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ORIGINAL SCIENTIFIC PAPER

Effects of Foreign Trade on Budget Equilibrium - Case Study of Bosnia And Herzegovina

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ABSTRACT *– The analysis of economic trends in BH in 2012 recorded further weakening of economic activity. Primarily, this is a result of stagnant economies of the EU and the region. In the first trimester of 2013 year, exports grew in real terms by 19% and imports by 13%, which led to the real growth in the trade deficit to about 7%. The given deficit significantly reduced the earlier estimate of economic growth for the first trimester in which the strong export growth, coupled with an increase in industrial production represented a very important step forward compared to the previous year. The main objective of this paper is to discuss the global financial crisis, the movement of the budget deficit in BH for the period 200 - 2012, as well as monitor the constraints set by the Maastricht Treaty that the amount of the budget deficit should not exceed 3% of the GDP and the interdependence of imports of goods and nominal GDP.*

KEY WORDS: *imports of goods, exports of goods, indicators of foreign trade, budget deficit, criteria of convergence*

Introduction

Fiscal policy is a modern financial policy that contains a component of social - economic policy implemented by public finance management measures of restrictive or expansionary fiscal policy. It is also associated with the economic and political dimensions of social policy, which permanently loses neutrality effects on reproduction (Kešetović et. al., 2012, pp. 26).

One of the most important tasks of fiscal policy is to manage the budget deficit – i.e. manage its excess of expenditures over revenues. In an open economy, it ultimately must balance the net saving in the private sector, as well as the balance of current account payments with the rest. Therefore, properly defining and then measuring the budget deficit is one of the main tasks of the fiscal policy but there is no single perfect measure and deficits but for different purposes using different definitions and define its different measurement.

The most commonly used definition of the deficit is the conventional deficit and it measures the difference between the cash total government revenue and total cash

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expenditures, which must be financed by new borrowing. This measure is also called the deficit and the need for the public sector borrowing - public sector borrowing requirement. A surplus (deficit) budget represents the excess of government expenditures over tax revenues in a given period, usually one year, while on the other hand the budget surplus occurs when tax revenues exceed government expenditures (Mishkin, 2010, pp. 12).

Budgetary expenditures include salaries of public servants, purchase of goods and services, government investments, interest on the public debt, transfers and subsidies. On the other hand, the budget revenues include the obligations, duties, interest on state property, transfers, surpluses of public enterprises and proceeds from the sale of public assets. The given concept of deficit measures government expenditure and lending taken for the implementation of public policies, with revenues from taxes, grants and payment of the loan, and without future borrowings or impaired state of liquid reserves. The advantage of this concept is a comprehensive view of the overall financial condition of state and its impact on monetary conditions, domestic demand and external accounts.

In practice, it is difficult to find conventional deficit on purely cash basis. Typically, a combination of cash and budget deficit is used. The budget deficit on a cash basis is the actual result of budgetary funds assets and liabilities, while the budget deficit on an accrual basis arises when assets and liabilities are recorded at the time of issuance of an order, not at the time of occurrence of actual cash flow. A delay in the performance of its obligations to suppliers and creditors or default on budget revenues results in arrears whose size can significantly affect the budget deficit. Financial indiscipline or high inflation contributes to the increased occurrence of arrears increasing the difference between conventional, cash budget deficit and the calculation of the budget deficit (Institute of Public Finance, 2013).

In most countries, poorly managed fiscal policy is the main cause of many problems such as high inflation, high budget deficits and low economic growth. The way out of this situation requires an appropriate fiscal adjustment. Therefore, if the current government spending is not financed from the current tax and non-tax state revenues, it can quickly lead to the growth of aggregate demand, and ultimately inflation. This is particularly true in countries where the state has allowed funding from the primary issue of the central bank. Therefore, it is necessary that the state, as well as all other participants borrow only on the market. In addition, in excessive government borrowing from banks, it is often the main factor affecting the overall monetary expansion, and appropriate fiscal adjustments are also needed to stop the expansion (Golomejić - Raspudić, 2011, pp. 144).

The total trade deficit in BH in 2012 increased by of 1.3% compared to the 2011. Negative economic growth was reflected in real decline in domestic demand and exports, decreased investment financing by local banks and the fall in industrial production (BH Directorate for Economic Planning, 2013).

The paper is structured in three parts. The first section describes the basic settings of the budgetary convergence and opportunities of deficit financing, and impact of global financial crisis on the budget deficit of individual EU countries and the Western Balkan countries. The second part is devoted to the analysis of the budget deficit in BH and opportunities for sustainability in the long term. The third part describes the possible application of regression model, where it will be determined by strength and direction of relationship between

variables such as: (1) the importation of goods in BH, and (2) the movement of nominal GDP. At the end of the study, concluding remarks are given.

Justification for budgetary convergence and deficit financing

Deficit financing has proved so far to be insufficiently effective means of increasing economic growth and modernization of economy, but on the other hand it is quite effective in supporting the overall demand in the economy, particularly in terms of demand when the economy shows a tendency of sharp decline. First, this deficit financing involves the realization of a long-term economic program, which comes to the fore, where deficit financing and public debt is becoming an important factor for the program. Increase of budget deficit in all economies followed by an ongoing growth of the public debt for its coverage is the reality of modern market economies (Komazec, Ristic, 2011, pp. 107-108).

Candidate countries for joining the monetary union had a lot of problems in reaching the set convergence criteria. In fact, most problems occurred in achieving the criteria of budget deficit and public debt, which has forced the country to a very strict fiscal discipline and caused a number of social protests in the Member States. The reasons for this situation should be look for in the method for covering the budget deficit. The budget deficit of candidate countries mainly covers the real financial income/tax, which directly affects the living standards of population and ultimately can cause serious social protests. Similarly, reducing the budget deficit to a level of 3% of GDP means savings that can influence the level of flexibility and efficiency of fiscal policy and employment. Therefore, these facts were the main reason for many economists to criticize the proposition for which the budget deficit should amount to 3% and public debt 60% of GDP. These figures were obtained in a manner based on the principle that determines the amount of the budget deficit, which is needed to stabilize the public debt. The budget deficit is expressed as follows:

$$d = g \cdot b \qquad (1)$$

where:

$b -$ the level at which public debt is stabilized (steady state) expressed as a% of GDP;
$g -$ the growth rate of nominal GDP; and
$d -$ government budget deficit expressed as a% of GDP – a.

In order to stabilize public debt at 60% of GDP - and the budget deficit must be brought to a level of 3% of GDP - provided that the nominal GDP growth rate is at 5%. The suggestion that was put in this way of calculating refers to the fact that it came to the conclusion that the public debt stabilizes at 60%, not to say 50% or 70%. As a justification, it is stated that the Maastricht Agreement specified percentage of 60%, as well as the fact that at that time most of the relationship between public debt and GDP ratio was 60% (Furtula and Marković, 2010, pp. 30-31). The second reason is based on future nominal growth rate of gross domestic product. If the nominal growth rate of GDP is greater than (less than) 5%, the budget deficit that stabilizes the public debt to 60% increases above (decreases) 3% (Đonlagić, 2006th, pp. 48).

The question that deserves attention relates to why the budgetary convergence was insisted on? The most important reason should be sought in connection with the budget deficit rate of inflation, as a country in which there is a high percentage of public debt to GDP - and urges the Government of the country to adopt measures that will cause unexpected inflation. The situation has a negative impulse to the owners of the state, i.e. long-term bonds, which leads to a significant reduction of their real value. On the other hand, the government of such countries realizes gains with respect to the real value of debt decreases. Using the sudden inflation to reduce the real value of government debt in a high charge state reflects negatively on the country's low charge. Under the circumstances, the convergence criteria was set, which provides an optimal relationship between government debt and GDP. For example, when a highly indebted country achieves a debt reduction to the required level, it will not have to use the mechanism of a sudden inflation, where its association with poor indebted countries will not pose a threat in terms of an increase in the inflation rate in the EU.

Unlike defined convergence criteria, there is a legitimate question: What criteria are missing, which can be considered very important? Santini (2011) considered that the criterion of missing long-term relationships is a balanced relationship with the rest of the world, i.e. the requirement for a balance of payments. The following table illustrates the movement of tax revenues based on the surplus / deficit on the current account of balance of payments.

Table 1. Movement of tax revenue on the basis of deficit / surplus in the current account balance

The share of indirect taxes in total taxes	**Tax revenues in the event of a deficit in the current account of balance of payments**	**Tax revenues in the event of a surplus in the current account**
0	0	There is no reduction in tax revenues
>0<1	The increase in tax revenues in proportion to the share of indirect taxes **L - (credit) - increase in tax revenue in the present and the reduction of the tax capacity in the future**	Reduction in tax revenue in proportion of indirect taxes **S - savings - reducing tax revenue in the present and increasing tax capacity in the future**
1	Increasing the taxable amount of deficit **L - increase tax revenue in the present and the reduction of the tax capacity in the future**	Reducing the size of taxable surplus **S - reduction in tax revenue in the present and increasing tax capacity in the future**

SOURCE: Santini, G. (2011). A possible approach to the reform of tax system of Republic of Croatian, Journal*: Economics,* Year 18, No. 1*, Zagreb, pp.* 121

Depending on the extent to which the tax system is of an expendable type with the clause ceteris paribus, the budget deficit is reduced/increased. Thus, the classification of tax revenues based on the division of tax according to the criterion of time allows the quantification of tax revenues based on the deficit/surplus of the current account balance, that tax revenues from domestic and disposable domestic product. Therefore, identification of tax revenue on the basis of the current account balance, as well as certain future tax corrects the size of the public debt. In addition, Santini (2011) considers that the criteria of the

budget deficit and public debt should be supplemented by the following criteria: (1) marginal tax presses matched with income per capita to countries with lower income per capita had a smaller share of the state in the final distribution of GDP - and, that is, with the growth of income per capita share of the state in the final distribution of GDP - a progressively growing, and (2) agree on the maximum difference in the total indirect tax revenue of individual members of the Eurozone, where countries with less income per capita had a higher proportion of indirect in relation to the direct taxes, which in extreme instances contributed to the increase in export competitiveness of less developed countries.

Influence of debt crisis on the budget deficit in the EU

Cumulative current account deficits over a longer period demanded constant sources of funding, such as the net inflow of foreign direct investment, portfolio investment, credit transactions on the account to reduce the foreign exchange reserves of the country. Any borrowing abroad has its limits, i.e. the creation of net foreign debt, creates an obligation in the future. The table below illustrates the tendency of movement of current account deficit of some EU countries for the period 1992 - 2008.

Table 2. The tendency of current account deficit of some EU countries and the world for the period 1992 -2008

Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Armenia	-46,3	-6,0	-3,80	-17,0	-18,2	-18,7	-22,1	-16,6	-14,6	-9,5	-6,2	-6,8	-4,5	-3,9	-1,4	-4,0	-4,2
Australia	-3,5	-3,1	-4,8	-5,2	-3,7	-2,9	-4,8	-5,3	-3,8	-2,0	-3,8	-5,4	-6,0	-5,8	-5,5	-5,7	-5,6
Azerbaijan	-16,6	-12,2	-5,5	-13,2	-25,9	-23,1	-31,9	-13,1	-3,5	-0,9	-12,3	-27,8	-29,8	1,30	15,70	31,4	39,9
Bulgaria	-4,4	-24,7	-0,4	-0,2	0,2	4,1	-0,5	-5,0	-5,6	-5,6	-2,4	-5,5	-6,6	-12,0	-15,8	-20,3	-19,0
Estonia	n/a	1,2	-6,8	-4,2	-8,6	-11,4	-8,7	-4,4	-5,4	-5,2	-10,6	-11,3	-12,3	-10,0	-15,5	-16,9	-15,9
Georgia	n/a	n/a	-33,8	-18,3	-12,6	-12,8	-12,8	-10,0	-7,9	-6,4	-8,4	-9,3	-12,2	-9,8	-13,8	-15,7	-15,2
Kazakhstan	-51,6	-8,6	-7,8	-1,3	-3,6	-3,5	-5,5	-0,2	3,0	-5,4	-4,2	-0,9	0,8	-1,8	-2,2	-2,2	-1,1
Malaysia	-3,7	-4,6	-7,6	-9,7	-4,4	-5,9	13,2	15,9	9,4	8,3	8,4	13	13	15	17	14	1,3
Moldova	-6,9	-16,7	-3,1	-4,6	-1,7	-6,2	-4,1	-13,4	-8,2	-9,4	-5,6	-4,6	-16,5	-35,8	-40,7	-40,5	-36,6
Malta	n/a	n/a	n/a	-11,9	-12,6	-6,7	-6,5	-3,7	-12,5	-3,8	-2,7	-2,8	-6,3	-8,0	-6,1	-9,4	-8,2
Portugal	-0,2	0,3	-2,3	-0,1	-3,5	-5,8	-7,1	-8,5	-10,2	-9,9	-8,1	-6,1	-7,7	-9,7	-9,4	-9,2	-9,2
Romania	-7,8	-4,7	-1,7	-4,5	-6,7	-5,4	-7,1	-4,1	-3,7	-5,5	-3,3	-5,8	-8,4	-8,7	-10,3	-13,8	-13,2
Serbia	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-1,7	-2,4	-7,9	-7,0	-11,7	-8,5	-11,5	-14,7	-15,0
Slovakia	n/a	-6,3	4,3	1,9	-9,8	-9,1	-9,5	-4,8	-3,3	-8,3	-8,0	-6,0	-7,8	-8,6	-8,3	-5,3	-4,5
Spain	-3,5	-1,1	-1,3	-0,3	-0,2	-0,1	-1,2	-2,9	-4,0	-3,9	-3,3	-3,5	-5,3	-7,4	-8,6	-9,8	-10,2
Turkey	0,1	-3,1	3,1	-0,3	-1,2	-1,1	1,0	-0,7	-5,0	2,4	-0,8	-3,3	-5,2	-6,2	-7,9	-7,5	-7,0
Ukraine	-3,0	-2,9	-3,2	-3,1	-2,7	-2,7	-3,1	5,3	4,7	3,7	7,5	5,8	10,6	2,9	-1,5	-3,5	-6,2
USA	-0,8	-1,3	-1,7	-1,5	-1,6	-1,7	-2,4	-3,2	-4,3	-3,8	-4,4	-4,8	-5,5	-6,1	-6,2	-5,7	-5,5

Source: Fabris, N., Kilibarda, B. (2008). Analysis of the sustainability of current account deficit of Montenegro, Montenegrin Central Bank - Division of Research, Statistics and IT, *Podgorica, p.* 10, available at: *http://www.cb-cg.org/slike_i_fajlovi/fajlovi/fajlovi_publikacije/radne_studije/analiza_odr%C5%BEivosti_deficita.pdf*

From the table above it is clear that the United States, Turkey, Estonia, Slovakia, Romania, Bulgaria and other countries, have had for years a balance of payments deficit above 5% of GDP. Based on the analysis, it can hardly be concluded that some of the observed countries were on the verge of an economic crisis. Some advocates believe that countries can have years of current account deficits, and the economy does not suffer because of this if the deficit is used to finance private investment. On the other hand, the budget deficit could lead to the inability of the state to remit abroad. Some analysts cite for example the case of Russia from 1998, when the Russian government was unable to pay the outstanding balance to abroad. The fact that the current account deficit does not matter if it is a result of private sector deficit - Lowson doctrine1 proved to be wrong, when the Asian financial crisis occurred between 1997 and 1998, where in spite of budgetary imbalances there was still the crisis due to the high external indebtedness of the private sector (Central Bank of Montenegro, 2008).

Measures taken by the governments of the member states in 2008, 2009 and 2010 were primarily aimed at supporting the financial system and mitigating the effects of the crisis that affected the real sector. The measures meant increase of insured deposits, issuing guarantees for liabilities of banks and recapitalisation of financial institutions.

Table 3. Basic Monetary and Fiscal Indicators in Euro Zone and EU for 2008 -2011

Parameters		2008	2009	2010	2011
			Euro zone		
GDP	(millions of euro)	9.241.541	8.922.208	9.176.138	9.420.834
Budget Deficit	(millions of euro)	-196.366	-566.498	-569.469	-390.708
	(%GDP)	-2,1	-6,3	-6,2	-4,1
Public Expenditure	(%GDP)	47,1	51,2	51,0	49,5
Public Revenues	(%GDP)	45,0	44,9	44,8	45,4
Public Debt	(millions of euro)	6.489.962	7.135.458	7.833.349	8.227.833
	(%GDP)	70,2	80,0	85,4	87,3
			European Union		
GDP	(millions of euro)	12.472.988	11.754.729	12.278.824	12.650.044
Budget Deficit	(millions of euro)	-303.470	-806.992	-800.906	-560.834
	(%GDP)	-2,4	-6,9	-6,5	-4,4
Public Expenditure	(%GDP)	47,1	51,1	50,6	49,1
Public Revenues	(%GDP)	44,7	44,2	44,1	44,7
Public Debt	(millions of euro)	7.763.975	8.764.582	9.826.981	10.433.926
	(%GDP)	62,2	74,6	80,0	82,5

Source: Erić, D., Djukić, M. (2012),Financial markets in times of crisis, the Institute of Economic Sciences, Belgrade Banking Academy – Faculty for Banking ,Insurance and Finance, Belgrade, pp. 382.

Greece had the highest deficit in 2009, i.e. 15.8%, and later in 2010, after severe austerity measures, it was reduced to 10.6%. The level of public debt in Greece at the end of 2010 amounted to 144.9% of GDP (Erić and Djukić, 2012, pp. 382-383). As it can be seen, in

[1] This doctrine was named after Nigel Lowson and it clarifies the extent to which the current balance deficits reflect the decisions of private savings and investment, and there are no disturbances and expectations are rational and there is no reason that the government operates.

relation to 2010, budget deficit of the Euro Zone and EU in 2011 was reduced, while the public debt recorded an upward trend. In the Euro Zone, the deficit ratio to GDP decreased from 6.2% in 2010 to 4.1% in 2011, while in the EU it dropped from 6.5% to 4.4%. The public debt to GDP in the Euro Zone increased from 85.4% to 87.3% in late 2011, while in the EU it recorded growth of the indicator from 80% to 82.5% only one year later.

At the time of joining the EMU, Greece shows a high level of budget deficit, which it sometimes seems to be the only country that has not met any of the fiscal conditions of eligibility for the monetary union. In addition, apart from fiscal conditions, Greece basically did not meet any of the criteria for convergence, where the range in long-term interest rate in relation to the three countries with the lowest interest rate always showed a higher value than any other member state of the EMU. Likewise, the inflation rate was at a satisfactory level, only at the time of entry into the Union.

Table 4. The current account deficit as % of GDP in the European Union for the period 2011 - 2012

No.	Country	Currency	2011		2012	
			In mil./currency	% of GDP	In mil./currency	% of GDP
1.	Belgium	**euro**	-13.777	-3,7	-14.852	-3,9
2.	Bulgaria	**BGN**	-1.492	-2,0	-624	-0,8
3.	Czech Republic	**CZK**	-124.943	-3,3	-169.003	-4,4
4.	Denmark	**DKK**	-33.018	-1,8	-72.470	-4,0
5.	Germany	**euro**	-20.230	-0,8	4.090	0,2
6.	Estonia	**euro**	186	1,2	-46	-0,3
7.	Ireland	**euro**	-21.268	-13,4	-12.461	-7,6
8.	Greece	**euro**	-19.834	-9,5	-19.360	-10,0
9.	Spain	**euro**	-100.402	-9,4	-111.641	-10,6
10.	France	**euro**	-105.392	-5,3	-98.196	-4,8
11.	Italy	**euro**	-60.016	-3,8	-47.633	-3,0
12.	Cyprus	**euro**	-1.132	-6,3	-1.127	-6,3
13.	Latvia	**LVL**	-509	-3,6	-187	-1,2
14.	Lithuania	**LTL**	-5.848	-5,5	-3.666	-3,2
15.	Luxembourg	**euro**	-98	-0,2	-359	-0,8
16.	Hungary	**HUF**	1.194.947	4,3	-531.585	-1,9
17.	Malta	**euro**	-183	-2,8	-226	-3,3
18.	Netherlands	**euro**	-27.009	-4,5	-24.405	-4,1
19.	Austria	**euro**	-7.385	-2,5	-7.684	-2,5
20.	Poland	**PLN**	-76.094	-5,0	-62.698	-3,9
21.	Portugal	**euro**	-7.543	-4,4	-10.596	-6,4
22.	Romania	**RON**	-30.911	-5,6	-16.822	-2,9
23.	Slovenia	**euro**	-2.298	-6,4	-1.418	-4,0
24.	Slovakia	**euro**	-3.498	-5,1	-3.107	-4,3
25.	Finland	**euro**	-1.539	-0,8	-3.662	-1,9
26.	Sweden	**SEK**	7.160	0,2	-18.307	-0,5
27.	UK	**GBP**	-118.632	-7,8	-97.794	-6,3
Average: 2011 - 2012.			-118.217	**-7,8**	-86.510	**-5,6**

Source: http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/2-22042013-AP/EN/2-22042013-AP-EN.PDF (Access to date: 10.8.2013.

At the end of 2011, the lowest ratio of the budget deficit and GDP was recorded in Luxembourg (0.3%), Finland (0.6%) and Germany (0.8%), while Hungary, Estonia and Sweden recorded a surplus of 4.3 %, 1.1% and 0.4% of GDP - individually. Also, according to Eurostat data, the seventeen member countries had a deficit in excess of 3% GDP and to Ireland (13.4%), Greece (9.5%), Spain (9.4%), United Kingdom (7, 8%), Slovenia (6.4%), Cyprus (6.3%), Lithuania (5.5%), Romania (5.6%), France (5.3%), Poland (5.0%), Slovakia (5.1%), the Netherlands (4.5%), Portugal (4.4%), Italy (3.8%), Belgium (3.7%), Latvia (3.6%) and Czech Republic (3.3%). Thus, one can conclude that, with respect to 2010, all EU member states in 2011 reduced the ratio of the budget deficit and GDP. Also, at the end of 2012 the positive percentage of GDP was recorded in Germany (0,2%), while all other observed countries of the European Union had a negative value of percentage of GDP. The largest negative percentage of GDP recorded in the following countries: Spain (-10,6%), Greece (-10,0%), Ireland (-7,6%), Portugal (-6,4%), Cyprus and UK (-6,3%).

Management and potential for sustainability of budget deficits in BH

Bosnia and Herzegovina has certain advantages in terms of movement of macroeconomic stability criteria, such as price stability and exchange rate stability, which are secured based on managing monetary policy through currency board arrangement since 1997. However, there are some delays in the fulfilment of structural reforms, among which a slow development of financial markets stands out, particularly money market and government securities market. The main challenges for the near future in the integration of Bosnia and Herzegovina into the European Monetary Union are expected in the area of public finance, with a focus on reducing the budget deficit and stabilizing the public debt as a segment of the implementation of effective fiscal policy in state of Bosnia and Herzegovina. The most important criteria in the context of integration of Bosnia and Herzegovina can be divided into two categories: first, the conditions arising from the Feasibility Study and the Stabilisation and Association Agreement, which have been designed by the European Union for all candidates for membership in the European Union and, secondly, the conditions arising from the Copenhagen criteria applicable for all candidates.

On the other hand, the conditions arising from the Maastricht Treaty, known as convergence criteria, refer to the European Monetary Union and they need to be met by each Member State of the European Union prior to the introduction of euro as a common currency and accession to the European Monetary Union. The main goal of the fulfilment of the convergence criteria is to create a stable macroeconomic environment for the introduction of the common currency of Euro and for the integration of the monetary system of Bosnia and Herzegovina into the European Monetary Union (Đonlagić, 2006th, pp. 197-198). The Maastricht criteria established boundaries of sustainability of the budget deficit to GDP - which amounts to 3%. A legitimate question is whether the set boundaries are the condition for sustainability of the economic activity? In the continuation, we will use the regression model to test the interrelatedness of movement between imports and nominal GDP.

Stopping the growth of expenditures in relation to revenue decline was indeed insufficient to prevent further escalation of primary deficit, which in 2009 amounted to 3.9% of GDP. In fact, the deficit projection that the government did was much higher than that which actually occurred. Consolidated BH has achieved a deficit of around 1 billion BAM, as measured by the GDP amounts to 3.9% (expenditure approach), i.e. 4.4% of GDP - a (production approach). Implementation of these measures has had the greatest impact in 2010, where for the first time a decline followed by stagnation of social benefits compensation of employees. Restrictive expenditure policy is continued in 2011, despite the significant growth of social welfare, which is largely achieved through savings in the area of material costs and subsidies. Therefore, with revenue growth of 4.6%, primary deficit has been reduced to only 0.6% of GDP - in 2011 (BH Directorate for Economic Planning, 2012). In 2012, the trend of limiting spending continued with the primary objective of reducing the fiscal deficit. According to the fiscal rules adopted by the IMF - and the plan is that the fiscal deficit is at the level of 2011. In 2012, the same as the year before, the trend of deficit financing through the issuance of government treasury bills and bonds was continued with the aim to primarily regulate debts on various grounds. In 2012, the Government of the Federation of Bosnia and Herzegovina issued treasury bills in five emissions in the total value of 120 million BAM. In addition, the Republic of Srpska issued bonds in three emissions in the total value of 112.8 million BAM (CBBH, 2012). The table below illustrates the foreign trade indicators in BH for the period 2008. - 2012.

Table 5. Trends in foreign trade indicators for the period 2008 - 2012

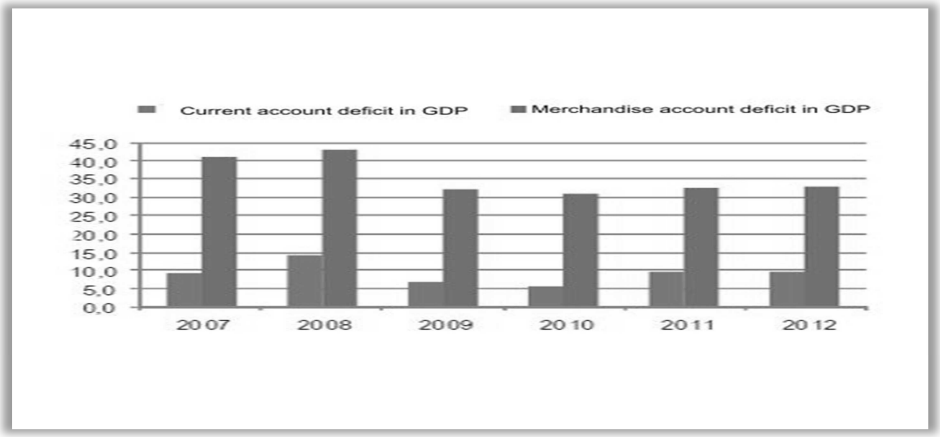
Indices	**2008**	**2009**	**2010**	**2011**	**2012**	**Total (2008 – 2012)**	**Index**
1	2	3	4	5	6	7	8(6/2)
Export of goods	6.711.690	5.530.377	7.095.505	8.222.112	7.857.962	35.417.646	117,07%
Growth/Export (of %)	-	(17,60)	28,30	15,88	(4,43)	-	-
Import of goods	16.286.056	12.348.466	13.616.204	15.525.428	15.252.942	73.029.096	93,66%
Growth/Import (of %)	-	(24,18)	10,26	14,02	(1,75)	-	-
Balance of trade (Export – Import)	(9.574.366)	(6.818.089)	(6.520.699)	(7.303.316)	(7.394.980)	-	-
Total trade	22.997.746	17.878.843	20.711.709	23.747.540	23.110.904	108.446.742	100,49%
Coverage of import by exports	41,2%	44,8%	52,1%	53,0%	51,5%	-	-

SOURCE: http://www.dep.gov.ba/dep_publikacije/ekonomski_trendovi/Archive.aspx?langTag=bs-BA&template_id=140&pageIndex=1 (Adaptation by author)

From the table above, it is clear that the total value of imports for the period 2008 - 2012 amounted to BAM 15.252.942, while the total value of exports for the same period was BAM 35.417.646. Maximum coverage of imports by exports was recorded in 2011 of 53%, whereas in 2012 there was a slight decline amounting to 51.5%. In 2012, imports were valued at 15.2 billion BAM, which resulted in a decline in imports of about 1.8% over the previous year,

while exports declined by 4.4% in 2012, and reached a value of 7,8 billion BAM. In all countries of the region except Croatia, rates of decline in the value of imports were recorded, while in the export, positive growth rates were achieved by Croatia and Slovenia. Most notably, the decline in exports was recorded in Macedonia and Serbia of about 10% compared with the previous year. The export-import ratio was reduced in all countries except Slovenia, where Slovenia has the highest export-import ratio that exceeds 95%. In countries with lower levels of per capita income, it is obviously a higher share of foreign trade in GDP. The graph below illustrates the change in import-export and export-import ratio for the year 2012 in the countries of the region. According to the Central Bank of BH (CBBH), the current account deficit balance of payments recorded a slight nominal increase of about 21 million BAM or 0.9%, where in 2012 it amounted to 2.45 billion BAM and represents a trend of increased deficits. Therefore, in relative terms, the current account deficit in 2012 amounted to 9.5% of GDP which is the same level as in 2011. The increase in the deficit current account was primarily affected by the foreign trade deficit and decrease of the surplus in the services account (Graph 1).

Graph 1. The current account deficit and merchandise account deficit as participation in GDP in BH for the period 2007 - 2012



Source:// http://www.dep.gov.ba/Default.aspx?langTag=bs-BA&template_id=139&pageIndex=1 Report on Development of BH, 2012, Economic Planning, 2013, p. 10 (Adaptation by author's)

Analysis of the interdependence of imports of goods and nominal GDP in BH

Regression equations are based on empirical data, where by the solution of the equation we can see that the change in imports of goods have a direct impact on nominal GDP in terms of increases or decreases. A Simple linear regression model expresses a relationship between the two parameters as follows:

$$Y_i = \alpha + \beta X_i + \varepsilon_i \qquad i = 1, 2, \dots \dots n, \tag{1}$$

where:

$Y -$ dependent variable,

$\alpha \; i \; \beta$ - unknown parameters that need estimate, and

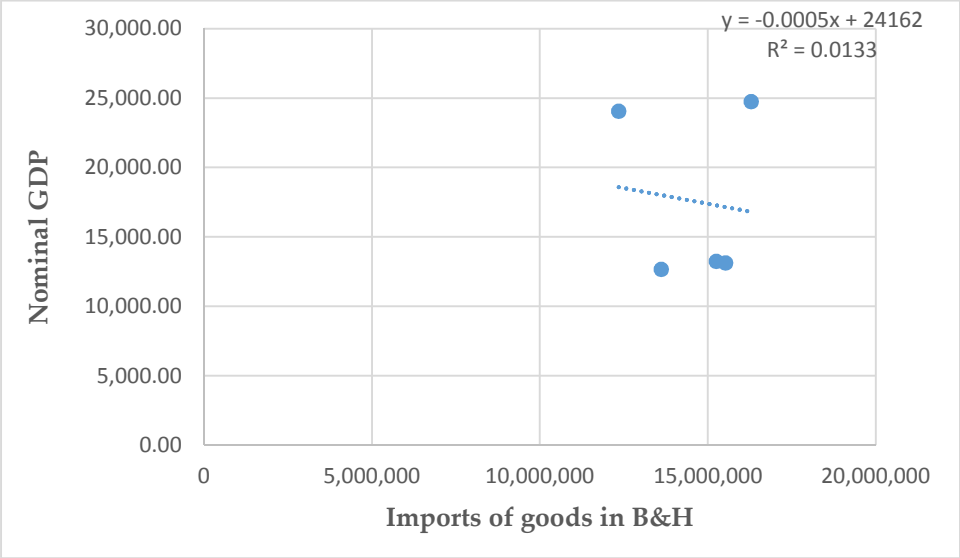
$\varepsilon_i -$ stochastic variable (error distances)

In the regression model, which will be the subject of analysis, we will follow the mutual dependence of the movement of imported goods in BH and nominal GDP sector of the Government of BH for the period 2008 - 2012. Also, in this paper we will provide the analysis of variance, and hypothesis on the significance of the regression variables, the null hypothesis, which is the independent variable contention that does not significantly affect the dependent variable, and hypothesis 1, which assumes that the independent variable has a significant effect on the dependent variable.

$H_0 \ldots . \beta_1 = 0$
$H_1 \ldots . \beta_1 \neq 0$

Based on the scatter diagram, i.e. the coefficient of correlation (r = -0.11513) it can be concluded that among these variables there is a statistical correlation of negative direction, i.e. that the increase in the value of imports of goods will affect the reduction in the value of nominal GDP. The chart below illustrates the interrelationship between imports of goods and nominal GDP for the period 2008 - 2012.

Graph 2. Simple linear regression line between the imported goods in BH and nominal GDP - for the period 2008 - 2012



Source: Calculation by author

The empirical ratio F = 3.53 (table 5) certainly shows that the regression model is statistically significant. The coefficient of determination is r^2= 0,013256, i.e. the model is interpreted to 1.32% deviation. Based on these parameters, as well as indicators of the regression analysis, it can be concluded that the applied model with the statistical point of view has rather good features.

Table 6. Pearson Product Moment Correlation between imports of good and nominal GDP of Government of BH

	Variable 1	*Variable 2*
Mean	14185760	15770,5
Variance	2,21E+12	30535723
Observations	4	4
df	3	3
Pearson Correlation	-0,798766	
Covariance	-917571721	
Correlation	-0,1151353	
Determination	0,013256145	
T – Test	19,00186	

Simple Linear Regression - Ungrouped Date

	Value	**S.E.**	**T – STAT**
Beta	57878,22	22518,84	2,570213
Elasticity	-0,00297	0,001581	-1,87758

Regression - Analysis of Variance

ANOVA	**DF**	**Sum of Squares**	**Mean Square**
Regression	1	58447985	58447985
Residual	2	33159184	16579592
Total	3	91607169	-
F - TEST	3,525297	-	-

Sorce: Calculation by author

The regression equation is equal:

$$Y = -0{,}0005\,X + 24162$$

$$R^2 = 0{,}0133$$

According to the above equation, if the value of imports of goods increased by one percentage point, indicator of nominal GDP will be reduced by an average of about 0.0005 percentage points. Parameter estimation is statistically accurate. Therefore, the analysis of relationships between the parameters imports and nominal GDP sectors of BH Government on the basis of model adopted and data showed that among the above parameters there is a strong statistical linear relationship in the opposite direction. This confirms the null hypothesis that imports of goods and services, has no significant impact on gross domestic product.

Conclusion

An analysis of macroeconomic indicators in BH in 2012 recorded a trend of weakening economic activity. First of all, the results of this situation should seek the stagnant economies of EU and the countries of the region. Negative economic growth is manifested through a real drop in domestic demand and exports, the decline in investment funding and the decline in industrial production. This situation is reflected in the BH economy in terms of public finance statistics. As you can notice, the current account deficit in BH has overrun the limits set by the convergence criterion of 3% of GDP - in the last few years, which will inevitably decline in gross domestic product, and ultimately to a deepening decline in economic activity.

In order to reduce the deficit by the end of the year, certain levels of governments have already implemented certain measures designed to reduce total expenditure, and thereby reduce the deficit, and for the purpose of approving the new. In line with all above, there is still the problem of financing the deficit. In the early years, the deficit financing was achieved through borrowing, both domestic and foreign. Entity Governments for this purpose performed bond emissions.

To achieve sustainable growth model in BH, attention must be paid to the level of reduction of the trade deficit, work on increasing the level of exports, reduce the level of consumption and higher levels of investment and employment. The only current assumption of deficit financing, which of course is not justified, is in part an increase in public debt. BH should certainly continue to implement restrictive fiscal policy measures and cuts in public spending in order to improve the fiscal position. Specifically, in addition to the nominal convergence criteria, BH should seek to achieve real convergence criteria in terms of creating the environment for foreign direct investment, harmonization of labour market and the proper transformation and homogenization of the real sphere of economy.

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Efekti spoljne trgovine na budžetsku ravnotežu - studija slučaja Bosne i Hercegovine

REZIME *–.Analizom kretanja ekonomskih trendova u BiH u 2012. godini zabeležen je nastavak slabljenja ekonomskih aktivnosti. Pre svega, ovakvo stanje rezultat je stagnacije ekonomije zemalja EU i regiona. U prvom tromesečju 2013. godine, robni izvoz je realno porastao za 19%, a uvoz za 13% što je dovelo do realnog rasta vanjskotrgovinskog deficita za oko 7%. Dati rast deficita bitno je umanjio ranije procene ekonomskog rasta za prvo tromesečje u kome je snažan izvozni rast praćen rastom industrijske proizvodnje predstavljao jako bitan iskorak u odnosu na prethodnu godinu. Osnovni cilj u ovom radu je razmatranje uticaja globalne finansijske krize na kretanje budžetskog deficita u BiH za period 2008. 2012., kao i praćenje ograničenja koje je postavljeno Mastrihtskim ugovorom da visina budžetskog deficita ne smije preći 3% GDP-a kroz međuzavisnost uvoza roba i nominalnog GDP-a.*

KLJUČNE REČI*: uvoz roba, izvoz roba, spoljnotrgovinski indikatori, budžetski deficit, kriteriji konvergencije*

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