

# **Macroeconomic determinants of Sustainable Development in Bosnia and Herzegovina**

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## **Abstract**

The origin of term sustainable development comes from forestry and it means the extent of cutting and putting the new trees on the planet. Synonymous for it is sustainability and it refers to ability to endure as much longer as it is possible. This paper shows the degree of correlation between sustainable development in Bosnia and Herzegovina and five macroeconomic determinants: unemployment, export, import, average salaries and CPI as a measure for inflation. The paper provides information about importance of economy in this process and it explains all variables that are used. It is based on the period of five consecutive years (2007-2011). Research for all of five variables was conducted on monthly basis for this period, so in total it provides 58 data (January and February of 2007 are excluded) for each variable. Next thing that this paper shows is the current position of the country in terms of its development. The paper represents a combination of basic research (provides a lot of useful information about the topic) and quantitative research (shows numerical results that are gotten by the analysis of the problem). Unemployment, as one of the biggest and growing problems in the country, is dependent variable and paper tries to prove relationships among this variable and the others. Results in the paper are obtained through descriptive analysis. The paper provides data about causes for high unemployment in our country and it shows how much impact each variables mentioned above have or does it have at all. Finally, paper shows on what country should put more emphasize in order to improve its current position and to be able to compete with more developed countries.

**Keywords:** sustainable development, unemployment, export, import, salary, inflation, CPI, economy, GDP

## 1. INTRODUCTION

Actions done should not affect people that are inhabited there. Sustainable development represents holding the balance among consumption, savings and regeneration of all our resources. Sustainable development is a process of change and it has to start from each individual and it continues by transmitting it to each area of our lives. One quotation describes, in the best way, change that sustainable development influences. It says: "Insanity is doing the same thing over and over and expecting different result".<sup>36</sup> As starting point of process, known as sustainable development, it refers to year 1970, when World leading countries made an agreement to allocate 0.7% of their total gross national income in order to help those countries which are struggling. In 1992 at conference in Rio de Janeiro sustainable development became a leading term in field of politics about environment. Sustainable development implies four ways of consolidation (use of resources, investments, technical development and institutional changes). During the process the understanding of sustainable development has been spread to two fields more: economic and social. All three are making so called "magic triangle" of sustainable development. Today, UN represents the leading international organization that deals with it. It was founded in 1945, right after the Second World War in order to harmonize the situation and to make "relationships" among countries. It represents an international organization whose stated aims are facilitating cooperation in international law, international security, economic development, social progress, human rights, and achievement of world peace.<sup>37</sup> Today, this organization is consisted of 193 countries members.

This paper defines basic terms related with sustainable development, explains data used in the research and provides the results on five consecutive years. The aim of the paper is to examine and analyze macroeconomic determinants of sustainable development in Bosnia and Herzegovina.

## 2. BOSNIA AND HERZEGOVINA

Bosnia and Herzegovina is positioned on the Balkan Peninsula with total area of 51 172 square kilometers and estimated population of 4.5 million people. Country is bordered with Croatia, Serbia and Montenegro. Capital city is Sarajevo.

### 2.1 History

First recorded appearance of name Bosnia has happened in 10th century in a geo-political handbook of Byzantine emperor Constantine VII. Since ninth century Bosnia was an independent country and it was governed by Bans. Independency was kept on until 1463, when last Bosnian Ban was removed and Ottoman Empire conquered this region. In 1878

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36 Albert Einstein, (attributed) US (German-born) physicist (1879 - 1955),  
<http://www.quotationspage.com/quote/26032.html>

37 [http://en.wikipedia.org/wiki/United\\_Nations](http://en.wikipedia.org/wiki/United_Nations)

Bosnia became a part of Austro-Hungarian Empire. In 1914 Gavrilo Princip, a member of youth movement called “Young Bosnia”, assassinated Austro-Hungarian heir Franz Ferdinand in Sarajevo. This event was, as most of historians say, an event that started the First World War. After the end of the War, in 1918 Bosnia becomes a part of country called country of Slovenians, Croats and Serbs, which was renamed in 1929 in Kingdom of Yugoslavia. After Second World War Kingdom Yugoslavia became Socialist Federal Republic of Yugoslavia and was operating under that name until October 1991. In that year Bosnian people vote for sovereignty and in February of 1992 for independency. In May 22 of 1992 Bosnia and Herzegovina became a member of UN. Dayton agreement in November of 1995 marked the end of four years war in the country. Bosnia and Herzegovina is consisted out of two administrative units: Federation of Bosnia and Herzegovina and Republika Srpska. The special status in the country has region of Brcko-District and it is not part of neither of those two units.

## **2.2 Politics and Political structure**

Based on its state organization, Bosnia and Herzegovina represents unique state structure in the world. Legislative power is given to bicameral Parliament consisted of House of Representatives and House of People. At the top we have presidency that is made out of three members. Each of them elected based on his ethnic characteristics. So, one is representative of Bosniaks, one is representative of Serbs and one is representative of Croats. Council of ministers represents central government and is consisted out of six ministers with positions in fields of external affairs, international trade and economy, civil affairs and communication, human rights and refugees, European integration, and finally treasury. On the state level we have established several agencies whose primary occupation is to create reports about sustainable development.

## **2.3 Sustainable Development**

As a part of Yugoslavia, Bosnia and Herzegovina was specialized in raw and energy production. Additionally, most of military production was done in the country. It was hugely due to huge amount of resources that were available especially for hydro and energy production. Among that, Bosnia and Herzegovina was and still is rich by coal and metal. Highly intensive production and exploitation of these resources were not what Sustainable development policies imply. It was totally opposite since there was imbalanced relationship between economy and ecology. In time when idea of Sustainable Development was formed and developed in Rio de Janeiro, Bosnia and Herzegovina was going through war. When in 1997 Rio 5 conference was done, this country was occupied by its own reconstruction and could not participate in developing the process of sustainable development. However, later on through several international programs, Bosnia and Herzegovina succeed to join the process of sustainable development and participated in forming MAP – Mediterranean Action Plan.

## **2.4 Economy**

Since the end of the war, Bosnia and Herzegovina had two main issues. One was to rebuild its infrastructure that was totally destroyed during the four years of war. The second one was to change the “style” of economy. Before, in this country is so called central economy, where most of institutions were government owned and now they had to privatize them. The main

help for rebuilding were FDI. Total FDI in period from 1994 to 2011 is around 8 billion of BAM, where the “best” year of FDI in Bosnia and Herzegovina was 2007 where this country total around 2.4 billion of dollars. This year represent 30% of all FDI since 1994.

Among the main investors (2010 estimated) we have Austria (1.88 billion of BAM), Serbia (1.72 billion of BAM), Croatia (1.35 billion of BAM) and Slovenia (1.07 billion of BAM).

When it comes to sector investments were mainly done in manufacturing where main companies of steel production faced joint venture. In the second place of FDI we have banking services which results in many foreign banks in our countries. In this sector we have highest investments from Dubai, Croatia and Austria. Economy in Bosnia and Herzegovina has faced the wall in last few years after continues growth in period before it. As whole world faces today, this country also feels the consequences of global crisis. The 2009 was the worst year where it GDP felt for 3%. However, this country started to recovering and in the last two years has increasing GDP.

### **3. DATA USED**

#### **3.1 Unemployment**

Based on International Labor Organization we define the unemployment as situation in which people without job could not find one in past four weeks. Another definition adds that unemployment represents a situation in which qualified worker, who are willing to work in current conditions can not find the job. This problem is presented in each country in the world and all governments are dealing with it. Among the reasons we can find: labor costs, low investments from companies, political reasons, low qualifications, personal behavior, job dissatisfaction, national policies, new technologies, economic crisis and discrimination. Having in mind the current structure of labor market economists differentiate three main types of unemployment; structural (the gap between availability of jobs and demand for the workers), frictional unemployment (when people change their jobs or they move on to the other regions or countries) and cyclical unemployment (there is generally low number of available jobs in the market). In order to measure unemployment economists use unemployment rate. Several international organizations are dealing by comparisons of unemployment among the countries. Among them we have Eurostat, OECD and ILCP. Based on the latest information Bosnia and Herzegovina takes 188th place among 200 ranked countries. This data shows that Bosnia is dealing with big issues regarding unemployment and that big part of its labor force is unemployed.

#### **3.2 Trade**

Trade is term that we use every day. It represents a situation in which good or service change its owner. In order to earn money trade must happen and place where it happens is called market. We can identify two types of trade in economy: domestic trade and international trade. Domestic trade represents the situation where all transactions are done within a country. On the other hand, international trade represents situation in which two or more countries made transactions among themselves. Import happens in situation when a domestic country buys goods and services from foreign one. In most cases two main reasons stand for doing import. One is that domestic company can import products that have higher quality and/or lower price than the ones that are produced within the country. On the other hand some services such as computer equipment, for example Apple is not produced in Bosnia and

Herzegovina, and so the only way to have it on the market is to import it. Export refers to opposite situation. It happens when goods and services are produced at home and sold in other country. As for import several reasons stand for export too. Among them there are possibilities to earn higher profit, because export gives ability to company to produce and sell more.

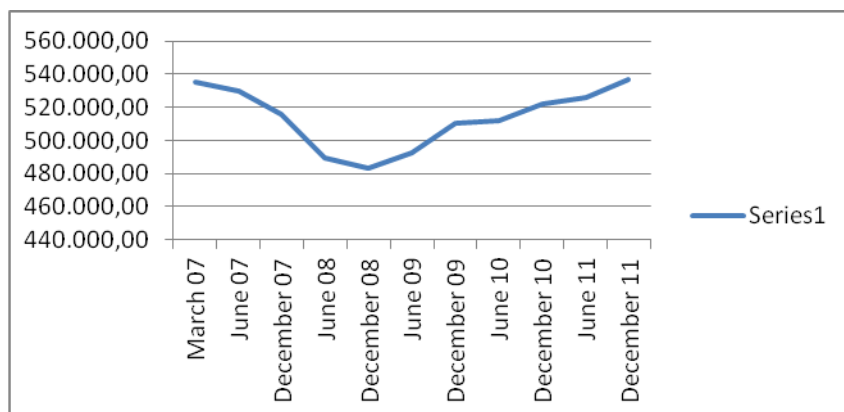
### 3.3 Inflation

Inflation represents the degree by which price level of goods and services has raised in certain period. At the same time value of money has decreased, since for the same money buyer can buy less now. Inflation can result in real decrease of money value, which results in uncertainties in future. This is seen as negative effect of inflation. On the other hand inflation can give authorities and government possibility to adjust nominal rates and to call promotes investments in nonmonetary areas. However inflation is normal from time to time and in some cases shows how economy is doing. Inflation may be divided into cost push inflation (companies decide to increase their prices because their costs have increased) or demand pull inflation (demand for certain product increases so much that it is far more above the supply of that product). Formula for CPI is  $\text{new price} / \text{old price} \times 100$ .

### 3.4 Salary

Salary represents a payment from company, organization or other legal entity to an employee on a periodical basis. Salary is important to economy since it provides finance to population so they can spend and move money around. Based on the contract terms between employer and employee we may distinguish salary by time (workers are paid for the time they work in their companies), salary by work (company pays its worker regarding the work done such as time spent on work and quality of finished work) or salary by results (workers are paid based on quantity they have produced). Economy ranges workforce based on its income. The main part of household income is its salaries and that why today there are several categories or salary grades. Those often called “levels of salaries” distinguish employees and importance of position they occupy. Same as in other areas of economy there has to be levels of income so economy could produce different products that have different prices and etc. Beside national or in modern time, global economic reasons, salary provides information to individuals so they can be able to see their current position.

## 4. ANALYSIS AND RESULTS



Unemployment has varied in the period of five years. As already mentioned unemployment may be the reason of several factors. As we can see from the chart on the left, unemployment was decreasing until 2009. It is assumed that world crisis from 2008 stroke.

Bosnia and Herzegovina in 2009, and it results in increase of 5.98% of unemployment rate in 3 years. Analysis of 58 data for each variable on 5 year basis shows the following:

#### Descriptive Statistics

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Unemployment	58	66761.00	469967.00	536728.00	511660.1552	17367.22390
Import	58	824155.00	719309.00	1543464.00	1205184.3793	171683.70156
Export	58	346719.00	385687.00	732406.00	562313.4310	90477.96194
Inflation	58	3.30	-1.20	2.10	.2931	.60491
Salaries	58	203.00	625.00	828.00	764.9483	59.53693
Valid N (listwise)	58					

Standard deviation for unemployment shows that most of the data is somewhere around the mean. When it comes to trade, import counts for 69,900,694.00 of BAM (68.19%), while export counts for only 32,614,179.00 of BAM (31.81%). This shows that in almost five year (January and February of 2007 excluded) Bosnia and Herzegovina made trade deficit of 37,286,515.00 of BAM. Inflation in 58 months totaled to 17% which means that if people could buy certain things for 100 BAM in February of 2007 in December of 2011 they had to paid 117 BAM. Average salaries increased from 625 BAM to 828 BAM or for 32.48%. It increased until 2009 and from that point it has almost a flat curve. In December of 2011 Bosnia and Herzegovina counted 536,728.00 of unemployed people or 43.83% of its total workforce. Even if this number of unemployed people is the record for five years the percentage of unemployed people is not the biggest one (44.74% in March 2007). Beside unemployment standard deviation is low only in salary while higher standard deviation we have in import and export and extremely high in inflation which means that results varying hugely from the mean.

## 5. CONCLUSION

The aim of this paper was to examine five determinants of economic sustainable development of Bosnia and Herzegovina and to see how they impact situation. From the results we could see that the main reason for unemployment, among the variables mentioned, is trade. Huge trade deficit is among the leading reason why this country stagnates in sustainable development. In order to operate with profit, company s revenue has to exceed the expenses. Same goes for economy; if there is no positive outcomes out of trade, in that case country cannot operate positive. However, it is important to increase export, because based on several economic theories it increases employment. On the other hand, economic researches show that relationship among unemployment and import is strongly negative, which means that increase in import also increases employment. Reason for that is that there is more consumption, which represents that economy is growing and that more money is available. The upcoming years will be crucial for the country since data shows slight stabilization in the last year. It shows that country started to recover a little bit from the crisis that hit it in the

2009. In 2010 government made a strategic plan with several strategic goals in order to move forward. Among the goals they put macroeconomic stabilization, competitiveness, employment, sustainable development and EU integration. In order to succeed government has to implement policies developed in this strategic plan efficiently and has to coordinate among these five goals, because the only way to have results is to implement them in the same time.

## REFERENCES

Agency of statistics of Bosnia and Herzegovina, Last Accessed April 29, 2012, [http://bhas.ba/?option=com\\_saopstenje&cbgodina\\_saopstenja=2012&pregled=1&lang=ba](http://bhas.ba/?option=com_saopstenje&cbgodina_saopstenja=2012&pregled=1&lang=ba)

A. Hodžić (2008). Geo-economic and geopolitical importance of the Balkan region in the expansion of European Union. Center for Security studies.

Bosnia and Herzegovina, The Council of Ministers, Directorate for Economic Planning (2010). Development strategy of Bosnia and Herzegovina.

CIA - Central Intelligence Agency, Last accessed on April 28, 2012, <https://www.cia.gov/library/publications/the-world-factbook/geos/bk.html>

N.L. Dobretsov, A.V. Kanygin, and A.E. Kontorovich, Paper on Economics and Environment as Factors of Sustainable Development of Siberian Mineral Resources

Quotations Page, Last Accessed on April 22, 2012, <http://www.quotationspage.com/quote/26032.html>

Tutor2u, Last Accessed on April 10, 2012, <http://tutor2u.net/economics/revision-notes/a2-macro-causes-of-inflation.html>

Wikipedia, Last Accessed April 29, 2012, [http://en.wikipedia.org/wiki/United\\_Nations](http://en.wikipedia.org/wiki/United_Nations)