The effect of Foreign Direct Investment in Western Balkan economies for the period 2005 - 2015

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Abstract

One of the most important conditions for the successful process of economic restructuring of transition countries including Balkans region is the opening of these economies towards foreign investors.

This paper surveys the effects of outward foreign direct investment in the countries of Western Balkan (Albania, Bosnia and Herzegovina, Croatia, Kosovo, Macedonia, Montenegro and Serbia) in the period between 2005 until 2015.

In all these countries FDI is often highly welcomed by government officials because they expect these capital flows to have a positive impact on home country exports, GDP, employment rate, as well as positive effects on the balance of payments i.e. on narrowing current account deficit.

The main hypotheses in the paper are tested econometrically and we identify weak correlation between foreign direct investment on the one side and export, GDP and employment rate on the other side. While in the most countries we found statistically significant correlation between FDI and current account deficit.

Key words: foreign direct investment; export; GDP; employment rate; current account deficit; Pearson correlation;

1. Introduction

After the period of isolation up to 1990-s, Western Balkan (WB) countries liberalised their trade flows and accepted foreign direct investment attraction policy. These policies implied by Washington consensus should result with accelerated economic growth and with significant increase in FDI to the whole region. In the Figure no. 1 is presented the cumulative income of foreign direct investment.

Figure 1: FDI inward stock in Western Balkans in the period from 2005 until 2015
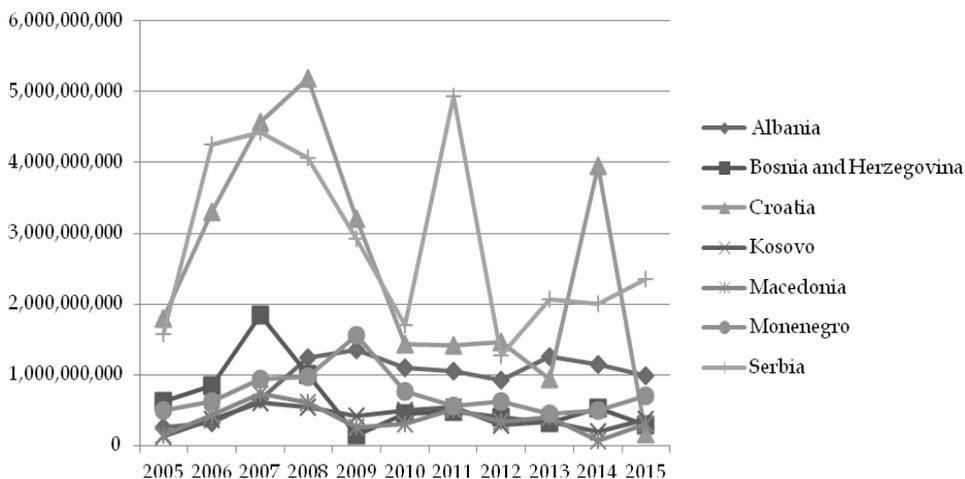
Source: Authors' calculation based on World Bank database.

As we can see in the figure above, the cumulative income of FDI is drastically different between the given countries. The average FDI inwards stocks in the period from 2005 until 2015 was highest in Serbia (2.867.717.816 US$) and the smallest in Macedonia (371.334.169 US$). These dissimilarities partly can be explained with the different economic institutions and different absorptive capacity of the countries, political events as well as different speed of the privatisation processes.

This article examines whether and to what extent foreign direct investment inflows enhance economic growth, export, employment rate, and reduce current account deficit in WB countries.

The structure of the paper is as follows: Section 2 surveys the literature. Section 3 presents the data and methodology. Research results are discussed in Section 4. Section 5 is summary of the thesis.

2. Literature review

There is a number of researches in which are enumerated positive effects of FDI inflows to host countries (Williams, 1997); (Markusen and Venables, 1999); (Dunning, 1996); (Haddad and Harrison, 1993) etc. The positive effects of FDI flow range from the transfer of technology and know-how, to the creation of employment opportunities. However, there is also evidence that FDI is a source of negative effects, such as profit expatriation, negative wage spillovers, monopoly power over the market, trade deficit etc. (Agosin and Mayer 2000); (Chaisrisawatsuk and Chaisrisawatsuk, 2007).

Over the past twenty years, there have been various studies which examine the impact of FDI in Western Balkan countries, due to the reason that foreign capital has played an important role in most countries during the twenty-six year transition to market economy.

There are empirical studies which confirmed the positive effects of FDI in WB countries. Mitic and Ivic (2016) found a significant level of correlation between FDI and export of goods. Selimi et al., (2016) found a positive and statistically significant effect of FDI on exports performance in Albania, Croatia, Bulgaria and Macedonia.

However, on the other hand, there are studies which didn't confirm positive effects of FDI flows in this region. For instance, empirical research made by Estrin and Uvalic (2013).

3. Data and methodology

The research presented in this paper includes countries from Western Balkan region. Data were taken from World Bank database for the period from 2005 up to 2015. In our research, we didn't include the year 2016 because data were not available.

At the beginning, we set up a hypothesis that there is a strong correlation between FDI inflows on the one hand, and exports of goods, economic growth, employment rate and current deficit on the other hand. For economic growth, we use indicator GDP per capita (constant 2010 US$). As a measure of the export, we use export of goods and services in constant

2010 US$. Furthermore, the level of employment we measure with the total unemployment as a percent of total labor force, (modelled ILO estimate). The data for the FDI net inflows and current account balance are taken from the balance of payments, expressed in current US$.

Our assumption is that FDI contributed to the strengthening of export performance, promote economic growth, reduce the unemployment rate and reduce current account deficit.

For correlation analysis in this study, we used the coefficient of linear correlation between FDI and export, GDP, unemployment and current account deficit, or the Pearson correlation coefficient (r), which is calculated as:

$$r = \frac{n\sum xy - \left(\sum x\right)\left(\sum y\right)}{\sqrt{n\left(\sum x^2\right)-\left(\sum x\right)^2}\sqrt{n\left(\sum y^2\right)-\left(\sum y\right)^2}}$$

Where:
n = number of value in each data set
y = dependent variable
x = independent variable

A correlation coefficient is a number between –1 and 1 that determines whether two paired sets of data are related. The closer to 1 the more confident we are of a positive linear correlation and the closer to –1 the more confident we are of a negative linear correlation.

For estimating Pearson coefficient we use statistical package SPSS. In addition to the strength and the way of correlation between analysed variables, we have tested the statistical significance of the relations.

The first step is to specify the null hypothesis of no linear correlation present in a population, against the alternative that there is a linear correlation present.

For the Pearson r correlation, both variables should be normally distributed. For this purpose at the beginning, we are applying Kolmogorov-Smirnov test for normal distribution of all the variables. Results from the test are presented below.

Table 1: Kolmogorov-Smirnov test for normal distribution

		Un-employment	GDP	Export	FDI	Deficit
Albania	Kolmogorov-Smirnov Z	.69	.55	.62	.70	.49
	Asymp. Sig. (2-tailed)	.724	.924	.835	.707	.970
BH	Kolmogorov-Smirnov Z	.57	.74	.55	.76	.58
	Asymp. Sig. (2-tailed)	.906	.642	.919	.608	.892
Croatia	Kolmogorov-Smirnov Z	.45	.76	.53	.70	.51
	Asymp. Sig. (2-tailed)	.986	.609	.939	.711	.960
Kosovo	Kolmogorov-Smirnov Z		.32	.44	.38	.76
	Asymp. Sig. (2-tailed)		1.00	.989	.999	.604
Macedonia	Kolmogorov-Smirnov Z	.46	.49	.61	.38	.88
	Asymp. Sig. (2-tailed)	.982	.968	.857	.999	.424
Montenegro	Kolmogorov-Smirnov Z	1.0	.77	.77	.69	.68
	Asymp. Sig. (2-tailed)	.265	.589	.595	.736	.749
Serbia	Kolmogorov-Smirnov Z	.62	.74	.63	.66	.84
	Asymp. Sig. (2-tailed)	.840	.648	.818	.771	.485

Source: Authors' own calculations

We can see from the above table that all variables are normally distributed because the significance value below the Kolmogorov-Smirnov test in all of them is greater than 0.05., which provide direction to continue with Pearson correlation test.

4. Research results

By applying Pearson correlation coefficient we made tests on the following alternative hypotheses:

H1: The inflow of foreign direct investment have a significant impact on unemployment (on reducing unemployment rate).

H2: The inflow of foreign direct investment have a significant impact on exports (on export increase).

H3: The inflow of foreign direct investment have a significant impact on GDP (on GDP increase).

H4: The inflow of foreign direct investment have significant impact on current account deficit (on reducing current deficit).

The results of the tests are presented below:

Table 2: Results of correlation analysis: Hypothesis 1

		FDI	Unemployment
Albania	Pearson Correlation	1.00	.65
	Sig. (1-tailed)		.022**
BH	Pearson Correlation	1.00	.37
	Sig. (1-tailed)		.145
Croatia	Pearson Correlation	1.00	-.59
	Sig. (1-tailed)		.035**
Macedonia	Pearson Correlation	1.00	.29
	Sig. (1-tailed)		.210
Montenegro	Pearson Correlation	1.00	-.27
	Sig. (1-tailed)		.224
Serbia	Pearson Correlation	1.00	.06
	Sig. (1-tailed)		.430

*** significance of 1 %, ** significance 5 %, * significance 10 %
Source: Authors' own calculations

We expect to conclude the presence of negative correlation between foreign direct investment and unemployment rate, i.e. increase of FDI inflow should contribute to decrease unemployment rate. As we can see in table 2 the highest correlation between FDI and unemployment rate expressed by the Pearson correlation coefficient exists in Albania, and the lowest level of correlation exists in Serbia. According to Evans (1996), correlation between FDI and unemployment rate in Albania is strong, in Croatia moderate, while in Bosnia and Herzegovina, Macedonia, Montenegro week and in Serbia very weak. But, the results of the estimation represented above suggest the statistical significance of 5% just in the case of Albania and Croatia. Because of lack of data for the unemployment rate, Kosovo is excluded from this correlation analyse. The coefficient sign supports our expectations just in the case of Croatia and Montenegro where the Pearson coefficient has a negative sign, which means that increase of FDI inflow leads in the decrease of unemployment rate.

Table 3: Results of correlation analysis: Hypothesis 2

		FDI	Export
Albania	Pearson Correlation	1.00	.73
	Sig. (1-tailed)		.005***
BH	Pearson Correlation	1.00	-.42
	Sig. (1-tailed)		.127
Croatia	Pearson Correlation		-.03
	Sig. (1-tailed)		.468
Kosovo	Pearson Correlation	1.00	-.52
	Sig. (1-tailed)		.062*
Macedonia	Pearson Correlation	1.00	-.24
	Sig. (1-tailed)		.239
Montenegro	Pearson Correlation	1.00	-.48
	Sig. (1-tailed)		-.093*
Serbia	Pearson Correlation	1.00	.81
	Sig. (1-tailed)		.0001***

*** significance of 1 %, ** significance 5 %, * significance 10 %
Source: Authors' own calculations

We expect to conclude the presence of positive correlation between foreign direct investment and export, i.e. FDI inflow should contribute in export increase in the analysed countries. From the table presented above, we can analyse the Pearson coefficient between FDI inflows and export in the countries of interest. The highest correlation between these two variables exists in Serbia, and the lowest level of correlation exists in Croatia. According to Evans (1996), correlation between FDI and export in Serbia is very strong, in Albania strong, in Bosnia and Herzegovina, Kosovo and Montenegro moderate, while in Macedonia weak and in Croatia very weak. The results of the estimation suggest the statistical significance of Pearson coefficient in Albania, Kosovo, Montenegro and Serbia (with 1%, 10%, 10%, 1% significance, accordingly). However, the negative sign of all coefficienst except in Albania and Serbia do not confirm our expectations for the positive correlation between FDI inflows and export.

Table 4: Results of correlation analysis: Hypothesis 3

		FDI	GDP
Albania	Pearson Correlation	1.00	.77
	Sig. (2-tailed)		.003***
BH	Pearson Correlation	1.00	-.31
	Sig. (2-tailed)		.147
Croatia	Pearson Correlation		.64
	Sig. (2-tailed)		.017**
Kosovo	Pearson Correlation	1.00	-.06
	Sig. (2-tailed)		.435
Macedonia	Pearson Correlation	1.00	-.17
	Sig. (2-tailed)		.311
Montenegro	Pearson Correlation	1.00	.05
	Sig. (2-tailed)		.447
Serbia	Pearson Correlation	1.00	-.08
	Sig. (2-tailed)		.410

*** significance of 1 %, ** significance 5 %, * significance 10 %
Source: Authors' own calculations

We expect to conclude the presence of positive correlation between foreign direct investment and GDP growth per capita i.e. FDI inflow should contribute towards the increase of GDP. Pearson coefficient between FDI inflows and GDP per capita is presented in table 4. The highest correlation between these two variables exists in Albania. According to Evans (1996), correlation between FDI and GDP per capita in Albania and Croatia is strong, in Bosnia and Herzegovina weak, and in all other countries is very weak. The weak correlation between FDI and GDP can be explained with the theoretical and empirical researches which confirm that FDI contribution to growth is positive, but depends on the sector of the economy where the FDI operates (Alfaro et al, 2003; Lall and Narula, 2004).

The signs of the coefficients are positive in Albania, Croatia and Montenegro, which confirms the positive correlation between FDI and GDP growth, as we expected. Other coefficients are negative, and do not support the theoretical assumption that FDI promotes economic growth.

Statistical significance of Pearson coefficient is present just in Albania and Croatia (1% and 5% respectively).

Table 5: Results of correlation analysis: Hypothesis 4

		FDI	Current account deficit
Albania	Pearson Correlation	1.00	-.91
	Sig. (2-tailed)		.000***
BH	Pearson Correlation	1.00	-.35
	Sig. (2-tailed)		.144
Croatia	Pearson Correlation		-.81
	Sig. (2-tailed)		.001***
Kosovo	Pearson Correlation	1.00	-.61
	Sig. (2-tailed)		.022**
Macedonia	Pearson Correlation	1.00	-.58
	Sig. (2-tailed)		.032**
Montenegro	Pearson Correlation	1.00	-.51
	Sig. (2-tailed)		.078*
Serbia	Pearson Correlation	1.00	-.64
	Sig. (2-tailed)		.032**

*** significance of 1 %, ** significance 5 %, * significance 10 %
Source: Authors' own calculations

The results from the test of hypothesis 4 are presented in table 5. We expect to conclude presence of negative correlation between foreign direct investment and current account deficit i.e. FDI inflow should contribute in a decrease of the current deficit, because the investment income is entered as an inflow (credit) on the current account. The empirical evidence has found that FDI impacts positively on the balance of payments. In this sense, FDI can prove to be a sustainable way to finance current account deficits (European Commission, 2009).

The highest correlation between FDI and current account deficit again exists in Albania and the lowest in Bosnia and Herzegovina. In Albania and

Croatia, the correlation is very strong, in Kosovo and Serbia strong, in Macedonia and Montenegro moderate, while in Bosnia and Herzegovina weak. As we expect, the signs of all coefficients are negative, which confirm the inverse correlation between these two variables. Just in the case of Bosnia and Herzegovina coefficient is not statistically significant.

5. Conclusion

This study explored the impact of FDI on export performance, economic growth, unemployment rate and current account deficit in WB countries.

We examined whether FDI influences economic growth, export, employment rate and current account deficit. For that reason, we test the hypotheses of the contribution of FDI flows on the strengthening of export performance, promotion of economic growth, reduction of unemployment rate and reduction of current account deficit.

According to our analyses, FDI inflows contribute in reducing current account deficit in all WB countries, while these capital flows do not seem to have generated much new employment and promoted export and GDP growth in this region in the period from 2005 until 2015.

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