
THE EFFECT OF FOREIGN DIRECT INVESTMENT IN TRANSITION COUNTRIES – CASE OF KOSOVO

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Abstract

The purpose of this paper is to establish that FDI has impact on improving some of the macroeconomic indicators influencing the economic development of transition countries, as well as Kosovo. In this paper, will be evaluated the impact of FDI on economic growth, income, labor and exports. The econometric model is based on linear regression (OLS), where each of the mentioned factors were tested with the same model, separately. The data were received by the Kosovo Agency of Statistics for the period 2004-2017. The results show that FDI has a positive impact on the economic growth of the current year with a 1% significance level ($p = 0.0023$), a positive impact on GDP growth per capita, lagged one year at a significant 10% ($p = 0.0729$); a positive impact on the export growth of the actual year with a significance level of 5% ($p = 0.0105$). As far as the impact of FDI in employment, the results are non-significant.

Key Words

Foreign direct investment economic growth; OLS models; transition countries; Kosovo.

INTRODUCTION

Foreign Direct Investment (FDI) is considered as a significant form of growth and economic development of host countries. This in turn refers to international economic integration, transformation of modern technologies, growth of management and organizational skills, and more modern marketing techniques (Moosa, 2002). A large number of studies consider that foreign direct investment generates economic growth in the host country (OECD, 2002) This effect and other spillovers are evidenced in many studies (Blomstrom & Kokko, 1998; Frindlay, 1978; Berthélemy & Démurger, 2002; Varamin & Vu, 2007).

According to Varamin & Vu (2007), technology transformation, apart influencing the performance of firms in host countries, also contributes to GDP growth, increased capital accumulation and trade growth. Whereas Wang (2009) determines foreign direct investment as an investment involving the transfer of a large pool of assets, including advanced technology and know-how, financial capital and best practices in managerial and administrative experiences in host countries etc. De Mello (1999) emphasizes that the spillover effect of technology and know-how of foreign firms are determining the long-term growth of the economy in host countries. On the other side, Lipsey (2002) highlight the effect that FDI has on employment and the overall increase in employee salaries, which is otherwise called the wage spillover effect (Lipsey 2002). In earlier FDI stages, (Helliner 1973, Cohen 1975, Nayyar 1978) emphasized the important role of FDI in trade exchanges, and in particular on expanding the exports of manufactured products of the host countries. While the WTO (1996) considers that FDI can often be used as a measure of country's integration into the world economy.

For other FDI effects in the host countries, such as: enhancing the use of resources and increasing the competitiveness of local firms, there are considerable numbers of studies (Blomström & Kokko, 1988; Lee & vTche, 2004; Pessoa, 2007). Local firms are forced to improve technology and find the best techniques and methods to deal with foreign firms competition (Driffield, 2000, Varamini and Vu, 2007).

According to the IMF (2007), FDI brings restructuring and modernization of private enterprises by increasing production capacity in host countries. Meanwhile, Demekas, Horváth, Ribakova and Yi Wu (2005) emphasize that the inflows of foreign direct investment has effects to finance the foreign trade deficit of the host country and has no effect on debt creation in an economy. Zhang , (2001), has an optimistic point of view on the prospect of foreign direct investment for a large number of reasons. Therefore, the policies of the most governments of the host countries are oriented towards the creation of conditions for attracting FDIs.

Meanwhile, other researchers also mention negative effects on the host country. Roolaht (2005) warns that technological transformation can also have negative effects, making the hosting countries dependent on the technology of developed countries. FDI-s can negatively affect host countries when these foreign investments create monopoly powers over the

gained market in the host countries. Very often, foreign affiliates result in increased competition with domestic firms (Bhalla & Ramu, 2005).

PROBLEM STATEMENT, OBJECTIVE AND HYPOTHESES

For a transition economy, such as Kosovo¹, FDI is considered as a key element that will contribute to the country's economic growth and development by assisting in the necessary structural changes. Many researches (Estrin & Uvalic, 2003, Christie, 2003; Brada, Kutan & Yigit; Demekas & al. 2005) show that FDI flow are not quite satisfactory in countries like Kosovo and in the Balkan countries due to the "Balkan" effect. Despite the lower inflow of FDI flows to transition countries compared to developing and developed countries, according to the World Investment Report (2018), projections show that there is an upward trend of FDI inflows, especially in transition countries.

In this context, the research problem of this paper is that FDIs have had positive effects on Kosovo's economic growth, as described in the above-mentioned studies.

As stated above, the objective of this paper is to measure the impact of FDI on the economic indicators of the economic development of the country, such as: economic growth, GDP per capita, labor and export. Consequently, we will test the cause-effect hypothesis that can be explained as follows:

- H1: FDI has positive effects on economic growth in Kosovo
- H2: FDI have positive effects on revenue growth
- H3: FDI have positive effects on employment
- H4: FDI have positive effects on export growth.

PROCEDURES AND METHODS

The Models

Testing the hypothesis will be based on the econometric models which apply to time series data. The theoretical basis of the methodological approach to the development of study and selection of econometric models, consists of the Solow model (1957). This model makes a transformation of the production function Cobb Douglas:

$$Y = AL^{\beta} K^{\alpha} \quad (1)$$

which transformers through logarithm by turning it into this functional form:

¹From a centralized economy in the former socialist system, Kosovo experienced an uppermost occupation during the 1990s, which ended with a devastating war of genocidal proportions also dwindled the whole economy

$$\ln GDP = \beta_0 + \beta_L \ln L + \beta_{IHD} \ln FDI + \beta_K \ln K + u_t \quad (2)$$

GDP - Gross Domestic Product; L - working age population; K - domestic capital; FDI - Foreign Direct Investments.

Based on the theory that the effect of FDI can not be noticed in the investment year, then the effect is tested using the lag (Studenmund 2017; Gujarati 2004; Osmani 2013). Adapted to the specifics of the case and based on the small number of observations, in our case we will test the impact of FDI with and without a one-year lag and including a small number of independent variables. A linear regression model will be used, which would have this form:

$$Y_t = \beta_0 + \beta_1 FDI + \beta_2 FDI_{t-1} + \beta_3 X_t + u_t \quad (3)$$

Y_t - dependent variables depending on the hypothesis that will be tested:

- rate of economic growth denoted as “*GDPgr*”;
- GDP per capita denoted as “*GDPcap*”;
- Employment rate denoted as “*EmpR*”;
- Export denoted as “*Ex*”.
- X_t -Gross capital formation denoted as “*Cap*”

Estimation and functional form

Model estimation will be made using the Ordinary Least Square method. Because to time series we often have problems of lack of stationarity (nonstationarity), which can cause spurious correlation (Studenmund 2017), to ensure that the series is stationary, we will evaluate the ADF-Augmented Dickey-Fuller test on the presence of unit root based on the Akaike Information Criterion (AIC). In the cases of existence of nonstationarity then the first difference will be applied (Osmani 2013).

To do the econometric analysis, the statistical package for econometric analysis-Gretl will be used, which also offers the possibility of applying the Heteroskedasticity-Corrected model. Also, through this software package, multicollinearity tests will be performed, including VIF - Variance Inflation Factor as well as Jarque Bera normality test. Hypotheses and test values are as follows:

- ADF test - Null hypothesis: the series has a unit root (significance level 5% AIC)
- Jarque Bera (JB) – Null hypothesis: error is normally distributed
- Multicollinearity test:
VIF minimum possible value = 1.0
Values > 10.0 may indicate a collinearity problem
- The heteroskedasticity test does not apply because is used the Heteroskedasticity-corrected model (part of Gretl package).

As far as functional forms are concerned, a form that will give better results will be used. We will consider the following functional forms: lin-lin; lin-log; log-lin and log-log.

The Data

Since the economic development and the effect of FDI is dynamic, for this type of research, it is mainly based on time series data. The study uses secondary data provided by the Kosovo Agency of Statistics and the World Bank database.

Because the reasons we mentioned above regarding the specifics of Kosovo, there is a lack of sufficient data to build series for a long period of time. This will make it impossible for us to develop models that could include many independent variables. Official FDI recording in Kosovo starts in 2004 (ASK 2018), so it limits the number of time periods that can be taken into consideration. Under these constraints, we take a 14-year period, thus 2004-2017.

RESULTS AND DISCUSSIONS

Descriptive statistics

From the statistical analysis of the description presented in Table 1 we see that Kosovo over the period observed has had a solid economic growth of 3.85% on average, with the largest growth being 7.29% in 2007 and smaller by 1.2% in the year 2014. The second below shows also the inflow of FDI averages 267 million euros annually, with a figure of 440 million in 2007 and 43 million in 2004. It is characteristic that both Kosovo's economic growth and the inflow of FDI and other macroeconomic indicators were not affected by the global financial crisis 2009. Table 1 presented the description of all variables used in econometric models for hypothesis testing. It can be seen that all variables have normal distribution where value of the p-value for the Jarque-Bera pointer is $p > 0.05$.

Table 1. Descriptive statistics of variables

	GDPGR	GDPCAP	FDI	CAP	EMPR	EX
Mean	3.854443	3249.340	267.2548	1293.950	27.09171	232.4349
Median	3.565615	3428.693	283.8172	1442.750	27.09200	284.9710
Maximum	7.286083	4054.721	440.7381	1819.700	29.80000	378.0000
Minimum	1.198071	2135.333	43.00000	701.2000	24.10000	35.60000
Std. Dev.	1.512139	637.4643	111.1592	373.1706	1.561304	109.6336
Skewness	0.652120	-0.671321	-0.464580	-0.471239	-0.193787	-0.556674
Kurtosis	3.447574	2.102640	2.536418	1.854238	2.357484	1.976375
Jarque-Bera	1.109129	1.521299	0.628977	1.283937	0.328441	1.334289
Probability	0.574322	0.467363	0.730162	0.526255	0.848555	0.513172
Sum	53.96220	45490.75	3741.568	18115.30	379.2840	3254.088
Sum Sq. Dev.	29.72533	5282689.	160632.7	1810332.	31.68970	156253.8
Observations	14	14	14	14	14	14

Source: ASK (2018) - Eviews processing.

Results of econometric models

Initially, the variables test showed that there was nonstationarity (the presence of unit root), and it was found that only the GDP growth (GDPgr) was a stationary variable (there was no unit root), so to the other variables used the first difference.

Further, the model estimation that tests the impact of FDI on Kosovo's economic growth was further explored. After applying some tests using or removing the lag, the model estimated that had the best results is presented in Table 2. Its functional form is linear – linear (lin-lin). Here we see that FDI has a positive impact on economic growth in the current year for 99% confidence level. Gross capital formation (cap) is statistically significant at confidence level of 95% of one lag.

Table 2. FDI impact assessment model in the economic growth of Kosovo

Model 1: Heteroskedasticity-corrected, using observations 2006-2017 (T = 12)					
Dependent variable: GDPgr					
	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
const	3.11057	0.298344	10.43	<0.0001	***
d_FDI	0.0116151	0.00276957	4.194	0.0023	***
d_Cap_1	0.00664895	0.00242955	2.737	0.0230	**

d_ - first difference; _1 lag;
 R-squared: 0.68; Adjusted R-squared : 0.61; P-value(F) = 0.005754
 Test for normality of residual: $p=0.416818 > 0.05$; Variance Inflation Factors (VIF): $1.313 < 10.0$

Source: ASK (2018) – Gretl processing.

This implies that Gross capital formation has a positive impact on economic growth in the next year whereas FDI has a positive impact in the current year.

As shown in Table 2, the econometric model has a satisfactory coefficient of determination, where variations in GDPgr are explained by variations in independent variables of 68% (R-squared) or 61% by adjusted-R-squared. Based on the F-test, the estimated model is statistically significant for the 1% significance level (P-value (F) = 0.005754).

Also, the model meets the condition about residuals distribution where H_0 cannot be rejected, which means that residuals have normal distribution. The risk of multicollinearity is irrelevant because the value of VIF for the two independent variables is much smaller than 10.

The second estimated model tests the impact of FDI on revenue growth where as a dependent variables is used GDP per capita. As shown in Table 3, the best model for testing the link has log-log functional form. There is a poor influence of FDI in GDP per capita, which is statistically significant at the 90% confidence level of one lag. On the other side, the impact of Gross capital formation is statistically significant (99% confidence level).

Table 3. FDI impact assessment model in GDP per capita

Model 2: Heteroskedasticity-corrected, using observations 2006-2017 (T = 12)					
Dependent variable: d_I_GDPcap					
	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
const	0.0147870	0.0168993	0.8750	0.4043	
d_I_FDI_1	0.0751089	0.0369936	2.030	0.0729	*
d_I_Cap	0.373289	0.0972645	3.838	0.0040	***

d_ - first difference; _1 lag; I_ -log;
 R-squared: 0.74; Adjusted R-squared : 0.68; P-value(F) = 0.002248
 Test for normality of residual: $p=0.147137>0.05$; Variance Inflation Factors (VIF): $1.026<10.0$

Source: ASK (2018) – Gretl processing.

Unlike the first model, the second model has a positive impact on GDP growth per capita in next year, while Gross capital formation has a positive impact in the current year.

Even in this model, the conditions of the econometric test of the model are met with a determination level of 74% or 68% by Adjusted R-squared.

As far as the impact of FDI on employment growth is concerned, after testing some models and using different functional forms, in either case does not result in any statistically significant model at least for the 90% confidence level. Consequently it is concluded that FDI does not have any positive impact on the increase of the rate of employment.

The last model is the one that tests the impact of FDI on export growth. In this case, the dependent variable is used the total export value in euro, according to the years investigated. The best rated model is the one with the log-log functional form. As shown in Table 4, the model shows that FDI has a positive impact on export growth, which is statistically significant for the 95% confidence level. With the same level of confidence, statistically significant is also the impact of Gross capital formation.

Table 4. FDI impact assessment model in export

Model 135: Heteroskedasticity-corrected, using observations 2005-2017 (T = 13)					
Dependent variable: d_I_Ex					
	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
const	0.0647592	0.0365043	1.774	0.1065	
d_I_FDI	0.293053	0.0932764	3.142	0.0105	**
d_I_Cap	0.614616	0.206040	2.983	0.0137	**

d_ -first difference; _1 lag; I_ -log;
 R-squared: 0.77; Adjusted R-squared : 0.72; P-value(F) = 0.000645
 Test for normality of residual: $p=0.677228>0.05$; Variance Inflation Factors (VIF): $1.084<10.0$

Source: ASK (2018) – Gretl processing.

The impact of both variables is evidenced by statistical significance in the current year. The model (Table 4) fulfills the conditions of econometric tests of normality and multicollinearity and has a solid ability to explain variations dependent on independent variables to 77% according to R-squared or 72% by Adjusted R-squared.

CONCLUSIONS

The results of this research suggest that FDI has a major impact on Kosovo's macroeconomic indicators. The results are in line with the OECD (2002) ascertainment finding that the mayor studies consider that foreign direct investment generates economic growth in the host country. In particular, the impact is evidenced by economic growth and exports, while the share of GDP per capita is lower. Economic growth and exports are evidenced in the actual year, which shows that FDI has not yet reached a long-term impact that will be attributed to the effects that are highlighted from many authors. Also, the results do not support hypothesis that FDI has an impact on the growth of employment.

These results have significant implications for further research, which is focused on the impact of FDI spillover across Kosovo, in the sector or in different economic areas. It is important to have focused research related to the impact of FDI on employment. This will enable us to understand that the failure to accept the alternative hypothesis has to do with another alternative hypothesis that would be technological improvement, either this is due to the fact that in Kosovo still it is expressed the fiscal evasion which may be related to undeclared work in the responsible institutions.

The paper also has its own limitations, especially for the fact that we have a short period of time (14 years) which for the econometric models, does not allow the inclusion of many factors in the model.

However, since Kosovo is a small country and with a long period of transition due to the specifics of its past, the results lead us towards favorable policies for attracting FDI.

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