

ARE FOREIGN DIRECT INVESTMENT CONTRIBUTION TO THE ECONOMIC GROWTH OF TRANSITION?

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UDC
339.727.22:338.1
Preliminary
announcement

Abstract: The main aim of this paper is to show whether foreign direct investments affect the development of transition countries. This paper represents an empirical model where you analyze sixteen countries in transition in the 10-year period. The existence of a positive correlation between the level of incoming foreign direct investments and economic characteristics of the economy, as well as its competitiveness, is obvious in numerous studies that have studied this subject, but there are also some opposite standpoints. The increase of foreign direct investments in host country by itself does not imply a positive impact on economic growth, but it depends on numerous factors such as human capital, financial structure development, macroeconomic stability and other institutional factors.

Received:
08.05.2014

Accepted:
27.03.2015

Keywords: foreign direct investments, transition countries, economic growth, human capital, macroeconomic stability

1. Introduction

By foreign direct investments we imply investments that result from the usage of foreign accumulation for the purpose of investing in domestic companies in real and financial, i.e. banking sector.

In literature, we observe different manners of defining foreign direct investments. „Foreign direct investments, according to Kindleberger, represent direct investments in the company abroad in order to acquire permanent control over the production, trade and finances of the company you invest in.“ (Jovanović Gavrilović, 2004, p.100)

Foreign direct investments in contemporary development phase take over the function of the crucial development factor of world economy and along with the trade become a basic mechanism of world economy globalization.

Foreign direct investments, in relation to other forms of international capital circulation provide a series of advantages for a foreign investor: products placement, expansion to the market of the host country, technology export, managerial knowledge and experiences, use of the resources (raw materials, labour, energy etc.), as well as savings in production and transport costs. They are particularly aimed towards transition countries with market-oriented economies, because the processes of privatization and transformation are mainly finished in them. These countries are attractive for foreign investors because they have a market with relatively high purchasing power, favourable infrastructure, cheap and qualified labour and significant natural resources.

Transition countries were faced with big socio-political crisis during the 1980s, which resulted in the breakdown of the previous social system. It was required to move on to market conditions of doing business. In that sense, foreign direct investments would significantly contribute to faster recovery of transition countries.

Foreign direct investments bring the host country an integrated package of material and non-material resources (capital, technology, management, marketing, organisational knowledge, labour training...) that represent a stimulus for economic development. Investment package, on one hand, complements available domestic production factors and creates the conditions for new employment and work, and stimulates, on the other hand, growth of host country through technology transfer, labour training, making connections with the rest of the local economy and development of the paths to world market for the domestic manufacturers. It is required to reach the level where the increase of national competitiveness, i.e. products that are stressed in domestic economy, can also appear in the global market and thus affect the competitiveness in the world market (Vidas Bubanja, 2008).

Foreign direct investments can contribute to the economic development of host countries and their contribution depends on many, macroeconomic, institutional and financial determinants that will be observed hereinafter. In addition, the macroeconomic effects of foreign direct investments will also be analyzed. In the end, there will also be given an empirical model that will analyze the impact of foreign direct investments on economic growth of transition countries, and these are: Albania, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Hungary, Macedonia, Poland, Romania, Russian Federation, Serbia, Slovenia, Tajikistan and Ukraine, in the period from 2001-2011.

2. Determinants of the Foreign Direct Investments Inflow to the Transition Countries

Transition countries or ex-socialist countries during the 1970s, and especially the 1980s, were caught in serious economic crisis and they could deal with it

only with the assistance of Western countries. The time has come to leave socialist economy and slowly move on to market economy. Implementation of privatization process was one of the important links of this transition. In different countries, it had different forms, starting from Slovenian which blocked the foreign capital inflow, to Hungarian that received it with open arms. A part of this capital is divided to domestic entities and a part was sold to different investors. In all these countries, the inflow of foreign direct investments was connected to the privatization process. Foreign direct investments were supported by all countries except Slovenia, in order to modernize the economic environment or collect funds to pay external debts back. Modernization of business environment will create conditions for greater economic growth in the future.

Alan Bevan and Saul Estrin (2000) reached the conclusion that foreign direct investments inflow is determined by the country's risk, i.e. three stability levels:

- macroeconomic stability – by this you imply economic growth, low inflation and exchange rate stability;
- institutional stability – by this we imply policies towards foreign direct investments, taxation policy, transparency of legislation and corruption scale,
- political stability.

In addition, the following factors are also required: labour costs, the size of the domestic market and the negotiations with the EU are a significant factor. These authors also stress that the credit rating of a country is under the impact of private sector development, industrial growth, budget deficit, reserves quantity and corruption level. Possibility of EU membership in the future can be an independent factor for foreign direct investments inflow in transition countries, and it significantly affects the credit rating of a country. When it comes to key factors that affect foreign direct investments inflow, it is required to mention the market size of the host country, production factors cost, investment risk, both in an economic and political sense.

Lorena Škuflić and Valerija Botrić (2006) have analyzed the variables that affected the foreign direct investments inflow in SE Europe countries. Relations between gross domestic product (GDP) growth and foreign direct investments have appeared to be positive and statistically significant. Although economic theory suggests that foreign direct investments inflow is in a negative correlation with labour costs, such a correlation in the countries listed is not confirmed. The relations between foreign direct investments inflow and labour costs appeared to be statistically significant and positive. Authors listed have attributed it to concentration of foreign direct investments in the service sector that looks for more skillful labour than production sector.

Brindusa Anghel (2006) has determined that foreign direct investment level is higher in countries that have higher GDP rates and that are more open, as well as those that have more efficient struggle against corruption.

Impact of institutional variables to the foreign direct investments inflow was often examined in the literature. In the paper of Bulent Dogru (2012), 54 medium-developed countries from different regions all over the world were analyzed in the period 1995 – 2011. The findings point to the fact that quality of institutions has a generally positive and significant impact on foreign direct investments inflow. Based on econometric analysis, we reach the conclusion that independence of the judiciary, an impartial judiciary, ownership rights protection, bureaucracy quality, administrative requirements and international risk of the country that includes military interventions in the rule of law field and integrity of a legal system, make a positive contribution to foreign direct investments inflow. Studies that have dealt with the role of institutions in foreign direct investments attraction show that efficient execution of civil and proprietary rights, economic freedom and regulatory system can stimulate both domestic and foreign investors. On the other hand, less qualified institutions imply a risky environment for the investors.

Although these analysis results correspond with other studies, Kayam (2006), also points out that among institutional variables, bureaucracy quality, investment risk and government stability do not have any more significant impact on foreign direct investment inflows.

From the aforementioned, we can see that although institutional variables are significant and have expected foresigns, their impact on foreign direct investments inflow is weaker than the impact of macroeconomic variables.

3. Macroeconomic Effects of Foreign Direct Investments

Foreign direct investments have the impact on macroeconomic variables that does not have to be positive always. There are authors that confirm this thesis. One of them is Jože Mencinger (2003), who reached the conclusion that correlation between foreign direct investments and economic growth is negative. He explains his conclusions with the fact that in the observed transition countries, acquisition was a dominant form of foreign direct investments, but rapid privatization was also performed because governments expected that multinational companies will increase the employment, export and tax revenues. However, studies point to the unclear correlation between employment and foreign direct investments. Namely, Mencinger points out that acquisitions cannot be observed as an investment in real assets because the income from the sale can be used for consumption or investments, and thus foreign direct investments cannot be reflected on the economic growth. He has

also asked the question of effects, direct or indirect, which foreign direct investments have on the host country, such as:

- companies development and their restructuring,
- contribution to international trade integration,
- improvement of competitiveness in business sector,
- raising the human capital development level.

None of these effects happened yet, which he attributes to the small size of economies, as well as concentration of foreign direct investments in the tertiary sector, especially trade and finances. He also pointed to the negative correlation between foreign direct investments and balance of the balance of payments, which can lead to the increase of external debt. Lovrinčević, Mikulić and Marić (2004) have studied the correlation between investment efficiency and foreign direct investments for 11 transition countries in the period from 1994 to 2002 and stressed their macroeconomic implications for those countries. Results that these authors have reached are:

- high rates of economic growth in the countries observed in the observed period are the result of efficient investments rather than greater volume of investments in GDP,
- efficiency of the investments is not in a direct correlation with height of the share of total foreign direct investments inflow in GDP,
- there is a direct positive correlation between investment efficiency and foreign direct investments inflow into the tertiary sector,
- the more efficient the investments, the higher the external debts,
- in some states, external debt is created by private residents and in case of particular states, government sector creates it, which will have a series of macroeconomic unfavourable implications in the future.

4. Regression Analysis Model

The Hypothesis that will be tested in this paper is whether foreign direct investments in transition countries have an effect on GDP growth.

Empiric model that will be presented in this paper will analyze foreign direct investments' impact on economic growth of the following countries: Albania, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Hungary, Macedonia, Poland, Romania, Russian Federation, Serbia, Slovenia, Tajikistan and Ukraine in the period from 2001 to 2011. The data are prepared in the form of a panel because observations have two dimensions: space and time. A model of a linear multiple regression will be applied.

Control variables that will be used in this paper are: GDP per capita, inflation (consumer prices), domestic loans provided by the banking sector, export of goods and services, import of goods and services, gross savings (% from GDP), foreign direct investments, labour force and corruption perception index (CPI). Dependent variable GDP GROWTH is defined as a difference of the GDP values logarithms from the period t and the period $t-1$, which are taken from World Development Indicators (WDI) (2013) published by the World Bank. Variables import and export of goods and services are defined as a share or percentage of GDP, which actually represents an indicator of the openness of the economy and together they make up a share of external trade in GDP. Variable gross savings measures the share of domestic savings in GDP. All the variables mentioned were taken from WDI (2013). As a corruption measure, we use Corruption Perception Index (CPI), according to Transparency International. That is a complex index, it is calculated annually and ranks countries towards the level at which they experience the corruption of state officers and politicians.

Table 1 Correlation Analysis of the Observed Variables

	GDP growth (annual %)	GDP per capita (current US\$)	Foreign direct investment, net inflows (% of GDP)	Inflation consumer prices (annual %)	Domestic credit provided by banking sector (% of GDP)	Exports of goods and services (% of GDP)	Gross savings (% of GDP)	Imports of goods and services (% of GDP)	CPI
GDP growth (annual %)	1,000								
GDP per capita (current US\$)	-0,273	1,000							
Foreign direct investment, net inflows (% of GDP)	0,158	-0,190	1,000						
Inflation consumer prices (annual %)	-0,101	0,028	-0,085	1,000					
Domestic credit provided by banking sector (% of GDP)	-0,573	0,625	-0,167	0,153	1,000				
Exports of goods and services (% of GDP)	-0,026	0,191	0,113	-0,381	0,040	1,000			
Gross savings (% of GDP)	0,476	0,172	0,085	0,484	-0,007	-0,266	1,000		
Imports of goods and services (% of GDP)	-0,388	0,120	0,158	0,302	0,380	0,218	-0,162	1,000	
CPI	-0,291	0,822	-0,169	0,167	0,615	0,086	0,188	0,284	1,000
labor force, total	-0,306	-0,046	-0,061	0,119	-0,060	-0,024	-0,104	-0,289	-0,218

Source: Calculation of the author based on data taken from World Bank website <http://data.worldbank.org/news/new-suite-of-world-development-Indicators-products-now-available> [accessed 15.12.2014.]

Foreign direct investments have negative low correlation with all the variables observed except GDP growth, with which it has a positive correlation. On the other hand, GDP growth has a low negative correlation with all variables except with foreign direct investments and gross savings, with which it has a low positive correlation.

A model that is tested in this paper is presented by the following equation:

$$GROWTH_{ij} = \alpha + \beta \cdot FDI_{ij} + \gamma \cdot X_{ij} + \varepsilon_{ij} \quad (1)$$

where ε_{ij} represents random deviations, while X_{ij} represents a vector of control variables. *GDP growth* is a dependent variable. Parameters β and γ are regression coefficients and α is a regression intercept. In this model, we used 9 independent variables, more precisely: *GDP per capita*, *Annual inflation*, *Domestic loans provided by the banking sector*, *Export of goods and services, % from GDP*, *Gross savings, % of GDP*, *Import of goods and services, % of GDP*, *Corruption perception index*, *Labour force*, and *Foreign direct investments*.

Table 2 Regression Analysis: dependent variables : GDP growth (annual %), Estimates of Fixed Effects, RCT=scaled identity

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>Multiple R</i>	0,8467
Regression	9,0000	15853,7025	1761,5225	46,7246	0,0000	<i>R Square</i>	0,7170
Residual	166,0000	6258,2130	37,7001			<i>Adjusted R Square</i>	0,7016
Total	175,0000	22111,9155				<i>Standard Error</i>	6,1400
GDP growth (annual %).	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	
Intercept	62,0531	8,5548	7,2540	0,0000	45,1699	78,9364	
GDP per capita (current US\$)	-0,0002	0,0002	-1,4650	0,1450	-0,0005	0,0001	
Inflation, consumer prices	-0,0844	0,0400	-2,1080	0,0360	-0,1633	-0,0054	
Domestic credit provided by	-0,1882	0,0281	-6,7020	0,0000	-0,2436	-0,1327	
Exports of goods and services	0,0705	0,0303	2,3270	0,0210	0,0107	0,1303	
Gross savings (% of GDP)	0,3041	0,0340	8,9540	0,0000	0,2371	0,3711	
Imports of goods and services	-0,1434	0,0387	-3,7050	0,0000	-0,2197	-0,0670	
CPI	0,1144	0,6769	0,1690	0,8660	-1,2216	1,4503	
LOG(Labor force, total)	-7,2873	1,0848	-6,7170	0,0000	-9,4282	-5,1463	
Foreign direct investment, net	0,0816	0,0767	1,0640	0,2890	-0,0697	0,2330	

Source: calculation of the authors based on data from World Bank website <http://data.worldbank.org/news/new-suite-of-world-development-Indicators-products-now-available> [accessed 15.12.2014.]

If P is the value equal or less than significance level, we say that the result is statistically significant at the significance level 5%, so we can conclude that domestic loans have a significant impact on GDP growth, which implies that loans and loan debt reduction leads to economic growth. *GDP per capita* with P value of 0,1450 is higher than the significance level of 0,05, we conclude that it doesn't have a significant impact on *GDP growth* and for that reason it is excluded from further regression analysis. Inflation with P value of 0,0360 points out that it has a significant effect on economic growth, i.e. *GDP growth*, negative effect, which means that inflation reduction leads to economic growth. Export with P value of 0,0210 shows that it has a significant effect on economic growth, i.e. *GDP growth*, a positive effect. Gross savings have a positive effect

on the increase of GDP growth indicators, i.e. GDP growth, negatively, which practically implies that import reduction leads to economic growth increase. Corruption index (CPI) does not significantly affect the higher economic growth, and as a variable it does not significantly contribute to the observed regression analysis. The labour force has a statistically significant effect on higher economic growth, negative, which can be observed as positive, since the labour force reduction leads to economic growth increase. Foreign direct investments also do not have any effect on gross domestic product, but in a positive correlation.

Determination coefficient = 0,7016 presents the level of the explained variability by using the obtained regression model (70,16%) and only 29,84% is of unexplained variability. The regression model obtained is statistically significant at significance level of 5%.

On the basis of *p* – value we determined the variables with significant effect on GDP growth (if *p* – value is less than significance level, we say that result is statistically significant, at the significance level of 5%).

Standard error of multiple regression shows the average deviation of empiric values of the feature *Y* in relation to the regression model. This is an absolute measure of unexplained variability. The greater the dispersion of points around model, the greater the standard error. The ideal case is when all these points are on the model (standard error is then equal to zero) and that is a very rare case in practice.

Coefficient of linear multiple correlation *R* (*Multiple R*) is a relative measure and shows the level of linear congruence of variations depending on the variable and the group independently from variable size. Possible values are from 0 to 1 and, as it is closer 1 the linear connection level is stronger and as it is closer to zero, we can conclude that there is no linear connection between the observed phenomena.

Adjusted R Square –Square of the linear multiple correlation coefficient (*Multiple R*) is the coefficient of multiple determination, R^2 (explained variability / total variability) which takes values from 0 to 1. It is a relative measure of the representation of the multiple regression model.

All the independent variables have a statistically significant impact on GDP growth (annual %), except foreign direct investments, which have a positive impact, but not to a significant extent. Inflation, domestic loans and labour force have a negative effect on economic growth and gross savings have a positive effect. Coefficient of foreign direct investments has no significant impact on GDP growth.

It is interesting to notice that *labour force* affects the economic growth that appeared to be statistically significant in all regression analyses, i.e. labour force reduction affects the increase of economic growth.

5. Conclusion

Foreign direct investments do not have a significant effect on GDP growth, but they are in positive correlation with GDP growth, which cannot confirm the hypothesis given. In case of the mentioned regression model, it appeared that FDI have a positive impact on GDP growth, which means that countries should encourage foreign direct investments inflow in order to speed up the dynamics of economic growth. We can say that impact of foreign direct investments on GDP growth is not statistically significant, practically it does not contribute to a significant increase of economic growth, but in any case their positive effect is indisputable.

Results reached based on this regression analysis have shown a positive, but not a statistically significant correlation between foreign direct investments and economic growth in transition countries. Transition countries should encourage foreign direct investments inflow, but we must pay attention to structure of foreign direct investments. Studies have shown that a greater share of FDI in the secondary sector increases their impact on economic growth and it is possible to track their effect on productivity at the company's level.

Labour force as an indicator also appeared to be significant and it has a positive contribution to economic growth. As for the corruption, higher corruption degree is negatively related to foreign direct investments inflow. Inflation in this case can be observed as a measure for the macroeconomic stability level and if the inflation rate is low, we can expect a positive effect on the foreign direct investments inflow, and if it is high, we can expect a negative effect on FDI inflow. Gross savings also appeared to be positive and it contributes to FDI inflow.

In addition, a stronger level of connection in case of transition countries in the global market, market development and higher investments in education which encourages human capital quality and contributes to the productivity growth, is a precondition for the increase of FDI's impact on economic growth of host country.

6. References

- Alfaro, L. (2013) Foreign Direct Investment and Growth: Does the Sector Matter? <http://gwww.grips.ac.jp/teacher/oono/hp/docu01/paper14.pdf> [pristup 8.11.2014.]
- Alfaro, L., Charlton, A. (2007) Growth and the Quality of Foreign Direct Investment: Is All FDI Equal , Working Paper, <http://www.imf.org/external/np/seminars/eng/2007/finglo/laac.pdf> [pristup 8.11.2014.]
- Alfaro, L., Charlton, A. (2006) Growth and the Quality of Foreign Direct Investment: Is All FDI Equal“, Working Paper <http://ideas.repec.org/p/cep/cepdps/dp0830.html>. [pristupljeno 20. aprila 2014].
- Anghel, B. (2006) “Foreign Direct Investment in Transition Countries: a Dynamic Analysis at Firm Level” , <http://www.nottingham.ac.uk/gep/documents/conferences/2006/postgradconf2006/anghel-postgradconf2006.pdf> [pristupljeno 7. marta 2014]
- Antevski, M. (2009) *Razvojni potencijal stranih direktnih investicija: komparativna međunarodna iskustva*, Institut za međunarodnu politiku i privredu, Beograd
- Bogdan, Ž. (2009) Utjecaj FDI – ja na gospodarski rast europskih tranzicijskih zemalja, <http://web.efzg.hr/repec/pdf/Clanak%2009-06.pdf> . [pristupljeno: 1. maja 2014].
- Bevan, A., Estrin, S. (2000) The Determinants of Foreign Direct Investment in Transition Economies“, Wiliam Davidson Institute Working Paper 342, Centre for New and Emerging Markets, London Business School, London <http://deepblue.lib.umich.edu/bitstream/handle/2027.42/39726/wp342.pdf?sequence=3> [pristupljeno 5. maja 2014].
- Cvetanovic, S., Despotovic, D., Cvetanovic, D. (2012) *Domestic savings and foreign direct investment in the new model of economic growth of the Western Balcan countries, Development Potentials of Foreign Direct Investment: international experiences*, Institut of International politics and economics, Belgrade, str. 255 – 266
- Cvetanović, S., Novaković, I. (2013) *Inovacije i razvojna konvergencija zemalja u modelu rasta Roberta Soula*, Ekonomika br.4, Niš
- Cvetanović, S., Despotović, D. (2014) *Izvori finansiranja razvoja zemalja Zapadnog Balkana u periodu 2001-2012. godine*, Ekonomika br. 3, Niš
- Dogru, B. (2012) ”The effect of institutional variables on fdi inflows: Evidence from upper-middle income countries”, http://mpr.ub.uni-muenchen.de/37531/1/MPPA_paper_37531.pdf [pristup 10. marta 2014]
- Fratzcher, M., Bussiere, M., (2004) Financial Openness and Growth: Short-run Gain, Long-run pain?“ ECB, Working Paper series:No 348,. <http://ideas.repec.org/p/ecb/ecbwps/20040348.html> [pristupljeno 15. aprila 2014].
- Jovanović Gavrilović, P. (2004) *Međunarodno poslovno finansiranje*, Beograd: Ekonomski fakultet
- Mencinger, J. (2003) “Does Foreign Investment Always Enhance Economic Growth?”, *Kyklos, International Review for Social Sciences*, 56(4):491–508; 534-547
- Nestorović, O. (2014) *Strane direktne investicije kao faktor održivog razvoja privrede Srbije*. Neobjavljena doktorska disertacija, Ekonomski fakultet Univerziteta u Kragujevcu, Kragujevac, Srbija
- Stanišić, N. (2008) *Priliv stranih direktnih investicija kao osnovni faktor unapređenja spoljnotrgovinskih performansi evropskih zemalja u tranziciji*, Naučni skup, Inostrani kapital kao faktor razvoja zemalja u tranziciji, Kragujevac

- Stefanović, M. (2008) *Uticaj stranih direktnih investicija na razvoj nacionalne ekonomije*, Ekonomske teme br. 2, Niš
- Stiglitz, J.,E. (2004) "Capital Market Liberalization, Globalization and the IMF", Oxford Review of Economic Policy vol 20., No 1 http://www.relooney.info/00_New_951.pdf, [pristupljeno 12 aprila 2014].
- Škuflić, L., Botrić, V. (2006) „Foreign Direct Investment in South East European Countries: The Role of Service Sector“, *Eastern European Economies*, 44(5): 72- 90
- Lovrinčević, Ž., Mikulić, D., Marić Z. (2004) „Efikasnost investicija i SDI – stara priča, nove okolnosti“, *Ekonomski pregled* 55 (1-2):3-43
- Vidas Bubanja, M. (2008) *Metode i determinante stranih direktnih investicija*, Beograd: Institut ekonomskih nauka
- UNCTAD (2012) *Global Investment Trends Monitor*, No.9, Geneva
- World Bank (2000-2011) *World Development Indicators*
- World Investment Report (2013) <http://unctad.org/en/Pages/Statistics.aspx> [pristupljeno 10.marta 2014].

DA LI STRANE DIREKTNE INVESTICIJE DOPRINOSU PRIVREDNOM RASTU ZEMALJA U TRANZICIJI?

Apstrakt: Osnovni cilj ovog rada jeste da pokaže da li strane direktne investicije utiču na razvoj zemalja u tranziciji. U radu je predstavljen empirijski model u kojem se analizira šesnaest zemalja u tranziciji u desetogodišnjem periodu. Postojanje pozitivne korelacije između nivoa ulaznih stranih direktnih investicija i ekonomskih karakteristika privrede, kao i konkurentnosti privrede je evidentno u brojnim studijama koje su izučavale ovu temu, ali ima i suprotnih stavova. Porast stranih direktnih investicija u zemlji domaćina, sam po sebi ne znači pozitivan uticaj na privredni rast, već zavisi od brojnih faktora kao što su ljudski kapital, razvijenost finansijske strukture, makroekonomske stabilnosti i drugih institucionalnih faktora.

Ključne reči: strane direktne investicije, zemlje u tranziciji, privredni rast, ljudski kapital, makroekonomska stabilnost.