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A TWIN DEFICIT - THE ISSUE OF THE SERBIAN ECONOMY

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The concept of a twin deficit relates to a budget deficit and a current account deficit. In the literature, there is no unique answer to the question of what the causal relationship between these deficits is. In any case, the existence of these deficits indicates that the spending of a country is higher than its production and investments are greater than savings. The form of financing could be a potential problem, as well as the manner of the use of these funds. Crisis situations contribute to the increasing importance of the issue. In these situations, those countries where a budget deficit chronically appears and which do not have enough domestic savings to finance excessive government spending will be in a worse position. The Republic of Serbia (RS) belongs to the group of countries where a budget deficit is a chronic phenomenon financed by external sources; therefore, the paper will analyze the issue of a twin deficit.

Keywords: a budget deficit, a current account deficit, a twin deficit, a public debt, an external debt, the Republic of Serbia

JEL Classification: E21, E22, F32, F34, H62, H63

INTRODUCTION

In the opinion of a number of economic experts, a twin deficit implies a long-term positive relationship between a budget deficit and a current account deficit. This issue can be said to have gained importance during the 1980s, when an imbalance of certain economic indicators increasingly came to the fore in many countries. On the one hand, there are countries that spend more than they produce, while a number of countries produce more than they spend, i.e. they postpone their spending for some future period. These

two deficits depend on the existing tax system, trade patterns and barriers, the exchange rate and a series of complex national and international forces shaping a country's economic status in the global environment. The importance of these deficits stems from the fact that they can have harmful effects on macroeconomic stability, i.e. the economy in general (Nargelecekenler & Giray, 2013). For that reason, in order that a country could have sustainable growth and achieve planned economic objectives, it is necessary that a twin deficit should be kept under control and within certain limits.

The contemporary global financial (and later economic) crisis has again brought this problem to a focus. In that period, there was a large increase in the budget spending (especially of developed countries). The

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aim was to avoid a complete economic collapse and mitigate the effects of the crisis to a certain extent. However, it is only a delay in resolving the problem for a future period of time, in which it is necessary that these large deficits should somehow be financed. The worse off are the countries where the budget deficit is a chronic phenomenon (rather than a consequence of the crisis) as well as those countries whose total spending is higher than their production (they achieve a current account deficit). Therefore, countries with a twin deficit will be in a more difficult position because they do not have enough domestic savings to finance excessive government spending. Thus, in some way, countries in a situation like this lose (primarily) economic sovereignty to some extent and surrender to the will of foreign investors and a (favorable) situation on the world market (which will not always be favorable).

The aim of the paper is to clarify theoretical assumptions regarding the existence of a twin deficit, emphasize the significance the aforementioned deficits could have on the development of a national economy, especially emphasizing the situation in the Serbian economy.

According to the aim of the research, the following hypotheses can be singled out as the key ones:

- H1: An increase in a budget deficit affects an increase in a current account deficit, and
- H2: An increase in a current account deficit positively affects investment spending.

The paper will apply a qualitative methodology based on the study and a descriptive analysis of the research issue. The research will examine the relevant foreign and domestic literature based on the theoretical generalizations and experiences of the authors who have dealt with the matter in question.

Starting from the relevant literature, it will be analyzed whether there is a connection between a budget deficit, on the one hand, and a current account deficit, on the other, i.e. whether it is possible to perform certain legitimacies in this relation. The situation with these indicators in the Serbian economy in the twenty-first century will particularly be analyzed in order to reach the answer of whether they have an impact on the development of Serbia's economy or not.

THEORETICAL ASSUMPTIONS

An open economy implies that a country can export a portion of its domestic product abroad and that a portion of the foreign product can be spent in the country, thereby forming an imbalance between production and consumption. For this reason, the basic macroeconomic identity of an open economy is represented as:

$$Y = C + I + G + X - M, \quad (1)$$

where Y - the gross domestic product, C - consumption, I - investment spending, G - budget spending, X - exports, M - imports. $X - M$ is, in fact, a current account balance - CA (the balance of the net income and current transfers is ignored in this analysis).

The key issue in an open economy is that savings can vary from one investment to another. In this case, savings can be expressed as $S = I + CA$, which means that, if the current account balance of a country is positive, the country exports more than it imports, its savings exceed its investments and its current account surplus has the character of net foreign investments (*vice versa* in the case when a current account balance is negative).

To establish a connection between the two above-mentioned deficits, it is necessary that savings should be divided into private savings (Sp) and government savings (Sg) - $S = Sp + Sg$. Government savings are obtained when the government's (budget) spending (G) is subtracted from the tax revenues of the state (T) - $Sg = T - G$. This represents a budget balance, if $Sg < 0$, it is a sign that there are „negative“ savings, or a budget deficit ($G - T$), and *vice versa*, and if $Sg > 0$, there is a budget surplus. Based on the previous, a current account balance will be equal to the remainder of ($Sp - I$) and ($G - T$): $CA = (Sp - I) - (G - T)$, which brings in connection a budget deficit and a current account deficit (Kovačević, 2010; Jošić, Jošić, 2011). In addition to a savings–investment relationship, depending on the required analysis, a current account balance can also be viewed as a trade-income, consumption-production or borrowed funds-lending relationship (Busch, Gromling & Matthes, 2011).

Therefore, based on the above equation, if investments and private savings do not change, an increase in

a budget deficit induces a reduction of a surplus or an increase in a current account deficit. Precisely, this phenomenon is referred to as „twin deficits“ in the literature. However, if these prerequisites are not fulfilled, and the level of private savings can be increased, or investments can be reduced, an increase in a budget deficit does not necessarily lead to an increase in a current account deficit (Jošić, Jošić, 2011). For this reason, two theoretical directions have emerged; in one of the directions, a causal link between these deficits is confirmed, whereas in the other one, it is not the case.

LITERATURE REVIEW

For now, the conducted research on investigating the relationship between a budget deficit and a current account deficit has not provided uniform results. The results differ to a large extent due to the examination of the countries of a different development level, the application of different econometric techniques, the length of the observation period etc. Thus, they can be classified as follows:

- researches that find a link between the aforementioned deficits - in accordance with the so-called Conventional Approach;
- researches that reject the link between the aforementioned deficits - according to the Ricardian Equivalence Hypothesis;
- researches that record the relationship between a budget deficit and a current account deficit, but this relationship is reversed and implies that a current account deficit causes a budget deficit - the hypothesis of current account targeting (Bolat, Emirmahmutoglu & Belke, 2014); and
- researches that have confirmed the existence of the twin deficit hypothesis only in developing countries.

The main reason for this is the fact that developing countries have an inefficient system of collecting tax revenues as well as domestic capital markets insufficiently deep and insufficiently developed, therefore having no possibility of financing the budget

deficit by using their own funds (Nargelecekenler & Giray, 2013). In addition, historical data from developing countries show that most of these countries have faced a huge budget deficit and a current account deficit, which imposes certain questions (Kouassi, Mougoue & Kymn, 2004): How is that current account deficit funded? Is it funded by the domestic capital market? Is it funded by the international capital market? Is there a causal link between a current account deficit and a budget deficit? In the event of a causal link, what is the nature of the link and what is the direction of causality? Can a budget deficit serve as a good indicator of a current account deficit forecast, and *vice versa*?

The first theoretical direction, known as the Conventional Approach, shows a positive relation between a budget deficit and a current account deficit, which means it supports the twin deficit hypothesis. Within it, there are the Keynesian Income-Spending Approach and the Feldstein Chain Approach. According to the former approach, a decline in income, or an increase in a public expenditure, causes an increase in the national income, which has a positive influence on the import sector (it increases it) and, as the result, a current account deficit appears. The latter is explained with the help of an exchange rate, the „hot“ money movement, and an interest rate (Azgun, 2012). It is also in accordance with the Mundell-Fleming Model of an open economy and suggests that higher government expenditures would increase domestic interest rates, which would attract foreign capital and influence the appreciation of the domestic currency. The consequence would be a reduction in exports, an increase in imports, i.e. it would worsen the condition of the current account (Sulikova, Sinicakova & Horvath, 2014). For a given level of private savings and investments, the budget and the current account will move in the same direction and with the same intensity. According to this traditional understanding, a budget deficit also has significant adverse effects on an economy. These adverse effects include high interest rates, low savings and low economic growth rates. Therefore, in many countries, a budget deficit is the result of an expansionary fiscal policy. Theoretically, a budget deficit occurs in the following cases: budget incomes are stable, but there is an increase in budget expenditures; a reduction in government savings

that affects a reduction in the total savings, and (if it is desirable that the same level of investments should be maintained) an increase in the external public debt and a decrease in public revenues (Nargelecekenler & Giray, 2013).

In other words, M. U. Toson, P. V. Iyidogan and E. Telatar (2014) believe that, in an open economy, the observed macroeconomic identity represents the relationship between the three deficits presented through the private sector, the public sector, and the current account. In this context, the twin deficit hypothesis implies that the growth of a budget deficit will lead to an increase in a current account deficit on condition that the private sector's balance is constant.

The second theoretical direction is called the Ricardian Equivalence Hypothesis and implies that a current account deficit is independent of a budget deficit. According to this hypothesis, an expansionary fiscal policy has no effect on spending and the output. A budget deficit occurs due to tax cuts, which affects a reduction of public revenues. Such a reduction does not affect an increase in spending, nor does it affect an increase in national savings. Public expenditures are assumed to be constant.

First, this hypothesis assumes that people rationally think current tax breaks are temporary and taxes will be balanced due to future tax increases. A decrease in current taxes must be accompanied by an increase in the present value of future taxes. Taxes and a debt have the same effect on private spending. Proponents of this hypothesis argue that a public debt represents a future tax liability. The replacement of a tax with a public debt will not create a current account deficit. Thus, an increase in disposable income, due to tax cuts, does not increase spending. Second, tax cuts will not affect national savings because a decrease in public savings will be offset by an increase in private savings, so the total amount of savings remains unchanged, which means a budget deficit has no effect on a current account deficit (Nargelecekenler & Giray, 2013). Simply, in order to be prepared for future tax increases, residents keep all the cash freed by a tax cut and therefore consumption, national savings and the current account remain unchanged (Bartolini & Lahiri, 2006).

However, R. Barro (1989) states five basic theoretical remarks inconsistent with Ricardo's conclusions: first, people do not live forever and do not care about the taxes that will be levied after their death; second, private capital markets are imperfect; third, future taxes and another income are uncertain and insecure; fourth, not all tax revenues are lump-sum, most of them are determined by income, spending, and wealth; and fifth, this hypothesis is based on full employment.

Certain studies have shown that, in the last few decades, it has been noticeable that changes in fiscal policies have a less impact on consumption and the current account in the group of industrial and fast-growing economies. There are at least three reasons forcing consumers to be aware of setting aside most of tax revenues in anticipation of a future fiscal burden: the first factor is a financial innovation, which makes it easier for households to borrow from a future income, which reduces their need for liquid funds to finance consumption; the second factor is more favorable demographic characteristics and linked to that, an extension of the working life as recorded in these countries in the past few decades; and finally, the introduction of „fiscal rules“ has also contributed to the future behavior of households within the sample countries – the mentioned rules are reflected in the balanced budget and/or the limitation of the public sector's debt in many of the observed countries (Bartolini & Lahiri, 2006).

THE IMPACT OF THE GLOBAL FINANCIAL AND ECONOMIC CRISIS ON THE REPUBLIC OF SERBIA ECONOMY

Only after the political changes had been made in 2000 did RS begin its transition process in the true sense of the word. Due to the very low starting basis and favorable trends in the world economy in the early years of the twenty-first century, RS has recorded satisfactory results. However, all the favorable trends have been largely aborted due to the global financial and later economic crisis, which has not missed RS, either. Table 1 accounts for the trend of some of the main macroeconomic indicators between 2001 and 2014. The majority of the indicators have significantly worsened since 2009. Until mid-2008, the real GDP

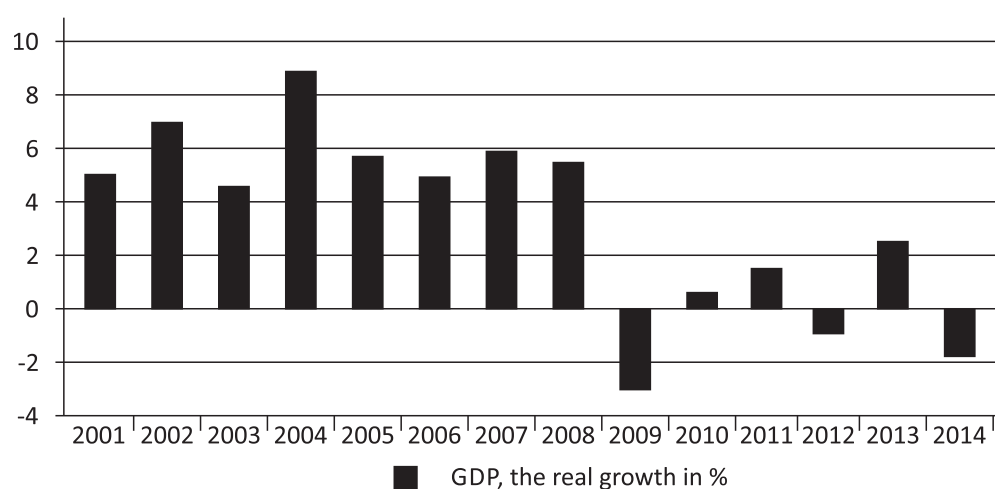
Table 1 The trends in the selected macroeconomic indicators of the Republic of Serbia

	2001.	2002.	2003.	2004.	2005.	2006.	2007.	2008.	2009.	2010.	2011.	2012.	2013.	2014.
GDP, mill. EUR	13805,5	17100,5	18738	19966,6	21103,3	24434,6	29451,6	33704,5	30654,7	29766,3	33423,8	31683,1	34262,9	33059,1
GDP per capita, in EUR	1840	2280	2505	2675	2836	3297	3990	4586	4187	4082	4620	4401	4783	-
GDP, real growth in %	5	7,1	4,4	9	5,5	4,9	5,9	5,4	-3,1	0,6	1,4	-1	2,6	-1,8
FDI net in mill. EUR	184,1	499,6	1194,5	773,8	1250,4	3322,6	1820,8	1824,4	1372,5	860,1	1826,9	669,2	1228,8	1236,3
External debt as % of GDP	81,5	56,7	53,3	48,3	59,3	58,5	59	62,3	72,7	79	72,2	80,9	75,1	78,7
Public debt as % of GDP	97,7	68,3	61,7	52,6	50,2	35,9	29,9	28,3	32,8	41,8	45,4	56,2	59,6	71
Exchange rate of EUR in dinars	59,7	61,5	68,3	78,9	85,5	79	79,2	88,6	95,89	105,5	104,64	113,72	114,64	121,96

Source: Ministry of Finance, *Public Finance Bulletin*, February 2015

growth rate was quite large and its average value was 5.9 % (Figure 1). In the mentioned period, the growth of the GDP *per capita* was also very good - it increased by almost 2.5 times (from 1840 to 4586 euros). Subsequently, a much worse global situation caused a

reduction in the foreign capital inflow (the maximum of the FDI inflow had been somewhat earlier, in 2006 - 3.3 billion euros, and after the crisis it did not exceed 1.8 billion), a significant depreciation of the dinar, and an increase in the inflation rate. All this at first caused

**Figure 1** The real GDP growth in RS, in %

Source: Ministry of Finance, *Public Finance Bulletin*, February 2015.

the slowing down of and later a fall in the economic activity, so, in the coming years, the real GDP growth rate was negative even three times (in 2009: -3.1%, in 2012: -1%, and in 2014: -1.8%).

THE PROBLEM OF FISCAL IMBALANCES AND THE PUBLIC DEBT

Since the beginning of the transitional period, a fiscal surplus was only recorded in 2005 (1.2% of the GDP). After that year, a fiscal deficit has constantly been recorded. One might say that the problem lies in its growing tendency. Even though we are still far from the membership in the EMU, in 2009, we broke the limit prescribed by the Maastricht criteria, which amounted to 3% of the GDP. The worst result was recorded in 2012 - a fiscal deficit of 6.84% of the GDP was reached (Figure 2).

As for the public debt in the period until 2008, the public debt decreased primarily due to the write-off of a portion of the debt to the Paris and London Club creditors and due to revenues from privatization. However, the crisis largely reversed this situation, so that, in order to finance its growing fiscal deficit (which emerged due to a decrease in income and an increase in expenditures, or because of a lack of income from privatization), RS had to borrow, which is very well

visible in Figure 3. What is bad is the fact that there is a growing trend in the share of the public debt in the GDP, so, since 2008, when it amounted to 28.3% of the GDP, it reached 70.9% of the GDP at the end of 2014. Additionally, even in 2011, the fiscal rule limiting the size of the public debt to 45% of the GDP was impaired, whereas since the end of 2013, not even the Maastricht criterion regarding the share of the public debt in the GDP can be said to have been met. This limit is 60% of the GDP, and the share of the public debt in the GDP in RS was 59.6% at the end of 2013.

As has already been mentioned, at the end of 2008, a decrease in the traditional foreign capital inflow that financed the growing budget deficit was made, so that, in order to ensure the stability of its public finances, RS began to issue securities denominated first in dinars and later in euros. However, investors' distrust in the country as the issuer caused the issuance of securities in dinars not to always be successful and the best to be short-term issuances of the government debt securities (three-month- and six-month-bills). This situation affected the growth of the debt in the foreign currency (investors were more interested in the securities indexed in euros and Eurobonds) and distancing from the banking sector of the economy. Due to the increasing share of the so-called problem loans, banks turned to the purchase of government securities (the safest way), whereby less and less money went to companies, which further aggravated the situation in

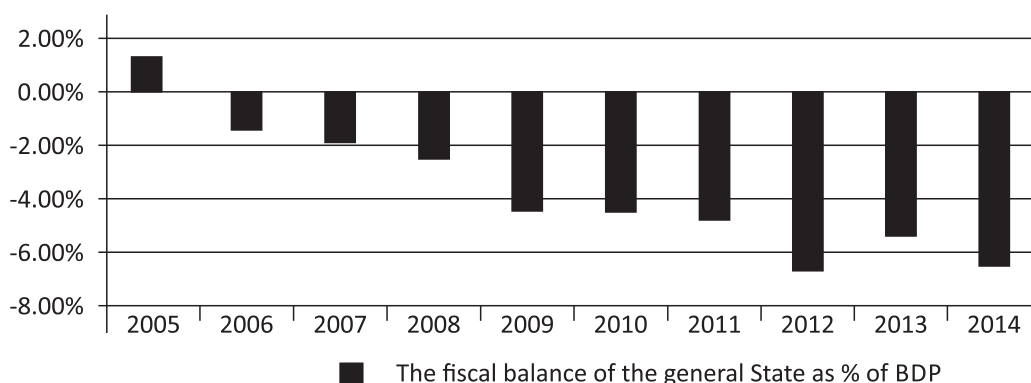


Figure 2 The fiscal balance of the general state of RS

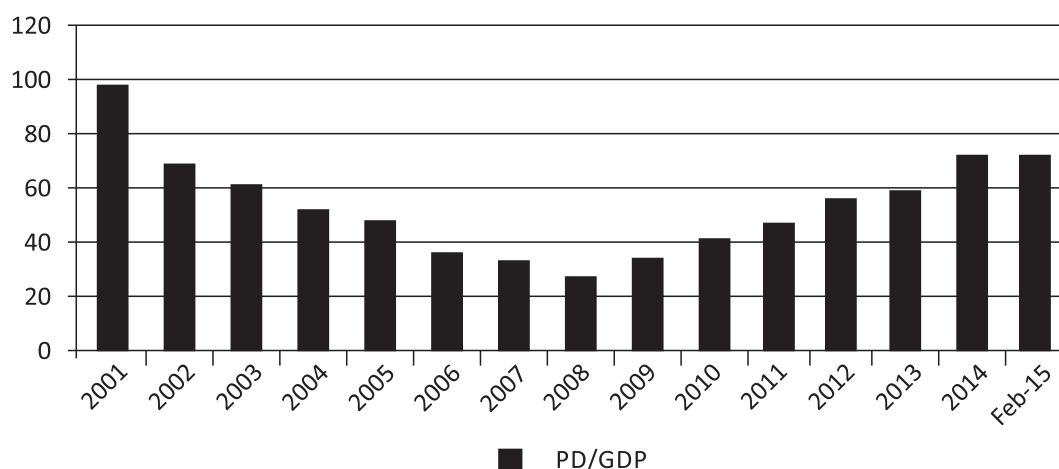


Figure 3 The share of the public debt in Serbia's GDP

Source: Ministry of Finance, *Public Finance Bulletin*, February 2015

the already underdeveloped Serbian economy (Kapor, 2014).

Given the fact that the public debt has far exceeded the legally established limit (45% of the GDP), the question of the sustainability of this indicator may be raised, especially if one takes into account the level of the competitiveness, i.e. the economic development of our country. An additional problem is the fact that the expansion of the public debt has not been accompanied by the construction of the infrastructure facilities, i.e. an adequate investment activity. Thus, the borrowed money has not been spent properly, in a way that will have long-term positive effects on the Serbian economy. Simply put, new borrowing must follow the principle that no credit is expensive if it is invested in the domestic production and employment, and that not a single such borrowing is advantageous if it is intended for the government's spending (Đinđić, Veselinović, Makojević, 2013).

The currency structure of the public debt also requires special attention. The inability to borrow funds in the local currency greatly limits the effects of the implemented economic policies. According to the Ministry of Finance of the Republic of RS, it is not good that, on 28th February 2015, only slightly more than a fifth of the public debt was in dinars (21.16%). The rest

was in some foreign currency, mostly in euros - 40.54%. However, when the currency structure is compared with the currency structure in the previous years, quite a different conclusion could be drawn. In 2008, the share of the public debt in dinars amounted to only 2.9%, while the public debt denominated in euros made up 77.1% of the total debt. Therefore, based on these data, there is an obvious increase in the share of the dinar in the observed period (from 2.9% to 21.16%) and the second major currency, the dollar (from 13% to 32.81%), compared to a significant decrease in the share of the euro (from 77.1% to 40.54%) (Figure 4). Given the fact that our economy is facing the EU (over 50% of trade flows are conducted with the EU), the question of the justification for increasing the share of the dollar in Serbia's public debt may arise, especially if one takes into account the strengthening of the currency against the euro in the recent period.

When it comes to the interest rate risk, according to the Ministry of Finance of the Republic of Serbia as at the date of 31st December 2014, the situation can be said to have been a favorable one. Around 77% of the public debt had a fixed interest rate. Out of the remaining 23% due was at a variable interest rate, with almost 65% of the most frequent being EURIBOR and EURO LIBOR, which once again speaks about the fact that our economy has largely been facing the EU and the

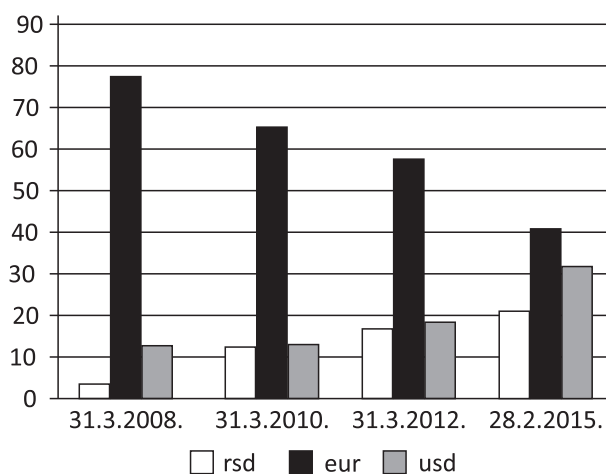


Figure 4 The currency structure of Serbia's public debt

Source: Author, based on the various issues of the *Bulletin of the Public Finances*

euro as the common currency of the countries of the monetary union.

It is obvious that after more than a decade since the start of the transition processes a fiscal imbalance is still present and has even been increasing in recent years. It can be said to largely be the result of the expansion of public spending and excessive growth in real earnings (growth above the GDP growth rate was recorded). It is important to note that this level of public spending is unsustainable from the standpoint of the stability of the macroeconomic situation in RS and a potential economic growth and development. In addition, this trend of the growth of public spending has a negative effect on the internal and external balances, and consequently on the growth of the public and external debts of RS (Đinđić, Veselinović, Makojević, 2013). With the beginning of the crisis, the favorable trends of the global environment were interrupted; revenues from privatization were significantly reduced so that the growing fiscal deficit could only have been financed by borrowing. A problem of the sustainability of that debt may arise. While RS is still far away from the EU (and therefore even farther away from the EMU), managing the fiscal and monetary policies should be

the aim in the upcoming period in order to fulfill the Maastricht criteria.

THE PROBLEM OF THE CURRENT ACCOUNT DEFICIT AND THE EXTERNAL DEBT

Another very important source of information for economic policy makers and potential investors (especially foreign ones) may be the state of the current account balance as a part of the country's balance of payments. The results of conducting a certain economic policy can be seen through the current account balance and the monitoring of the inflows and outflows of funds based on the exchange of goods, services, income and transfers, i.e. tracking the emergence of foreign liabilities and receivables from abroad (Kilibarda, 2011). Although a current account deficit is not a problem by itself, it may indicate the existence of a particular problem. The problem can be the manner of financing the deficit, or whether it makes economic growth unsustainable. One way of solving this problem may be the movement of short-term capital („hot money"), whereby it is necessary that negative impacts this sort of the movement of capital can have on the domestic market should be protected against by the implementation of appropriate measures (Akbas, Lebe & Uluyol, 2014). The current account balance plays one of the key roles in defining the concept of an external (im)balance. In addition, through this balance we learn some of the key facts, such as the fact that it must be equal to a net foreign investment, i.e. equal to the difference between domestic savings and domestic investments, i.e. to represent the difference between the domestic production of goods and services and the total spending of goods and services. Based on the above, a current account deficit implies negative net financial investments as well as the fact that domestic savings are smaller than domestic investments and the production of goods and services is smaller than the consumption of goods and services. What is crucial for a country in the long term is the fact that the external balance should imply that the balance of current transactions is in balance, i.e. that the country consumes as much as it produces and invests within its

accumulation and takes as much as it loans (Kovačević, 2010).

A large current account deficit (in general its balance) can often impact the exchange rate movements, and therefore the export competitiveness of a country. For this reason it is very important for economic policy makers, and for those dealing with the exchange rate, export competitiveness and the like, to include an analysis of the current account as well as an assessment of its sustainability in their analysis. Certainly, high and long-term current account deficits cannot be indefinitely financed by borrowing from abroad, so that, at a certain point, it will be necessary that certain adjustments be performed. Given the fact that the problem is largely significant, it is very important that the sources of a deficit (i.e. the factors affecting the current account balance), the desired deficit level possible to maintain and the timeframe in which this will be conducted should be determined (Janković, Stanišić, 2013). The sustainability of a current account deficit has become an extremely important not only economic but also political issue. In the short term, the sustainability of a deficit of a trade (and thus current) account primarily depends on the expected inflow of foreign direct investments, growth in foreign exchange reserves due to the purchase of cash from individuals and an increase in external indebtedness. The problem is that all the three sources are in the long term subject to considerable fluctuations (particularly in undeveloped countries), which may lead to undesirable consequences.

A current account deficit is not necessarily bad by itself. If these funds are used in the right way and directed to productive domestic investment projects that will be covered on the basis of income to be realized in the coming period, the deficit may represent a sign that there are structural changes, which will be enabled by an inflow of capital (primarily equipment) and investments, of which, in the future, a significant rate of economic growth and catching up with developed countries can be expected (the catching up process - which includes high amounts of productive investments, but without an over-compromising external balance). However, the fact remains that, due to quality institutions, a deeper and more liquid financial market, a diversified real economy and the

capability of issuing bonds in their own currency (i.e. the ability to do so), it is much easier to maintain a current account deficit in developed countries (Nikolić, 2010), or a current account deficit will be sustainable to the extent and in those terms for which creditors believe it can be sustainable. Therefore, it is very difficult to quantitatively express when a current account deficit becomes a problem. According to the IMF and the World Bank, that is 5% of the GDP. However, current business conditions, an increased integration of financial markets and the inclusion of underdeveloped countries in global financial flows have contributed to having this limit become relative. The fact is that there are numerous examples of countries that have maintained and financed large current account deficits over a long period, with satisfactory rates of economic growth and avoiding the balance-of-payments crisis. Simply, the funds are used in the right way.

As can be concluded based on Figure 5, RS faces the problem of a current account deficit. Ever since 2003, the deficit has consistently been above the mentioned limit of 5% of the GDP, which may call into question its sustainability, especially given the situation of the Serbian and the world's economies. Simultaneously, in addition to the amount of a deficit, its structure is extremely important and, in our case, it is unfavorable. A much bigger problem for the sustainability of a deficit is a large foreign trade deficit rather than a deficit in the sub-balance of income. A large foreign trade deficit, particularly over a longer period of time, implies that a country faces certain structural problems manifested through a lack of competitiveness on the external market. Apparently, after 2000, due to the beginning of the process of Serbia's EU accession, our market has suddenly opened to the world, which was not taken advantage of in the best possible manner. Growing trade openness has resulted in a three times bigger trade with the world. Beside the fact that in the first decade exports increased more than imports (exports - 3.9 times and imports - 2.7 times), the still present deficit indicates that it was insufficient. The problem was in different starting points (in 2001, the import of goods was 2.5 times higher than exports). Based on the data, by 2008, there was a growing trend of the current account deficit, which amounted to almost 21% of Serbia's GDP in 2008. However, there

was a crisis at the time that negatively affected Serbian exports (down to 19.76%), but also led to a significant drop in imports (30.18%), which had a positive effect on the current account deficit - in 2009, it amounted to only 6.2% of the GDP. The global economic crisis has led to a decline in the economic activity around the world (and thus in our country as well), while the decline in our exports was the result of the decreased prices of primary products on the world market, and the reduction in imports was the result of the decline in industrial production and domestic consumption in RS (NBS, Statistical Bulletin, 2012). Afterwards, there was an upward trend in the current account deficit (in 2012, it was double-digit again - 11.5%), which was until the last two of the observed years, when we witnessed a perceptible increase in Serbian exports (primarily due to the export of Fiat) and the return of the deficit within the frames of from 2009 - about 6% of the GDP.

It is obvious; the problem of financing this deficit emerges. The FDIs, as one of the sources of financing, have shown a significant instability. After 2006 (when the maximum was reached), the inflow was significantly below the expected one in the coming years. It was necessary that the so-called greenfield investments that enhance productivity and technological progress, particularly in the tradable sector (export-oriented), should be encouraged. Inflows in the non-tradable sector (banking, trade, real estate) can have negative effects in the form of a credit

expansion, an asset price increases, a wage increases, the moving of resources from tradable to non-tradable which leads to an even larger current account deficit (Unković, Kordić, 2011). During 2009, more than a half of the already significantly reduced foreign funds went to the non-tradable sector. Although remittances from workers from abroad were a fairly constant item (in our case significant as well), they also proved insufficient. Consequently, we were forced to turn to borrowing funds from abroad. This does not have to be a problem, if such funds are channeled to productive domestic investment projects that will be covered by the revenues generated in the future period. However, if deficits are a consequence of excessive consumption, which is the result of the wrongly pursued government policy, and poorly-planned investment projects, the government may face a loss of confidence of foreign investors, the problem of indebtedness under less favorable conditions and even the emergence of a debt crisis. Simply put, economic growth cannot in the long-term be based on the expansion of domestic demand, which constantly generates fundamental external and internal balances and increases overall indebtedness. Potential problems in capital inflows can bring down the whole concept of growth and even turn it into the opposite (Ćurković, 2010).

When analyzing indebtedness, what is important is not the absolute amount of the debt, but indicators indicating the level of indebtedness in relation to the

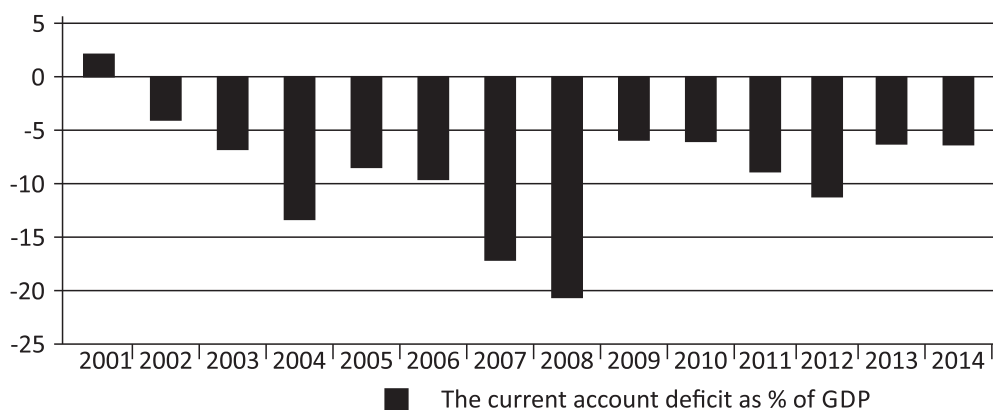


Figure 5 The current account deficit as % of Serbia's GDP

economic and export potentials of a country and a country's ability to meet its liabilities with respect to the external debt (the indicators of external solvency and liquidity). The basic indicator of external solvency (external debt/GDP - Figure 6) has in the last years been near entering the zone of over-indebtedness (according to the World Bank's criteria, which is 80% of the GDP). A decrease in this indicator is a sign that the growth rate of the GDP is growing faster than the growth rate of an external debt, which improves the capacity to repay debts and, conversely, an increase in the value of the indicator would indicate that the growth rate of a debt is growing faster than the growth rate of the GDP, where an increase in the value of this indicator above the prescribed limits is indicative of possible problems with a country's solvency and increases the risk of difficulties in the repayment of loans (Janković, Stanišić, 2013).

Since exports are the most important generator of a foreign debt sustainability, many economists believe that the indicator of an external debt/exports of goods and services is a more reliable indicator (how big a burden an external debt is for economic flows with other countries in the current year is measured by the exports of goods and services). In this case, the limit of sustainability, according to the criteria of the World Bank, is 220%, and RS was close to that limit until 2013. Subsequently, in the next two years, there has been

a significant improvement in this indicator, which is partly the result of the aforementioned increase in exports in the observed period.

As for the indicators of liquidity, the situation is similar. In this case, the problem is observed in the short term and the debt repayment is put in ratio with the GDP, i.e. the export of goods and services (which may be increased by remittances from abroad). In the observed period, the share of the debt repayment in the GDP was constantly above 10% (it even reached 14%), which is certainly a big burden. When the ratio between the debt repayment and the exports of goods and services is concerned, there is an even worse situation. The limit of indebtedness is 25% - 30% and, according to this indicator, we were constantly in the zone of over-indebtedness (in 2009, this indicator was 46%). Even if remittances from abroad are included, we were still constantly on the verge of over-indebtedness - ranging between 25% and 30%. What is good is that, in the last two years, this indicator has recorded a certain improvement, once again proving that an increase in exports can be seen in these statistical indicators (NBS, Analysis of Serbia's debt, 2014).

The conclusion that can be drawn by analyzing the indicators is that they still do not show a tendency of constant and significant growth, but are rather close to the limit of over-indebtedness. Short-term liquidity will be a bigger issue in the coming period, given the

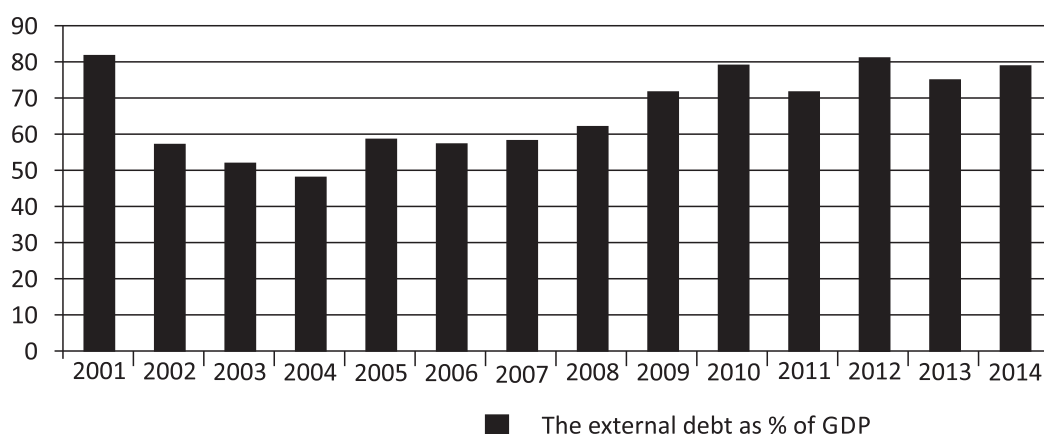


Figure 6 The external debt as % of Serbia's GDP

large maturing obligations. An additional problem is very small and, in some years, also negative GDP growth rates. The right path, which leads to improving the situation of external solvency and liquidity, would be the continuation of increasing the exports of goods and services. At the same time, efforts should be made towards attracting as many foreign direct investments as possible and having them appropriately used. If these measures fail, Serbia's stepping into the zone of over-indebtedness may have additional negative consequences in the form of lowering the credit rating and difficult conditions of borrowing on the international market (Mirković, Knežević, 2013), which certainly adversely affects the overall external position of our country.

A TWIN DEFICIT IN THE REPUBLIC OF SERBIA

Based on the above data, it can be concluded that RS is constantly faced with the problem of a twin deficit (except for the year 2005, when the general government fiscal balance was positive - 1.1% of the GDP). Thus, since the beginning of the transition process, RS has been consuming more than it has been producing,

and has been investing more than it has been saving (as a country and on the whole). Using the basic macroeconomic identity of an open economy (with some simplifications), the method of using Serbia's GDP in the twenty-first century is obtained (Table 2). Once again, the fact is confirmed that, in addition to the size of a current account deficit, its structure is also very significant - the data show that the current account deficit of RS is largely the result of a foreign trade deficit. The maximum was reached shortly before the outbreak of the crisis. After that, as has already been mentioned, one of the positive effects of the spillover of the crisis to RS was a bigger decrease in the imports than in the exports of our country and, as a result, a significantly smaller current account deficit (and thus the trade deficit as well - in 2008, it was 25% of the GDP, and in 2009, it was 15.9% of the GDP). The last two years of the observed period attest to the fact that there was a better coverage of imports by exports and a reduction in a foreign trade deficit, which is now around 10% of the GDP. The balance $X - M$ tells us, in terms of percentages, how much higher consumption in RS could be in comparison with the Serbian production. It is interesting that consumption and budget spending are rather constant during the period (for consumption, the average was 76% of the

Table 2 The use of Serbia's GDP

	2001.	2002.	2003.	2004.	2005.	2006.	2007.	2008.	2009.	2010.	2011.	2012.	2013.	2014.
X - M, as % of GDP	-15,3	-18,1	-17,6	-26,4	-20	-20,3	-24,3	-25	-15,9	-15	-15,4	-16,7	-10,7	-10
I as % GDP	19,2	21,2	22,1	29,8	24,8	25,1	29,1	30,3	19,5	18,5	20,1	21	17,6	15,6
C as % of GDP	76,6	75,4	73,5	75,7	75,7	75,9	75	75,3	77,7	78	77,1	77,1	75,3	76,2
G as % of GDP	19,4	21,4	21,9	20,8	19,6	19,4	20,2	19,5	18,8	18,5	18,2	18,6	17,8	18,2
$S = I + X - M$	3,9	3,1	4,5	3,4	4,8	4,8	4,8	5,3	3,6	3,5	4,7	4,3	6,9	5,6

Source: Author, according to Statistical Office of the Republic of Serbia (2015). *The use of gross domestic product (GDP) of the Republic of Serbia 1995-2014*

GDP, whereas for the budget spending, it was 19.45% of the GDP), whereas the most noticeable fluctuations are observed in investment spending (from 30.3% of the GDP in 2008, when it recorded the largest foreign trade deficit, up to 15.5% of the GDP, when it recorded the lowest foreign trade deficit). Obviously, it is essential that, first, consumption and the budget spending should be financed through a foreign trade deficit, while a foreign trade deficit just above a certain percentage has a positive influence on investment spending.

Figure 7 shows the movement of the twin deficit in RS during the observed period. While the crisis has influenced the interruption in the growth of the current account deficit, there has been an almost constant increase in the budget deficit since 2001. After 2009, these two deficits can be said to again have similar movement tendencies. Based on the data accounted for in Table 2, we can conclude that budget spending is fairly constant, which means that it has grown at about the same rate as the GDP has. Given the fact that the budget deficit has grown, it is obvious that the budget revenues have not grown at a sufficiently high rate (they have not followed expenditure growth, i.e. the GDP). The decrease in the current account deficit has resulted in that, in the last two years, these two deficits

have been practically equal. Thus, a better relationship between imports and exports has been established, in the percentage terms, relative to the GDP, the total spending has been reduced; however, the government spending has remained at the same level. What should concern us is the fact that a decrease in a current account deficit also reduces the share of investment spending in the GDP. Apparently, national savings are still insufficient and the current account deficit is primarily used for financing excessive government spending. Only what is left after that is used for increasing investment spending.

CONCLUSION

There is a problem of a twin deficit in the Republic of Serbia. When RS is concerned, the individual observing of the budget deficit (which is still far above the limit eligible for entering the EMU), the public debt (which is above the legally established limit), the external debt (which is on the limit of over-indebtedness), the relatively high domestic indebtedness of the economy and the population (with a high indexation of liabilities in the foreign currency) can be said to still be not a very big problem, but the problem may

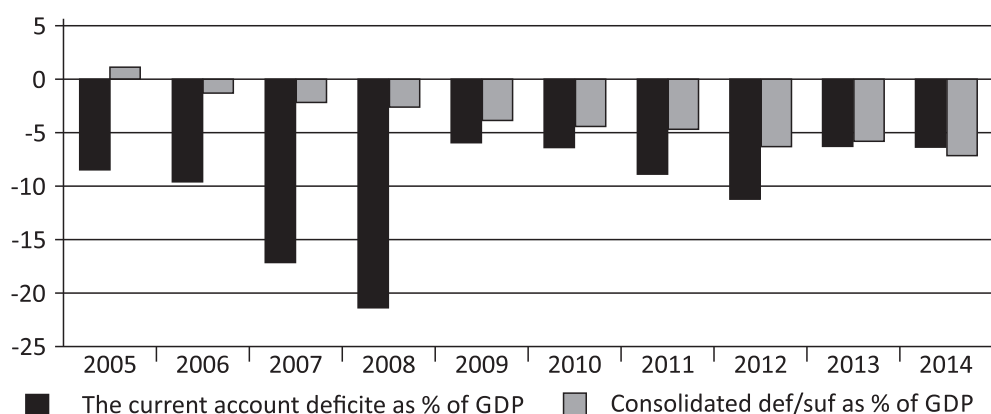


Figure 7 A twin deficit in RS

be a combination of all these debts, which could face the very weak economy of RS and its relatively poor population with the very negative consequences of not fulfilling the obligations at all levels (Kapor, 2014).

In the case of RS, the presence of the twin deficit hypothesis with a simple qualitative analysis of available data cannot entirely be confirmed, i.e. the presence of the first hypothesis is what cannot entirely be confirmed. Until the outbreak of the crisis, these two deficits can be said to have been growing together, but in 2009, there was quite the opposite movement - the budget deficit continued to increase (from 2.6% of the GDP to 4.4% of the GDP a), and the current account deficit decreased significantly (from 20.9% of the GDP to 6.2% of the GDP). After this year, similar tendencies in the aforementioned deficit movement could be said to be reappearing.

The analysis of the use of Serbia's GDP has led to some interesting conclusions. The share of consumption and the budget spending in Serbia's GDP have been found to be quite constant, whereas investment spending was the only one indicator to have varied. The increase in the current account deficit has influenced an increased allocation for investment spending, which confirms the second hypothesis. Apparently, the increased foreign trade deficit (or the deficit of the current account) only above a certain percentage has had a positive impact on investment spending. Domestic savings are insufficient and the current account deficit is primarily used for financing the excessive government spending. Only when these needs are met, if there are funds, can they be used for increasing investment spending. The constant share of the budget spending in the GDP, with an increased budget deficit, implies that (in addition to the excessive government spending) the growth rate of the budget revenues does not follow the growth rate of the budget expenditures.

The key limitation of this paper is a lack of adequate data in a sufficiently long period of time in order to make it possible for some complex statistical and econometric analyses to be implemented. It is this fact that will serve as one of the ideas directing future research - the proving of the statistical relation between these two deficits. At the same time, the main contribution could be a better comprehension of the

concept of a twin deficit (which is significantly present in our economy), i.e. the comprehension of the impact that the excessive budget spending financed in the wrong way has (and may in the coming period have) on the economy of the Republic of Serbia.

According to the conclusions laid down this way, it is clear that a poor economic structure and a lack of industrial capacities stand for a clear sign that, in our case, a simple increase in consumption cannot generate positive results. It is in some way necessary that we should work on decreasing both deficits at the same time. On the one hand, it is necessary that the budget spending should be rationalized, while on the other, it is essential that the infrastructure and production (especially export-oriented) should be more invested in, so that, in time, the Serbian economy could finally be able to finance an eventual budget deficit from its internal sources as much as possible. Such a situation would have a positive effect on an increased level of independence in conducting the economic policy. In time, a significant increase in domestic savings (one of the most important factors of economic stability) and the transition from the deficit zone to the current account surplus zone could have been achieved.

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REFERENCES

- Akbas, Y., Lebe, F., & Uluyol, O. (2014). Analyzing The Relationship Among The GDP - Current Account Deficit and Short Term Capital Flows: The Case of Emerging Markets. *Journal of Management & Economics*, 21(2), 293-303.
- Azgun, S. (2012). Twin Deficit Hypothesis: Evidence from the Turkish Economy. *Dogus University Journal*, 13(2), 189-196.
- Barro, R. (1989). The Ricardian Approach to Budget Deficits. *The Journal of Economic Perspectives*, 3(2), 37-54.

- Bartolini, L., & Lahiri, A. (2006). Twin Deficits, Twenty Years Later. *Current Issues in Economics & Finance*, 12(7), 1-7.
- Bolat, S., Emirmahmutoglu, F., & Belke, M. (2014). The Dynamic Linkages of Budget Deficits and Current Account Deficits Nexus in EU Countries: Bootstrap Panel Granger Causality Test. *International Journal of Economic Perspectives*, 8(2), 16-26.
- Busch, B., Gromling, M., & Matthes, J. (2011). Current Account Deficits in Greece, Portugal and Spain - Origins and Consequences. *Intereconomics: Review of European Economic Policy*, 46(6), 354-360. Doi: 10.1007/s10272-011-0400-9
- Ćurković, V. (2010). Svetska finansijska kriza i njen uticaj na Srbiju. *Singidunum Revija*, 7(1), 259-269.
- Dinđić, S., Veselinović, P. i Makojević, N. (2013). Javni dug - ograničavajući faktor razvoja privrede Republike Srbije. U V. Leković (Ur.), *Institucionalne promene kao determinanta privrednog razvoja Srbije* (str. 324-242). Kragujevac: Republika Srbija, Ekonomski fakultet Univerziteta u Kragujevcu.
- Janković, N. i Stanišić, N. (2013). Deficit tekućeg računa kao ograničavajući faktor privrednog razvoja Srbije. U V. Leković (Ur.), *Institucionalne promene kao determinanta privrednog razvoja Srbije* (str. 225-242). Kragujevac: Republika Srbija, Ekonomski fakultet Univerziteta u Kragujevcu.
- Jošić, H. i Jošić, M. (2011). Dvostruki deficit ili dvostruka divergencija u Hrvatskoj. U A. Pavković (Ur.), *Zbornik Ekonomskog fakulteta u Zagrebu* (str. 1-16). Zagreb: Ekonomski fakultet Sveučilišta u Zagrebu.
- Kapor, P. (2014). „Začarani krug“ dugova Srbije. U M. Kovačević i V. Grečić (Ur.), *Stanje i perspektive ekonomsko-finansijskih odnosa Srbije sa inostranstvom* (str. 151-160). Beograd: Republika Srbija, Ekonomski fakultet Univerziteta u Beogradu.
- Kilibarda, B. (2011). *Platni bilans Crne Gore - teorija i praksa*, Podgorica: Crna Gora, Centralna banka Crne Gore.
- Kouassi, E., Mougoue, M., & Kymn, K. O. (2004). Causality Tests of the Relationship between the Twin Deficits. *Empirical Economics*, 29(3), 503-525. Doi: 10.1007/s00181-003-0181-5
- Kovačević, R. (2010). *Međunarodne finansije*. Beograd: Republika Srbija, Ekonomski fakultet Univerziteta u Beogradu.
- Ministarstvo finansija Republike Srbije. (2015). *Bilten javnih finansija*. Retrieved 26. May 2015, from <http://www.mfin.gov.rs/UserFiles/File/bilten%20javne%20finansije/bilten-126-web.pdf>.
- Mirković, V. i Knežević, M. (2013). Dug Republike Srbije kao prepreka ekonomskom rastu. U V. Leković (Ur.), *Institucionalne promene kao determinanta privrednog razvoja Srbije* (str. 305-322). Kragujevac: Republika Srbija, Ekonomski fakultet Univerziteta u Kragujevcu.
- Nargelecekenler, M., & Giray, F. (2013). Assessing the Twin Deficits Hypothesis in Selected OECD Countries: An Empirical Investigation. *Business and Economics Research Journal*, 4(4), 1-23.
- Narodna banka Srbije. (2012). *Statistički bilten*. Retrieved 25. May 2015, from http://www.nbs.rs/static/nbs_site/gen/latinica/90/statisticki/sb_08_12.pdf
- Narodna banka Srbije. (2014). *Analiza duga Republike Srbije*. Retrieved 27. May 2015, from http://www.nbs.rs/export/sites/default/internet/latinica/90/dug/dug_I_2014.pdf
- Narodna banka Srbije. (2015). *Statistički bilten*. Retrieved 27. May 2015, from http://www.nbs.rs/static/nbs_site/gen/latinica/90/statisticki/sb_03_15.pdf.
- Nikolić, G. (2010). *Pokazatelji spoljnotrgovinske razmene Srbije sa Evropskom unijom i svetom*. Beograd: Republika Srbija, Zavod za udžbenike.
- Republički zavod za statistiku. (2015). *Upotreba bruto domaćeg proizvoda (BDP) Republike Srbije 1995-2014*. Retrieved 6. June 2015, from <http://webrzs.stat.gov.rs/WebSite/Public/PageView.aspx?pKey=61>.
- Sulikova, V., Sinicakova, M., & Horvath, D. (2014). Twin Deficits in Small Open Baltic Economies. *Panoeconomicus*, 61(2), 227-239. Doi:10.2298/PAN1402227S
- Tosun, M. U., Iyidogan, P. V., & Telatar, E. (2014). The Twin Deficits in Selected Central and Eastern European Economies: Bounds Testing Approach with Causality Analysis. *Romanian Journal of Economic Forecasting*, 17(2), 141-160.
- Unković, M., i Kordić, N. (2011). Mogućnosti Srbije za privlačenje stranih direktnih ulaganja. *Singidunum Revija*, 8(1), 163-177.

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