which, in equation (3) is the denominator of debt (Debt/GDP). Smaller denominator (GDP) means that, on this basis, a reduction in government spending results in an increase of debt to GDP ratio.

Third, the reduction in GDP caused by reductions in government spending will also reduce government revenues (automatic stabilizer) – which will reduce the effects austerity has on reducing the deficit.¹⁵ According to equation (3), increased deficit leads to an increase in the debt to GDP ratio.

From these relations, we can see that the critical factor that makes the difference between a successful fiscal

¹⁴ Serbia's public debt grows independently of the deficit mainly due to the issuance of government guarantees on borrowings by public enterprises, but that part of the increase in public debt does not belong to this analysis. Also, for now, we will ignore the possible change in the exchange rate, privatization and other.

¹⁵ Empirical evaluations of automatic stabilizers in Serbia are 0.33 to 0.36 (Arsić at al 2012). To simplify the matter, but approximately accurately, we can assume that the tax revenues to GDP ratio will remain constant when the GDP changes (in Serbia, this share is approximately 35%). This means that with a reduction of GDP by 1%, public revenues decrease by 0.35% of GDP.

consolidation and a self-defeating fiscal consolidation is the impact reduced public expenditure has on GDP. Namely, if the impact of reducing public expenditure on GDP is high, then the debt/GDP ratio will grow due to lower GDP, and lower GDP will also result in lower revenues and nullify a substantial portion of the effects of austerity measures. If the impact of reducing public expenditure on GDP is lower, the dominant influence on the change in the debt to GDP ratio will be achieved through the reduction of deficit and the ratio will decline.

The standard indicator which shows how much GDP is reduced with a change in public expenditure is the fiscal multiplier. The fiscal multiplier tells us by how much GDP will change when government expenditure changes by a certain amount. For example, if a reduction in government spending of 100 dinars results in a decrease of GDP by 50 dinars – the fiscal multiplier is 0.5.

Back to equation (3) now. At the end of the 2013, the public debt ratio amounted to 63.7% of GDP.¹⁶ Let us assume, conservatively, that in 2014, the rate of GDP growth in Serbia will be equal to zero and that the Government decides to implement fiscal consolidation measures (austerity) of 1% of GDP during the year. The question we are asking is: what is the critical fiscal multiplier for Serbia that would, under these conditions, result in increased debt to GDP ratio instead of the expected reduction (the limit after which there is self-defeating fiscal consolidation)?

Calculations show that in this case the critical value of the fiscal multiplier that would bring Serbia self-defeating fiscal consolidation is 1.01 (which is, for example, much less than the critical fiscal multiplier for Greece, it being less than 0.5).

This is obtained from the following:

$$\text{Debt}/\text{GDP} - \text{Debt}'/\text{BDP}' > 0 \quad (4)$$

where ' means values of debt and GDP after reducing public expenditure by 1% of GDP. Therefore, this inequality requires that fiscal consolidation is not self-defeating, because the debt to GDP ratio that would be achieved without austerity is greater than that which would be achieved after austerity.

¹⁶ For reasons of conservatism, we have included guaranteed debts of companies that will almost certainly pay off their own liabilities (EPS, Fiat, APEX, the EIB loans, etc.).

A combination of this relation and equation (3) produces the following:

$$(\text{Deficit}/\text{GDP} + (\text{Debt}_{-1}/\text{GDP}_{-1})/(1+g)) - (\text{Deficit}'/\text{GDP}' + (\text{Debt}'_{-1}/\text{GDP}'_{-1})/(1+g')) > 0 \quad (5)$$

And the deficit after austerity can also be expressed as follows:

$$\text{Deficit}' = \text{Deficit} - \Delta \text{Deficit} \quad (6)$$

Where, due to lower orders of magnitude, $\text{Deficit}'/\text{GDP}' \approx \text{Deficit}/\text{GDP}$. Now, the new equation is as follows:

$$(\text{Debt}_{-1}/\text{GDP}_{-1})/(1+g) + \Delta \text{Deficit}/\text{GDP} - (\text{Debt}'_{-1}/\text{GDP}'_{-1})/(1+g') > 0 \quad (7)$$

Further on, g' and $\Delta \text{Deficit}$ may be expressed as a function of reductions in government spending and hence derive the critical value of the fiscal multiplier for Serbia (when the above inequality is equal to zero). We are not intending to do this at this point, because the formula becomes too large.

However, we are going to show that the above inequality with critical fiscal multiplier of 1.01 satisfies this inequality (produces a value of zero). Reducing expenditure by 1% of GDP, with this value of the fiscal multiplier, would lead to a lower growth rate g by 1.01 percentage points, and since in our example the initial growth rate is zero, the value of g' becomes -1.01%. The value of $\Delta \text{Deficit}$ with fiscal deficit of 1.01 and reduced public expenditure by 1% of GDP amounts to 0.646% of GDP.¹⁷ Now, the above formula produces the following values:

$$0,637 + 0,00646 - 0,637 / (1 - 0,0101) = 0 \quad (8)$$

Thus if Serbia had a higher fiscal multiplier than 1.01 i.e. if the reduction in public expenditure by 1% of GDP results in GDP lower by 1.01%, fiscal consolidation would be self-defeating. Otherwise, if the fiscal multiplier is less than 1.01 - a reduction in government spending also lowers debt to GDP ratio. Since the fiscal multiplier for Serbia is not greater than 0.5 to 0.6, as we are going to demonstrate in the next part of the paper, in Serbia austerity undoubtedly improves the health of its public finances.

Let us recall, nevertheless, once again that the critical value of the fiscal multiplier was calculated with zero growth rate. In the next three years, the expected average growth rate for Serbia is 1.6%, and in that case,

¹⁷ $\Delta \text{Deficit} = \text{expenditure reduction} - \text{stabilizer} * (g - g') * \text{GDP}$

the critical fiscal multiplier would be even higher, which is then far above the actual fiscal multiplier in Serbia.

What are the fiscal multipliers in Serbia?

There is no such thing as *the multiplier*, as it varies with its determinants, e.g. the exchange rate regime, size and openness of economy, expansion and downturn etc. Hence it is not easy to come out with accurate estimate of fiscal multipliers. However, there are a number of studies on the size of fiscal multipliers which provide a basis for assessing the possible value of multipliers in a country with similar characteristics as Serbia. Therefore, we can say with considerable certainty, that the fiscal multipliers for Serbia are significantly lower than those for the EU countries and that in times of economic expansion they probably range between 0 and 0.2, and may reach 0.5-0.6 in times of crisis.

The latest research of the size of fiscal multipliers for 10 new EU member states¹⁸ [1] was particularly useful for determining the approximate size of fiscal multipliers in Serbia. Based on a sample of Central and Eastern European countries, this paper confirms a number of theoretical predictions and empirical findings on the size of fiscal multipliers and the impact that they have on factors such as the size and openness of the economy, the exchange rate regime, the recession, etc. – which we are going to compare with Serbia. This study also covers separately the period of current Great Recession, hence coming out with multiplier estimates that are relevant for assessing the effects of fiscal consolidation in Serbia during current crisis.

Small and more open economies have a lower size of fiscal multiplier. Economic theory predicts, and empirical evidence supports these predictions [8], that greater economic openness leads to a lower fiscal multiplier. In more open economies, the change in government expenditure will transfer more onto imports and less on the increase in purchases of local products and hence reduce fiscal multiplier. In large economies, however, after an increase in imports, there is also a certain increase in exports, so

fiscal multiplier does not reduce so much with the openness of economy as in small open economies. According to all the criteria, Serbia is a small and open economy,¹⁹ and the fiscal multiplier for both criteria is low.

Developed countries have higher fiscal multipliers than developing countries. A possible reason for this result (which is confirmed in empirical research) is greater confidence that markets have in developed than in developing countries, and they do not “punish” them even when their deficits and public debt is relatively high. The link between the development of a country and its fiscal multiplier is implicitly confirmed by *Arsić, Nojković, and Petrović* [1] because the sizes of fiscal multipliers obtained for the EU10 countries are lower than those in developed countries and higher than those in developing countries. According to this criterion, Serbia would probably have lower fiscal multipliers than the EU10 countries.

High public debt lowers fiscal multipliers. *Ilzetzki et al.* [8] identified public debt of 60% of GDP as the limit after which fiscal multipliers lower. In countries where public debt is permanently above this limit, fiscal multipliers are lower independently of all other factors. Serbia exceeded this limit during 2013, and the growth of the public debt will inevitably continue for at least the next three years (until 2016), and it will therefore have lower fiscal multipliers in the coming years.

Flexible exchange rate regime and accompanying inflation targeting decrease fiscal multipliers. The plausible reason for the great difference in the size of fiscal multipliers that are obtained for the countries with fixed exchange rate and those with flexible exchange rate is different monetary policy that is typically pursued across different exchange rate regimes. Countries with fixed exchange rates and free capital flows practically do not have the freedom of independent monetary policy making. On the other hand, countries with flexible exchange rates, as a rule have accommodating monetary policy and increase interest rates after a fiscal stimulus, thus reducing the fiscal multiplier. Empirical evidence strongly supports this hypothesis. In the a sample of EU10 countries [1]

18 The sample included the following countries: Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.

19 The usual criterion of openness of an economy is the trading volume (imports and exports) that exceeds 60% of GDP. For Serbia, the trading volume in the 2013 was about 100% of GDP.

under flexible exchange rates fiscal multipliers are low and statistically insignificantly different from zero, while under fixed exchange rates they are above one.

In times of crisis, fiscal multipliers rise significantly. The responses that private consumption has to a change in government spending increases substantially in the times of crisis, and that can be explained by the rise in the number of households that spend all their revenues, and companies that are credit constrained. Therefore, in times of crisis, their consumption is more dependent on government stimulus. A stronger response of private consumption to changes in government spending increases fiscal multipliers. There is indirect evidence that in times of crisis, monetary policy becomes somewhat looser even in countries with flexible exchange rate and inflation targeting, which then allows for an increase in fiscal multipliers [1]. In the case of Serbia, it should be noted that even in times of crisis it maintained quite tight monetary policy, which is why we expect this increase to probably be considerably lower than in other countries.

Revenue fiscal multipliers are lower than expenditure multipliers. We, however, did not even consider revenue multipliers to be relevant for the case of Serbia, since fiscal consolidation will have to primarily be implemented at the expenditure side rather than the revenue side of the budget. There are several reasons for this. The recent tax rates increase did not leave much room for a further increase of budget revenues, the government expenditure is oversized in Serbia relative to comparable countries, and a successful fiscal consolidation is implemented by reducing expenditures rather than by increasing revenues. Table 5 shows basic values of fiscal multipliers obtained for the EU10 countries

Table 5 shows that, for the whole observed period, the value of (maximum) annual fiscal multiplier for the overall sample of countries was 0.58. However, there is a great difference resulting from a difference in the exchange rate regimes in individual countries. For countries with flexible exchange rate regimes, fiscal multiplier is almost

negligible, and for countries with fixed exchange rate regime, it is around 1.74. In times of recession, fiscal multiplier increased by about three times in the overall sample, from 0.48 to 1.51. Sample size for the crisis period does not allowed reliable estimation of multipliers under fixed and flexible regime respectively. However, we implicitly and roughly assess that, in times of crisis, fiscal multipliers for the EU10 countries with flexible exchange rate could be around 1.

As already demonstrated, Serbia shares common features with the group of countries from the survey with lower fiscal multipliers (a small open economy and flexible exchange rate). However, due to higher public debt and slightly lower level of development, Serbia would have to have even lower fiscal multipliers. Therefore, we tentatively estimate that fiscal multiplier in Serbia will be almost negligible in times of expansion (0-0.2), and that in times of crisis, it can increase to 0.5-0.6 at most.

There is also some anecdotal evidence to suggest that the fiscal multiplier for Serbia is relatively low (even in times of crisis). This can be concluded based on the data presented in the first section as well. There, we have, in fact, shown that despite less responsible fiscal policy (considerably higher fiscal deficit and public debt growth) compared to other countries in the region – Serbia did not have higher economic growth. Also, in some recent relevant analyses (Merrill Lynch 2014), fiscal multiplier used for Serbia in 2014 and 2015 is 0.6. Although there is no detailed explanation how this multiplier is estimated, it is entirely consistent with our findings.

The effects of fiscal consolidation and fiscal multipliers on public debt trajectory

In Serbia, fiscal consolidation or great cuts in government spending and the deficit would, in the medium term, first stop the increase, and then reduce the public debt to GDP ratio. The negative impact on economic growth in Serbia, which fiscal consolidation may have, is not a good enough excuse for its delay – because the alternative is crisis. This

Table 5: EU10 – An overview of annual fiscal multipliers

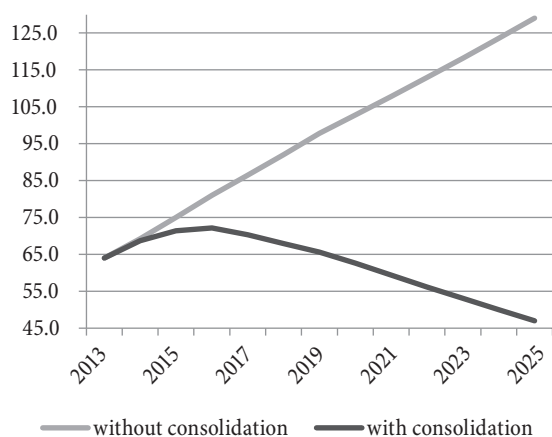
	Overall sample	Fixed exchange rate	Flexible exchange rate	Recession	Expansion
Maximum cumulative multiplier	0.58	1.74	0.13	1.51	0.48

Source: [1]

section illustrates possible trends of public debt in the coming years, with and without fiscal consolidation, as well as what impact different fiscal multipliers may have on the trajectory of public debt. It is evident that even with extremely high fiscal multipliers (which certainly do not apply to Serbia), fiscal consolidation turnaround public debt to GDP ratio trajectory i.e. from increasing trend to decreasing one.

Figure 1 shows trends in public debt with and without fiscal consolidation. We would like to note that the graph is illustrative and cannot be fully trusted to show the correct value of public debt in the coming years. Namely, the public debt to GDP ratio is influenced by numerous factors that are unpredictable, such as: the dinar exchange rate, future interest rates, possible privatizations, economic growth rates, as well as the rate of fiscal consolidation which would be pursued. Yet, the graph is completely reliable in terms of the direction of the debt trajectories with and without fiscal consolidation.

Figure 1: Serbia – Public debt to GDP ratio with and without fiscal consolidation



Source: the author's estimate base on the data from the Ministry of Finance

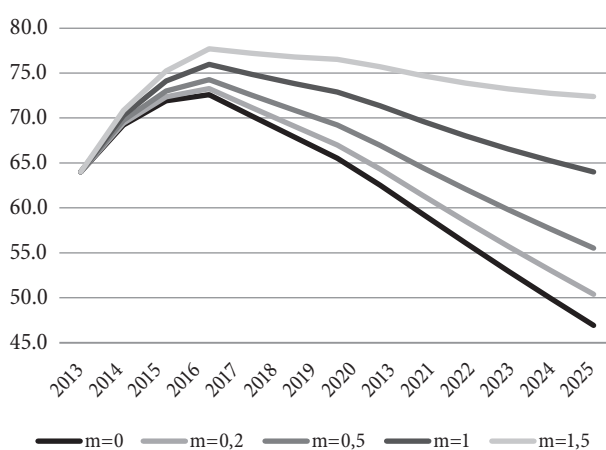
In the first scenario, without fiscal consolidation, we assumed that the primary deficit²⁰ in the coming years will remain unchanged and that it will be around 3% of GDP (slightly lower than that expected in 2014). In the second scenario (fiscal consolidation) we assumed savings of around 0.5% of GDP in 2014 and further reduction in the primary deficit by about 1.5% of GDP per year until 2017.

²⁰ Deficit without appropriations for interest rates

The graph shows that the public debt will inevitably grow until 2017 – in both cases. Without fiscal consolidation, however, it is impossible to stop the growth of the public debt to GDP ratio even after 2017, despite high rates of economic growth (higher than 4%). Namely, if the primary deficit remains unchanged and the appropriations for interest rates continue to grow, this means that the total deficit shall grow. Higher total deficit increases public debt, which then increases appropriations for interest rates, i.e. debt becomes self-generating. Although Figure 1 shows an increase in public debt without fiscal consolidation that significantly exceeds 100% of GDP, it is clear that in Serbia crisis would occur much sooner.

Figure 2 shows how different fiscal multipliers would influence the trajectory of public debt if consolidation is implemented. The larger fiscal multiplier, by definition, hinders the implementation of fiscal consolidation. Figure 2 shown trajectories of the public debt to GDP ratio with different sizes of fiscal multipliers from $m = 0$ to $m = 1.5$.

Figure 2: Serbia – Fiscal multipliers and public debt to GDP ratio



Source: the author's estimate base on the data from the Ministry of Finance

Even with the extreme values of fiscal multipliers that certainly do not apply to Serbia (1.5) in the medium term, fiscal consolidation would stop the growth of public debt to GDP ratio. Since fiscal multipliers for Serbia are relatively low (0.5-0.6 in times of crisis, and 0-0.2 in times of expansion), in the long term, the trajectory of public debt would probably be close to the trajectory that corresponds to the line $m = 0.2$ in Figure 2.

Although given the current state of public finances in Serbia, fiscal consolidation is necessary in order to

avoid crisis, its impact on economic growth should not be ignored (but by no means exaggerated). This is especially true in terms of stagnation or recession, because fiscal multipliers are higher then, but the same goes for the sensitivity of investors to low growth rates as well. For multi-year fiscal adjustment, which Serbia is facing, it is possible to determine the acceptable pace of fiscal consolidation, which would be a combination of the largest deficit reduction with minimum negative impact on economic growth. In such cases, countries with low credibility, such as Serbia, would benefit greatly from entering into a multi-year arrangement with the IMF.

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