FOREIGN DIRECT INVESTMENT AND ECONOMIC GROWTH IN TIMES OF ECONOMIC CRISIS: EVIDENCE FROM SOUTHEAST EUROPEAN COUNTRIES

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Abstract

Countries of Southeast Europe are at different levels of economic growth and accession to the European Union. Bulgaria, Romania and Croatia are already valid members of the EU. While Albania, Macedonia, Montenegro and Serbia have the status of the candidates for membership, Bosnia and Herzegovina still waits for the status of candidate for the accession to the EU. The common thing for all the referred countries is that they are far away from other members of the EU regarding their economic development. Therefore, foreign direct investments appear to be an important factor of speeding up the economic growth of these countries. Linear correlation between the foreign direct investments and the indicators of economic growth in the countries of the Southeast Europe is analyzed in the paper. The period before the economic crises and the period after the beginning of the economic crisis are analyzed separately, in order to observe the linear correlation between FDI and economic growth. The following variables are taken as indicators of the economic growth: GDP per capita, export, import and rate of unemployment. The results of the research speak in favor of the existence of a statistically significant correlation between FDI and other macroeconomic indicators in the period before the economic crisis in the majority of the analyzed countries. After the beginning of the economic crisis, the linear correlation has been extremely weak. Effects of the crisis very strongly influenced the economies of the observed countries.

Keywords: Foreign Direct Investment, Growth, Crisis, Southeast Europe

Introduction

Foreign capital has the key role in the economic development of every country. Regarding the exporting countries, the export of capital provides increased utilization of capacities, market expansion, new technological development, increase of profit, especially within the middle and long-term periods. Regarding the importing countries, the import of capital provides additional accumulation, transfer of new technology and knowledge without buying licenses, increased export, possibility of financing new investments that influences the increase of employment, income, productivity, increase of budgetary revenue, etc. (Kragulj, 2014). The criterion for the volume and the direction of capital flow in contemporary conditions is not just the difference in the profit amount. The importance of other factors also rises. The role of uncertainty and risk criterion originating mostly from economic and political reasons has been increased significantly. Economic and political instability may not only slow down, but also sometimes stop the capital flow. Certain economic and political circumstances are the key determinants that establish the inflow of foreign direct investments (FDI) into a host country (Kragulj, 2003). The countries of the southeast Europe (SEE) are characterized by the lack of capital. They have met the process of transition through their economic development, and also with the global economic crises in the recent period. The result of all that was that all these countries must significantly speed up their economic development in order to come up with other European countries. Unlike additional borrowing, foreign direct investments are imposed as the most suitable way for attracting foreign capital. Economic crisis that overflowed also to the countries of the SEE significantly slowed down the economic growth of these countries. FDI carry both positive and negative effects, differentiating from one country to another. Therefore, the accent in this paper is in the investigation of the correlation between FDI and economic growth, represented through GDP per capita, export and import performances and unemployment. The goal is to recognize the correlation between FDI and economic growth in the period before the economic crisis and the effects of FDI after the beginning of the economic crisis.

Previous researches

There are different researches on positive effects (Borensztein et al., 1998; Campos and Kinoshita, 2002; Giroud et al., 2012) and negative effects (Stanisic, 2008; Doytch and Uctum, 2011) of FDI on economic growth and other economic variables. Certain studies show a significant influence of the FDI to export performances of the SEE countries, providing entrance to global markets for these countries (Castellani and Pieri, 2013; Kornecki and Rhoades, 2006). Researches show that inflow of the FDI depends on the

level of accession to the EU. The difference was made between the group of countries that were candidates for the membership in the EU before 2004 and other countries that were predicted for the accession to the EU later. The first group of countries received almost 60% of the total inflow of FDI in the region. The various studies pointed out that the countries of so-called Western Balkan (Croatia, Bosnia and Herzegovina, Serbia and Montenegro, Macedonia and Albania) were not able to attract FDI due to slowdown of economic reforms and political instability (Acaravci and Ozturk, 2012; Joze, Kostevc and Rojec, 2013).

Lyroudi, Papanastasiou and Vamuakidis (2004) were researching the connection of FDI inflow with economic growth. The research included 17 countries in transition during the period 1996-1998. Results of the research showed that there was no statistically significant correlation between the FDI inflow and the economic growth in the transitional countries. The observations that FDI go mostly to developed countries (Kragulj, 2014) also speak in favor of this study. Namely, multinational investment corporations choose high-productive, quickly growing and profitable economies (Rodrik, 1999). Campos and Kinoshita (2002) in their study included 25 countries from Central and East Europe during the period 1990-1998. The study showed a significant positive effect of FDI to technological advance of the countries that were the subject of the research. Certain studies put in the foreground the process of privatization of companies. Advantages of the external model of privatization in attracting FDI concerning other models of privatization were pointed out (Merlevede and Schoors, 2009).

Linear regressive dependence of import and export of goods and services and growth of BDP per capita from FDI inflow in the countries of SEE during the period 1995-2011 was tested by the study from 2013. The most important conclusions of the study were that a high level of correlation between FDI inflow and other variables was present in Albania, while this correlation was very low in Bosnia and Herzegovina. In addition, the influence of FDI inflow to economic growth was the lowest in Macedonia (Jacimovic, Bjelic and Markovic, 2013). Insufficient influence of FDI to economic growth should be looked for in the structural reforms in these countries, as well as in the inefficiency of local companies (Stanisic, 2008).

Methodology and data

Subject of analysis in this paper is the correlation between the FDI and economic growth in the countries of SEE-8 (Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Montenegro, Romania and Serbia). For the calculation of the simple linear correlation, we use Pearson's coefficient given by the expression:

$$r = \frac{\mathrm{n} * \sum \mathrm{xy} - \sum \mathrm{x} * \sum \mathrm{y}}{\sqrt{n * \sum x^2 - (\sum x)^2} * \sqrt{n * \sum y^2 - (\sum y)^2}} \quad (1)$$

where the Foreign direct investment, net inflows (BoP, current US$) is the variable x, while the variables y are:

- GDP per capita (current US$)
- Unemployment, total (% of total labor force) (modeled ILO estimate)
- Export of goods and services (current US$)
- Import of goods and services (current US$)

All the data required for the research were collected from statistical bases of the World Bank (World Bank, 2015). Coefficient of determination (R^2) is used in the analysis that represents the squared value of Pearson's coefficient and measures which part of variance of the two variables is mutual.

Results and discussion

Chosen period of the analysis is 2000-2013. The last year for which data exist in the World Bank bases – the year 2014 is excluded from the analysis due to incomplete data for certain macroeconomic indicators. In order to observe the influence of the world economic crisis, the period was divided into two sub-periods: the period before the economic crisis 2000-2007 and the period after the beginning of the economic crisis 2008-2013. 6

FDI and economic growth (2000-2013)

On basis of the obtained results for the observed period 2000-2013 (Table 1), we may conclude that only in case of Bosnia and Herzegovina there is no statistically significant correlation between FDI and other macroeconomic indicators. The examples of Bulgaria and Romania show that there is statistically significant negative correlation between FDI and rate of unemployment. The correlation is more expressed in Bulgaria (R^2=0.520), while it is for Romania R^2=0.306. Such the results may be ascribed to the influence of FDI to establishing new working positions. There is a statistically significant negative correlation between the FDI and the rate of unemployment (R^2=0.529) also in Croatia. Besides, Croatia is characterized also by the statistically significant correlation between the FDI and the import of goods and services (R^2=0.355), which speaks in favor of the fact that Croatia is dependent on import of raw materials and semifinished products.

Table 1: Correlations between FDI net inflow and GDP per capita, Exports, Imports and Unemployment rate (2000-2013)

Country	Correlations		FDI net inflows	GDP per capita	Exports	Imports	Unemployment
Albania	FDI net inflows	Pearson Correlation	1	.919**	.932**	.923**	-.064
		Sig. (2-tailed)		.000	.000	.000	.829
		N	14	14	14	14	14
Bosnia and Herzegovina	FDI net inflows	Pearson Correlation	1	.301	.272	.433	.470
		Sig. (2-tailed)		.297	.348	.122	.090
		N	14	14	14	14	14
Bulgaria	FDI net inflows	Pearson Correlation	1	.299	.213	.437	-.721**
		Sig. (2-tailed)		.299	.465	.118	.004
		N	14	14	14	14	14
Croatia	FDI net inflows	Pearson Correlation	1	.442	.402	.596*	-.727**
		Sig. (2-tailed)		.114	.155	.024	.003
		N	14	14	14	14	14
Macedonia	FDI net inflows	Pearson Correlation	1	.500	.586*	.565*	-.127
		Sig. (2-tailed)		.068	.028	.035	.665
		N	14	14	14	14	14
Montenegro	FDI net inflows	Pearson Correlation	1	-.241	-.761*	.147	-.502
		Sig. (2-tailed)		.603	.047	.753	.251
		N	7	7	7	7	7
Romania	FDI net inflows	Pearson Correlation	1	.458	.287	.497	-.553*
		Sig. (2-tailed)		.100	.320	.071	.040
		N	14	14	14	14	14
Serbia	FDI net inflows	Pearson Correlation	1	.576*	.500	.608*	.428
		Sig. (2-tailed)		.031	.068	.021	.127
		N	14	14	14	14	14

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

The most expressed degree of correlation between FDI and other macroeconomic indicators is present in Albania. Strong correlation is present between FDI and GDP per capita (R^2=0.845), FDI and export (R^2=0.869), FDI and import (R^2=0.852). Moreover, a strong negative correlation is also present between FDI and rate of unemployment, but due to the absence of

Pearson's coefficient, it is not statistically significant and we cannot make dependable conclusions.

Montenegro is characterized by significant negative correlation between FDI and export of goods and services (R^2=0.579), which indicates that FDI were not export oriented.

Correlations between FDI and export and between FDI and import are present in Macedonia, which illustrates that FDI had modest level of congruence only with Macedonian trading flows. Serbia is characterized by significant correlation between FDI and GDP per capita and between FDI and import of goods and services.

FDI and economic growth (2000-2007)

Completely different results regarding the correlation between FDI and economic growth are obtained for the observed period 2000-2007 (Table 2). Statistically significant correlation between FDI on one hand and GDP per capita, export and import on the other hand is present in all of the observed countries, with the exception of Macedonia. At that, the coefficient of determination is everywhere higher than 0.60 (R^2>0.6) for all of the observed correlations. Statistically significant correlation between FDI and export of goods and services is present in Macedonia (R^2= 0.539). It varies regarding to the whole observed period 2000-2013, where the correlation between FDI and import existed apart from this correlation.

Montenegro is excepted from this analysis since it exists as a sovereign country from 2006 and the data are available from 2007.

Table 2: Correlations between FDI net inflow and GDP per capita, Exports, Imports and Unemployment rate (2000-2007)

Country	Correlations		FDI net inflows	GDP per capita	Exports	Imports	Unemployment rate
Albania	FDI net inflows	Pearson Correlation	1	.865**	.922**	.892**	-.129
		Sig. (2-tailed)		.006	.001	.003	.760
		N	8	8	8	8	8
Bosnia and Herzegovina	FDI net inflows	Pearson Correlation	1	.947**	.789*	.795*	.689
		Sig. (2-tailed)		.000	.020	.018	.059
		N	8	8	8	8	8
Bulgaria	FDI net inflows	Pearson Correlation	1	.950**	.976**	.977**	-.841**
		Sig. (2-tailed)		.000	.000	.000	.009
		N	8	8	8	8	8

Croatia	FDI net inflows	Pearson Correlation	1	.814*	.803*	.808*	-.661
		Sig. (2-tailed)		.014	.016	.015	.074
		N	8	8	8	8	8
Macedonia	FDI net inflows	Pearson Correlation	1	.628	.734*	.701	-.054
		Sig. (2-tailed)		.095	.038	.053	.900
		N	8	8	8	8	8
Romania	FDI net inflows	Pearson Correlation	1	.916**	.946**	.932**	-.399
		Sig. (2-tailed)		.001	.000	.001	.327
		N	8	8	8	8	8
Serbia	FDI net inflows	Pearson Correlation	1	.829*	.881**	.823*	.769*
		Sig. (2-tailed)		.011	.004	.012	.026
		N	8	8	8	8	8

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

The differences between the countries of the SEE are illustrated by the level of correlation between FDI and rate of unemployment. Statistically significant correlation exists only in the cases of Bulgaria and Serbia. This correlation in Bulgaria is negative (R^2= 0.707), while in Serbia the correlation between FDI and rate of unemployment has a positive preceding (R^2= 0.591). The positive correlation in Serbia, illustrating that there is a decrease in working positions with increase of FDI, might be explained by process of privatization that was very intensive in this period. Companies were rationalized by privatization and number of employees was reduced in order to increase labor productivity (Stosic, Redzepagic and Brnjas, 2012).

On basis of the above, we may conclude that the effects of FDI to economic growth before the economic crisis were much more significant than within the whole period.

FDI and economic growth (2008-2013)

After the beginning of the economic crisis, the correlation between FDI and economic growth became even weaker (Table 3). There is no statistically significant correlation between FDI and macroeconomic indicators in Albania and Macedonia.

Statistically significant correlation between FDI and import exists in Bosnia and Herzegovina (R^2= 0.743), while there is a negative correlation between FDI and export in Montenegro (R^2= 0.576).

Romania and Bulgaria are characterized by high level of negative correlation between FDI and rate of unemployment, while a positive correlation between FDI and GDP per capita exists in Serbia. Surely that the global economic crisis affected the economy of Serbia and made the already bad economic situation even worse (Parezanin, Jednak and Kragulj, 2014).

Table 3: Correlations between FDI net inflow and GDP per capita, Exports, Imports and Unemployment rate (2008-2013)

Country	Correlations		FDI net inflows	GDP per capita	Exports	Imports	Unemployment rate
Albania	FDI net inflows	Pearson Correlation	1	-.035	-.379	.149	.152
		Sig. (2-tailed)		.948	.459	.779	.774
		N	6	6	6	6	6
Bosnia and Herzegovina	FDI net inflows	Pearson Correlation	1	.665	.091	.862*	-.327
		Sig. (2-tailed)		.149	.864	.027	.527
		N	6	6	6	6	6
Bulgaria	FDI net inflows	Pearson Correlation	1	-.104	-.352	.373	-.814*
		Sig. (2-tailed)		.844	.494	.466	.049
		N	6	6	6	6	6
Croatia	FDI net inflows	Pearson Correlation	1	.856*	.415	.840*	-.816*
		Sig. (2-tailed)		.029	.413	.036	.047
		N	6	6	6	6	6
Macedonia	FDI net inflows	Pearson Correlation	1	.555	.635	.800	.322
		Sig. (2-tailed)		.253	.175	.056	.534
		N	6	6	6	6	6
Montenegro	FDI net inflows	Pearson Correlation	1	-.228	-.759*	.134	-.495
		Sig. (2-tailed)		.664	.080	.800	.318
		N	6	6	6	6	6
Romania	FDI net inflows	Pearson Correlation	1	.658	-.226	.472	-.978**
		Sig. (2-tailed)		.156	.666	.344	.001
		N	6	6	6	6	6
Serbia	FDI net inflows	Pearson Correlation	1	.915*	.150	.681	-.454
		Sig. (2-tailed)		.011	.777	.136	.366
		N	6	6	6	6	6

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

An exception is Croatia, where a strong correlation exists between FDI and all macroeconomic indicators, except for export. Effects of the economic crisis to economies of the SEE countries are clearly visible from the referred. Apart from the decrease of FDI in absolute amounts, their effects to macroeconomic indicators are almost negligible.

Conclusion

The last empiric studies confirm the positive effect of foreign direct investments to economic growth of developing countries. FDI are recognized as the important channel of international transfer of technology. However, studies in European economies in transition do not show such a consistent result. The cause may be found in the process of transition itself, but also in the effects of economic crisis. Due to structural reforms in the countries of SEE, there is a decrease of production and employment because of inefficiency of local companies. This may neutralize or even excel the positive effect of FDI to economic growth.

While reliable conclusions regarding the linear correlation of FDI and other macroeconomic indicators cannot be made for the whole observed period 2000-2013, the periods before and after the beginning of economic crisis give us a clearer acknowledgement about the correlation between FDI and economic growth. The period before the economic crisis is characterized with a strong correlation between FDI on one side and GDP per capita, import and export on the other side in almost all the countries of the SEE. The difference between the countries is in the influence of FDI to the rate of unemployment. While in Bulgaria new working positions have been created, unemployment as the result of privatization process has been increased with increase of FDI in Serbia. Adverseness is that there is a positive correlation between FDI and import with the majority of analyzed countries, which might be the result of import of semifinished products necessary for the process or insufficient import substitution from foreign companies dealing in the analyzed countries.

The period after the beginning of the economic crisis is characterized by the absence of linear correlation between FDI and economic growth in all analyzed countries except for Croatia. A significant positive effect of FDI has been accomplished only in Romania and Bulgaria regarding the reduction of unemployment, while positive effects have been sublimated in the growth of GDP per capita in Croatia and Serbia. Influences of economic crisis significantly disturbed the flows of capital in the analyzed countries and reduced their influence to economic growth.

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