

The Impact of Foreign Direct Investment on the Productivity of the Balkan Countries

Klodian Muço* • Enzo Valentini** • Stefano Lucarelli***

Abstract Balkan countries are trying to attract foreign direct investment, hoping that foreign enterprises, besides employment, will also convey their know-how. This will later be transferred to their national industries, where it is expected to increase productivity.

This paper examines the effects of foreign direct investment on productivity growth, university enrollment and unemployment in eight Balkan countries: Albania, Bosnia, Bulgaria, Croatia, Montenegro, Macedonia, Romania and Slovenia.

The empirical analysis shows significant results about the positive impact of both investments and FDI on productivity growth in the respective countries. Additionally, the data show a positive impact of FDI on university enrollment, but not a negative correlation between FDI and unemployment. Furthermore, the results confirm that FDI effects may have positive consequences in the host country depending on its level of economic development and institutional quality.

Keywords: Foreign Direct Investment; Productivity; School Enrollment; Balkan Countries.

JEL Classification: E23; F21; F43

1. Introduction

In recent years all the economies of the Balkan region have been vigorously seeking to draw the attention of foreign investors to the opportunities their economies have offer, in a bid to convince them to invest their capital in their countries, in the form of foreign direct investments. Countries offer to foreign companies various incentives or state-run facilities for free, or at a symbolic fee, because FDI conveys new technologies and know-how to their countries, increasing productivity and competitiveness.

Klodian Muço* , Enzo Valentini** (✉) , Stefano Lucarelli***

*Aleksander Moisiu University, L.1, Rruga e Currilave, Durres, Albania.

e-mail: kmuco@fastip.edu.al

**University of Macerata, “Department of Social Sciences, Communication and International Relations”, Macerata, Italy.

e-mail: enzo.valentini@unimc.it

*** University of Bergamo, “Department of Management, Economics and Quantitative Methods“, Bergamo, Italy.

e-mail: stefano.lucarelli@unibg.it

The literature suggests that FDI is credited with having a very positive impact on host countries increasing employment, wages, spillover of new technology and know-how, all of which improve economic growth and management skills (Lall, 2002; Kostevc et al., 2007).

Our study analyzes the impact of FDI on economic growth and productivity, using data provided by the World Bank and by focusing on the Balkan region countries, those that are already part of the EU as well as those aspiring to become part of it. Slovenia, Croatia, Bulgaria and Romania are already EU member states and are considered developed countries from the economic point of view, while Albania, Bosnia, Serbia and Macedonia are seen as developing countries aspiring to join the EU. It is interesting to understand the differences that FDI impact displays on various countries from the economic and institutional point of view, and to understand if the effects of FDI are different for countries at different stages of economic development and integration. The study is based on macroeconomic panel data from 1990 to 2016 and analyzes how FDI affects productivity, university enrollment and unemployment in host countries.

The paper proceeds as follows: section 2 reminds the literature on FDI and their impact on host countries, with a focus on Balkan countries. Section 3 introduces data and methodology. Section 4 shows the results of the panel data analysis and section 6 concludes.

2. Literature Review

2.1 FDI determinants

Among the theories concerned with the study of FDI and the internationalization of enterprises, there is the product life cycle theory that breaks down the life of a product in four stages, where it may be economically profitable for the enterprise to develop and produce this product abroad. Vernon talks about how new products are generally created in developed countries, and later when the manufacturing process is consolidated and standardized (i.e., in the final stage of the product life cycle), the enterprise often decides to produce the product in another country at a lower cost, delocalizing production through FDI in countries with cheap labor (Vernon 1966). Knickerbockers (1973) supported the idea that enterprises delocalize production abroad, in a bid to counter each other's investments in new foreign operations. This is especially the case in oligopolistic markets, where their main goal is securing and maintaining their market share.

Caves (1993) adds that firms follow competitors in their investments abroad counter each other's investments due to market uncertainty and risk aversion. Hymer (1960, 1972) and Kindleberger (1969) show that an enterprise invests abroad because there are advantages in relation to competition, benefitting from the economies of scale, specific advantages, or the ability to evade trade restrictions imposed by the governments of the countries where FDI is applied.

Dunning (1977), through the OLI (Ownership, Location, Internalisation) approach, demonstrates that an enterprise should have three types of advantages to be able to make an investment abroad, i.e., advantages related to the characteristics of the country in which it will be located, ownership advantages, advantages in internationalization,

i.e. those advantages deriving from the acquisition of the local supplier, i.e. from the upstream and downstream stages in the production process which were previously carried out by the foreign enterprise.

Referring primarily to the advantages of ownership and localization, Helpman (1984) indicates that a multinational company invests in a foreign country if there are differences in the relative allocation of factors of production under the assumption that transport costs are zero.

Krugman (1998), indicates through the theories of international trade and productive specialization, that it are not only exogenous factors, such as the different allocation of productive factors, which push companies to invest abroad but also the endogenous dynamic factors linked to the increasing returns to scale that can be either internal, that is within the production plant, or economies of scale outside the enterprise determined by *spillover* effects.

Buckley & Casson (1976) explain FDI through the *specific location* advantages (both of economic nature as well as those of socio-cultural and political nature) that in the Balkan region are undoubtedly present: low cost of inputs, cultural affinity with developed countries such as Italy, as well as various forms of investment stimulation.

Kinoshita & Campos, (2003) add the positive role of natural resources and agglomeration infrastructure of the host countries. Javorcik & Wei, (2000) and Kersan-Skabic & Orlic, (2007) show that FDI is negatively affected by corruption. For Rodrigues & Pallas (2008) FDI depends foremost on labor cost and market dimensions of the host country, whereas for Sun (2002) FDI depends mainly on the quality of human capital of the host country.

In their empirical study, Kostevs, Redek & Susjan (2007) emphasize that FDI can be attracted through an increase in institutional quality, good governance, rule of law and macroeconomic stability. Muco (2015) adds that the protection of property rights and the possibility of selling land to foreigners are necessary in order to have “quality” and long-term FDIs. Pournarakis & Varsakelis, (2004) conclude that institutional efficiency and an efficient judiciary system are needed in order to be able to attract FDIs. The authors in question in their next study have made a classification of factors influencing FDIs on the supply side (competencies and cost of labor force, taxation of enterprises) as well as on the demand side (market dimensions and the prospects of economic growth, Pournarakis & Varsakelis, 2004).

2.2 The impact of FDI

As far as the FDI-related benefits are concerned, various empirical studies show that FDI is a determinant fact in economic growth in the long run. For Borensztein et al. (1998) and Findlay (1978) FDI stimulates the transfer of technology, bring about improvements in managerial competencies, know-how, and employment growth. Lee (2002) adds that FDI brings about a growth in exports in the long run in addition to GDP growth, employment growth and technology transfer.

According to Jones (1996), FDI complements internal saving, which contributes to the formation of national capital, thus it affects positively the growth of domestic

investment as well. Lall (2002) affirms that FDI always has positive effects on GDP although these effects are sometimes difficult to be highlighted. In some cases, these effects may be re-dimensioned for various reasons, such as social, political, technological or lack of competitiveness on the part of enterprises of the host country.

Cipollina et al. (2012) provide robust evidence on the positive and statistically significant growth effect of FDI in recipient countries, in a study on developed and developing countries. Buckley et al. (2007) finds positive spillover effects on productivity in China.

Haskel et al. (2007) estimate that a 10 percentage-point increase in foreign presence in a U.K. industry raises the TFP of that industry's domestic plants by about 0.5 percent.

On the other side, the results of Girma et al. (2001) indicate that, in UK, foreign firms do have higher productivity than domestic firms and they pay higher wages, but there is not aggregate evidence of intra-industry spillovers. Also Rodrik (1999) is not convinced that FDI can have a global positive impact on host countries, but acknowledges a positive relationship between FDI and productivity growth of host countries. Sometimes FDI can generate a negative spillover to the domestically owned enterprises in the host country by draining the most qualified human capital out of them, because of a higher pay. Consequently, domestic enterprises will have at their disposal a less qualified human capital, which in turn means lower productivity.

Brenszteina et al. (1998) analyzes 69 developing countries over '80s and '90s, and suggest that FDI is an important vehicle for the transfer of technology, contributing relatively more to growth than domestic investment. However, the higher productivity of FDI holds only when the host country has a minimum threshold stock of human capital.

2.3 FDI and the Balkan Countries

The Balkan region has been a meeting point of different cultures and ethnicities for centuries. The international pressure on the part of the great economic powers has left its mark on the economic policies and the development in the region with important implications. Even today, a good part of the Balkan countries are characterized by an uncertain future in regards to domestic economic stability as well as international integration (Muco, 2014).

It is interesting to see how the Balkan countries that were not deeply affected by Turkish rule, were the first to integrate into the EU (Slovenia and 2004, Bulgaria and Romania in 2007, Croatia in 2013).

Macedonia, Montenegro, Serbia and recently Albania have been granted candidate status. Kosovo and Bosnia and Herzegovina have a lot of work to do before they can start the integration process (Muco, 2014; Muco, 2015).

The public opinion of the Balkan countries sees integration into the EU as the beginning of a new era. This is mainly due to the fact that integration into EU would bring about economic and political stability, the latter would also lead to an increase in FDI, which would bring more employment and wellbeing for citizens (Estrin & Uvalic, 2013).

To make possible the integration into the EU, the Balkan countries have always striven to fulfill all the recommendations of the international institutions such as the

IMF, WB, EU and at the same time have embarked on a number of initiatives to attract foreign investment (Muco, 2015; Estrin & Uvalic, 2013). Such as, the liberalization of commercial exchange between them and EUs, mass privatization, strengthening of institutions, improvement of entrepreneurial context, lowering of tax rates, and the creation of a common market of the western Balkans.

According to Nicoletti et al. (2003), Kinoshita & Campos (2003) market size and growth prospects are the primary factor in attracting FDI. To all this, we add the low cost of labor force, the prospect of economic growth, natural resources and the wage gap between East–West EU countries, which mean that FDI in these places keeps growing more and more (Bruno, Crinó & Falzoni, 2006). According to data published by World Tax in 2018, the Balkan countries have a highly competitive fiscal system regarding investments. If we refer to the table below, we see that countries that are not yet part of the EU and aspire to integrate into the EU have even lower tax rates compared to those that are already in the EU. Regarding the low salaries in the aforementioned Balkan countries, according to Eurostat data (2016), the average gross salary is 773 Euro. In addition to low wages and quotas, the Balkan countries have a geographic advantage, since they are close to economically developed countries such as Italy, Germany and Austria (Holland & Pain, 1998).

Table 1: Tax rates by country

Balkan States	Corp. Inc. tax	Cap. gain tax	Bran. tax	Divid.	Interest	Royalties	Bran. remit. tax
<u>Albania</u>	15%	15%	15%	15%	15%	15%	0%
<u>Bulgaria</u>	10%	10%	10%	0%	5%	10%	0%
<u>Bosnia</u>	10%	10%	10%	5%	10%	10%	0%
<u>Croatia</u>	18%	12%/14%/36%	20%	12%	15%	15%	0%
<u>Macedonia</u>	10%	10%	10%	10%	10%	10%	0%
<u>Montenegro</u>	9%	9%	9%	9%	9%	9%	0%
<u>Romania</u>	16%	0%/16%	16%	5	16%	16%	0%
<u>Slovenia</u>	19%	17%	19%	15%	15%	15%	-
<u>Serbia</u>	15%	15%	15%	20%	20%	20%	0%

Source: World tax, 2018

In the last 15 years there has been a significant growth in literature and empirical studies on FDI in Balkan countries. This is not surprising given the fact that FDI has played a very important role on the economic performance of the majority of the countries in the region, throughout the economic transition process. However, we want to stress that some of the countries are still in transition despite the fact that more than 25 years have passed since the big change of the economic system.

Bartlett (2009) signals that much of the FDI inflow to the region has been linked to privatization in telecommunications, banking and oil refining rather than new green field investments, and the pattern of inflow over time has been irregular and lumpy,

following the vagaries of the privatization process. Estrin & Uvalic (2013) emphasizes that Western Balkans countries receive less FDI in comparison with the other transition economies. Kostevc et al. (2007) confirmed a significant impact of various institutional aspects on the inflow of foreign capital and showed that in the observed period the quality of the institutional environment significantly influenced the level of foreign direct investment in transition economies. Brada et al. (2006) study the effect of transition and of political instability on FDI flows to the transition economies of Central Europe, the Baltics and the Balkans and find that FDI to transition economies unaffected by conflict and political instability exceed those that would be expected for comparable West European countries. In the case of Balkan countries, conflict and instability have reduced FDI inflows below what one would expect for comparable West European countries. Bevan et al. (2004) study the determinants of FDI from Western countries, mainly in the European Union (EU), to Central and Eastern European ones, and find the most important influences to be unit labor costs, gravity factors, market size, and proximity.

However, in the majority of these countries in the early 1990s¹ there was a rise in inward FDI inflows and consequently there has been a large number of empirical studies on the impact of FDI on the region. With regard to effects of FDI in Balkan Countries, Holland et al. (1998) suggest that spillovers from the stock of inward investment and international trade both have a positive impact on productivity in the transition economies, with the beneficial effects of FDI being higher in the more market-orientated economies. Javorcik (2004a), using firm-level data from Lithuania, produces evidence consistent with positive productivity spillovers from FDI. Campos and Kinoshita (2002) find a positive and significant impact of FDI on economic growth as theory predicts, with a study on Central and Eastern European and former Soviet Union transition countries between 1990 and 1998. But they underline that FDI has a positive impact on productivity growth only when the host country possesses a minimum level of qualified human capital.

3. Data and Methodology

The data used in this study enables us to evaluate the impact of FDI on the productivity of host countries. To conduct this study, we have created a panel data of 8 countries from the Balkan region with transition economies (Albania, Bulgaria, Bosnia, Croatia, Macedonia, Romania, Serbia, Slovenia). In fact, there are 12 countries in the Balkans but we have excluded Turkey and Greece. We have excluded Greece, because it became part of the EU in 1981, besides, the two aforementioned countries differ from the historical and economic point of view from the other Balkan countries. We have also excluded Kosovo and Montenegro, because they have declared their independence relatively recently and there are few data on them.

The time series for the countries in question covers the period from 1990 to 2016. The

¹ Before the 1990s, the FDI inflow for the majority of the Balkan countries was very low, because of political and economic instabilities. This instability continued even after the 90s, leaving lasting impressions on the Balkan region as well as unresolved issues that continue to exist even today. See: Estrin, S., & Uvalic, M. (2013). Foreign direct investment in transition economies: Are the Balkans different? P.11.

number of panel observations is 180 because of the lack of some data on certain years. We chose to use only macro data published by World Bank for the respective countries. We declined to use non homogeneous micro data valid only for few years. Their use would lead to unreliable results and we would be mistaking in sample collecting, as different countries use different methods of producing micro data.

Time series are very important for our study in order to have a lot of observations and to understand more clearly what happens to the FDI inflow when a country becomes a member of the EU. Here we add the fact that some of the countries emerged as market economies in early 1990s, and as a result foreign investors started to appear in these years, even though at first these investors were few and kept a wary eye on investing in these countries.

The main goal of this study is to highlight through the empirical analysis the impact of FDI on productivity, unemployment and university enrollment in host countries.

Grote (1966); Borensztein et al. (1998); Findlay (1978); Buckley et al. (2007) affirm that FDI conveys not only capital but also new technologies, production capacities, management capacities, employment, innovation and know-how.

Of course, all these effects become evident only when investors are “serious”, make long-term investments, and do not move to a country just to exploit the low cost of labor force without leaving much of a trace in the host countries. (i.e. when the FDI really contributes to GFCF growth).

As we mentioned above, productivity, university enrollment and unemployment served as a dependent variable. University enrollment serves as such because when a foreign investor chooses a place to invest in, in addition to the overall cost of production and political stability he also seeks qualified labor force that is quicker to gain new knowledge, consequently the costs of training workers is lower.

As we initially thought, the arrival of foreign investors in a developing country is a strong signal for young people to enroll in universities, as the adoption of new technologies requires skilled work force. We will empirically verify that FDI stimulates education. The latter stimulates economic growth and development in the long run (Mitaj, Muco & Avdulaj, 2016). In turn, a growing enrollment in universities will make the country more attractive to foreign investors and may lead to salary increase for host countries (Bruno, Crinó & Falzoni, 2006).

We also study unemployment, since in the early 1990s a part of the countries in question experienced an economic collapse which was reflected in a sharp drop in industrial output. This drop started with the stabilization program in ex-Yugoslavia and the termination of the central planning system in Albania. According to Barlett (2008; 2009), those factors led to a deindustrialization, which was felt more in Albania, where industry went from 58% of GDP in 1990 to 10% of GDP in 2000. Something similar happened in Croatia and Macedonia although the effects in these countries were more moderate. In these countries, entire areas experienced an economic and social collapse. A good part of the public enterprises, which were still in operation, were ineffective. They were overstaffed, which is a ubiquitous phenomenon in countries with high index of corruption (and the Balkan countries are such), where governments prefer

to artificially increase employment in publicly-owned companies in a bid to get more votes in election. Considering these facts, the goal of this study is to empirically verify that FDI stimulates employment or indirectly reduces it through the privatization of state-owned enterprises when foreign investors automate the manufacturing processes consequently making workers redundant.

In this paper, data on FDI net flow and Gross Capital Formation (GCF) is always expressed in % of GDP. The positive aspect of this panel data is the length of the time series, considering the fact that most of the Balkan countries overthrew their Communist regimes in the early 1990s. The data before the fall of Communism does not make much sense for our study.

A negative aspect of our panel data lies in the lack of data on the evolution of wages and poverty. Having this data would make the study more complete and highlight the productivity and the positive or negative impact of FDI on economic growth and social welfare in the host country. It would be interesting if we were able to measure productivity in different sectors of the economy to see which sectors of the economy FDI impacted the most. But there was a lot of inconsistency in the published data on employment according to the relevant sectors which is why we decided not to take these data in consideration.

4. The Impact of FDI on Productivity, Education and Unemployment

In this section we will discuss the empirical results of our study. As we mentioned in the paragraphs above, our goal is to exhaust the impact of FDI on the economies of the Balkan region, both on countries that are already part of the EU and can be considered developed countries such as Slovenia, Croatia, Bulgaria and Romania as well as on the countries that are considered developing countries such as Albania, Macedonia, Serbia and Bosnia. To make this possible, we will try to go past the traditional factors identified by a wider literature on FDI in the Balkan region (for example GDP growth, export growth or employment growth).

Taking into account the impact of FDI on productivity and enrollment in universities, indirectly we are also studying the impact of FDI on both GDP growth and the long-term economic development of a country in general.

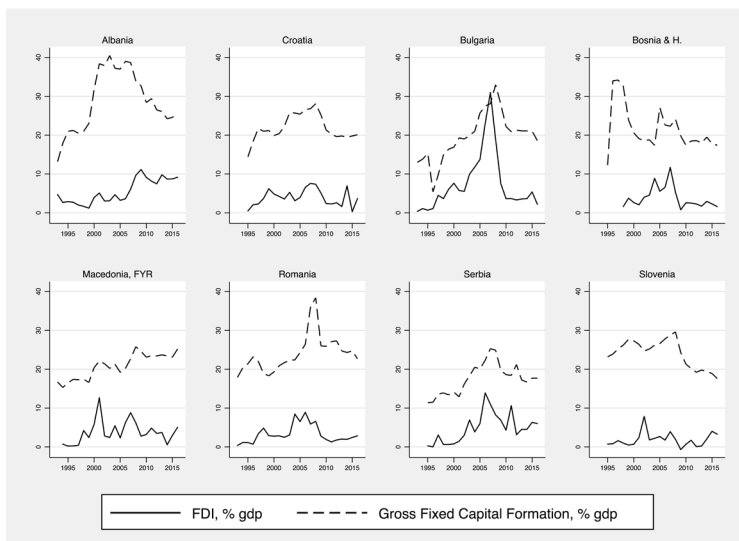
As mentioned in the literature review, there is a large number of economic studies that evaluate the impact of FDI on the productivity of host countries (Buckley et al., 2007; Girma et al., 2014; Javorcik, 2004; Smarzynska, 2003). But all of these studies use micro level data, at the business level, for short time periods and only for specific countries. This makes it impossible to juxtapose our results with the aforementioned studies. We start with a graph analysis showing the performance of FDI and the performance of Gross Fixed Capital Formation (GFCF). FDIs increase productivity/economic growth if they impact GFCF, meaning they become an important component. GFCF includes both domestic and foreign investments. Thus, the GFCF progress cannot be taken as a proxy only for domestic investments. What matters is the FDI-GFCF relationship, which is highlighted in the graphs. FDIs may not even become GFCF if used for pure speculation.

Figure 1 shows quite similar trends for FDI and GFCF. An interesting fact here is that there is a significant FDI increase shortly before a country joins the EU and this substantial increase continues for some time after joining the EU. Also, referring to the WB data and the following graphs, we see a decrease in FDI and domestic investments for most of the countries in question in the 2008-2010 period.

If we focus on the graphs for certain countries we see that Serbia displays the highest FDI decrease for the period in question, ranging from 14 billion in 2008 to 6.4 billion in 2010. FDI and GFCFs have relatively had the same similar trend for most countries the only exception being Macedonia where the decrease is not felt as much. From this it can be assumed that foreign investors in the Balkan region are mainly from the EU countries and that the economies of the Balkan countries are closely related to the economies of the developed countries of the EU that are close to them from the geographic point of view, such as Italy, Germany, Austria, Greece etc. Some of the countries in the Balkan region were not directly affected by the economic crisis; however, the effects of the economic crisis can be seen on the decrease of FDI coming from the developed EU countries directly affected by the crisis. Thus, the onset of the crisis in EU countries led to a decrease in FDI in the Balkan countries.

Another interesting fact is the performance of GFCF in Albania and Romania. For Albania, we can say that from 1998 to 2010 there has been a GFCF increase (except for 2001-2002 and 2005-2006, which were post-election periods).

Figure 1. FDI in % of GDP and Gross Fixed Capital Formation in % of GDP



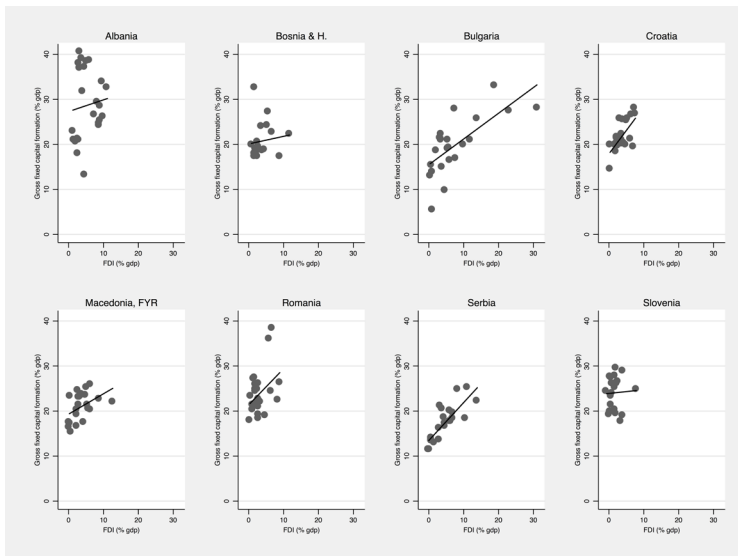
In Albania, both right and left governments have always sought to support economic growth by investing in infrastructure such as the construction of new roads. Often, these investments are funded through loans. These investments together with a steady increase in remittances (from 1990-2010) and FDI growth have supported GDP growth

over the years. But with the onset of the crisis and with the surpassing of the public debt limit (60%) after 2010 there has been a decline in domestic investments.

Whereas in Romania from 2000 to 2009 there has been a steady increase in GFCF. The major part of this capital has been in the form of help or loans secured through IMF, IBRD, USAID and the privatization of large state-owned enterprises. Throughout the period in question, domestic investments have been around 25% of GDP. These investments have made an important contribution to Romania's economic growth for the period in question, which has ranged between 6 to 8% a year.

Figure 2 shows the correlation between FDI and GFCF. In Bulgaria, Croatia, Romania and Serbia the correlation between FDI and GFCF is stronger than in other countries., suggesting that FDI is more productive in these countries.

Figure 2. The correlation between FDI and Gross Fixed Capital Formation



FDI is not always used to finance the formation of fixed capital; FDI is often used to cover the deficit or to pay off a loan, and these investments are not always included in gross fixed investments.² Below we will see the empirical results of FDI impact on the productivity in Balkan countries. Working with time series, we start analyzing stationarity: Productivity results to be I (1) (non stationary), while Fdi_gdp and GFCF are I (0).

Then, to analyze the relationship between a variable I (1) and an I (0), we use a Vector Auto Regression (VAR) approach including the lag value of the dependent variable between the regressors. Consequently, the regressor explains most of the regression. The table shows a very high R^2 , but this is because essentially we are using VAR.

² See the definition of FDI by WB: FDI can be used to finance fixed capital formation, however it can also be used to cover a deficit in the company or paying off a loan. Thus, you cannot say FDI is always included in gross fixed capital formation. Note that some countries, such as Luxembourg, have large figures for FDI because they serve mainly as financial intermediaries, offering very favorable conditions such as tax exemptions for holding companies and corporate headquarters.

Empirical results show that FDI has a positive impact on productivity. This result is robust even if we use different specific estimates (Standard fixed effects, or GLS with dummies for country fixed effects).

From the table we see that investments in general and FDI are positively correlated with productivity. But, if we group together FDI and investments in general, then we see that productivity is correlated only with investments and not with FDI, that is why we deduct that it is investments that increase productivity whereas FDI is determined when it completes investments.

Thus, given the fact that FDI is decisive because they complement investments in general, and bearing in mind the comments on the graphs in the second table, we will divide the sample into 2 sub-samples based on the aforementioned correlation.

Table 2 shows that FDI has an important role in the countries which have a strong correlation with investments in the broad sense, i.e. Bulgaria, Croatia, Romania and Serbia.

Table 2 once again highlights the quality of FDI, i.e. the latter have a role in productivity if they are related to investment, and this can also be said at this point on the impact on growth³. In the following table, university enrollment is our dependent variable and FDI is our independent variable. In this model, twice-lagged FDI has been used due to the fact that students in high school most of the time do not decide to enroll in university at the last moment, they often make that decision some time ago.

Table 1. The impact of FDI and GFCF on productivity

Dep. Var: ln(productivity)(heteroskedastic panels)	Panel GLS (heteroskedastic panels)	Panel Fixed Effects (robust standard errors)	Panel GLS (heteroskedastic panels)	Panel Fixed Effects (robust standard errors)	Panel GLS (heteroskedastic panels)	Panel Fixed Effects (robust standard errors)
ln(FDI)	0.006**	0.011*			0.004	0.006
ln(Gross Fixed Capital Formation)			0.06***	0.10**	0.03**	0.04***
ln(Productivity) (t-1)	0.93***	0.93***	0.89***	0.88***	0.93***	0.92***
Constant	0.65***	0.71***	0.86***	1.07**	0.62***	0.67***

³ In Albania, during the period 2006-2009 FDI inflow was very important. The bulk of this flow went to the privatization of the state-owned oil refining company ARMO and the Electric Power Distributor Operator OSHEE. Both these privatizations should have been accompanied by important investments in technological innovations to optimize electricity and reduce power losses and increase the quality of the oil produced. In reality both companies did not succeed because privatization was not accompanied by other investments and the government was forced to nationalize them again.

Dep. Var: ln(productivity)	Panel GLS (heteroskedastic panels)	Panel Fixed Effects (robust standard errors)	Panel GLS (heteroskedastic panels)	Panel Fixed Effects (robust standard errors)	Panel GLS (heteroskedastic panels)	Panel Fixed Effects (robust standard errors)
Country fixed effects	yes (dummies)	Yes	Yes (dummies)	yes	yes (dummies)	yes
Observations (groups)	175(8)	175(8)	180(8)	180(8)	175(8)	175(8)
Wald chi-2 (Prob > chi2)	23845 (0.000)		16682 (0.000)		24106 (0.000)	
R-squared		0.99		0.98		0.99
F (prob>F)		1635 (0.000)		748 (0.000)		1486 (0.000)

*: 10%, **: 5%, ***: 1%

N.B: all the variables are log transformed, for this reason the coefficients can be interpreted like this: “if we change x by one percent, we’d expect y to change by β percent”

Table 2. The impact of FDI and GFCF on productivity by countries

Dep. Var: ln(productivity)	Panel GLS (heteroskedastic panels) Albania, Bosnia, Macedonia, Slovenia	Panel Fixed Effects (robust standard errors) Albania, Bosnia, Macedonia, Slovenia	Panel GLS (heteroskedastic panels) Bulgaria, Croatia, Romania, Serbia	Panel Fixed Effects (robust standard errors) Bulgaria, Croatia, Romania, Serbia
ln(FDI)	0.004	0.006	0.010**	0.015***
ln(Productivity) (t-1)	0.93***	0.91***	0.94***	0.95***
Constant	0.72***	0.86**	0.56***	0.57***
Country fixed effects	Yes (dummies)	Yes	Yes (dummies)	Yes
Observations (groups)	86(4)	86(4)	89(4)	89(4)
Wald chi-2 (Prob > chi2)	23289 (0.000)		7804 (0.000)	
R-squared		0.99		0.98
F (prob>F)		1113 (0.000)		1517 (0.000)

*: 10%, **: 5%, ***: 1%. N.B: all the variables are log transformed, for this reason the coefficients can be interpreted like this: “if we change x by one percent, we’d expect y to change by β percent”

Table 3: The impact of FDI on the tertiary enrollment

Dep. Var: In tertiary enrollment)	Panel GLS (heteroskedastic panels)	Panel GLS (heteroskedastic panels) Albania, Bosnia, Macedonia, Slovenia	Panel GLS (heteroskedastic panels) Bulgaria, Croatia, Romania, Serbia
ln(FDI)(t-2)	0.010**	0.008	0.012**
ln(Enrollment) (t-1)	0.94***	0.93***	0.89***
Constant	-0.03	-0.03	-0.03
Country fixed effects	Yes (dummies)	Yes (dummies)	Yes (dummies)
Observations (groups)	133(8)	58(4)	75(4)
Wald chi-2 (Prob > chi2)	9293 (0.000)	5667 (0.000)	3008 (0.000)

*: 10%, **: 5%, ***: 1%. N.B: seeing that enrollment is I (1), and FDI I (0), we use VAR again

Looking at the table, we can say that even in this case we see that FDI correlation with university enrollment is positive only in those countries where total investments are correlated with productivity and FDI complements investments. In general, regarding FDI and university enrollment, we can say that FDI conveys new technology that requires qualified human capital, so there will be an increase in demand for qualified workers (Subbarao & Srinivas, 2009; Noorbaksh et al Narula & Marin, 2003). An increased demand for qualified workers inevitably means higher future salaries for them.

This increased demand for qualified workers encourages young people to enroll in universities in the future. This decision is taken at least 1 or 2 years ahead, so the effects are felt after a two-year delay.

Table 4: The impact of FDI on Unemployment

Dep. Var: ln(unemployment)	Panel GLS (heteroskedastic panels)	Panel GLS (heteroskedastic panels) Albania, Bosnia, Macedonia, Slovenia	Panel GLS (heteroskedastic panels) Bulgaria, Croatia, Romania, Serbia
ln(FDI)	-0.002	0.001	-0.006
Constant	-1.00***	-1.00***	-0.07***
Country fixed effects	Yes (dummies)	Yes (dummies)	yes (dummies)
Observations (groups)	178(8)	87(4)	91(4)
Wald chi-2 (Prob > chi2)	7118 (0.000)	2283 (0.000)	3859 (0.000)

N.B: Unemployment and FDI I(0): panel in levels

Unemployment is the dependent variable in the last table. The results show that FDI do not have a positive impact on the reduction of unemployment.

In this case, unlike the analyses conducted in the preceding models, we do not provide fixed effects and GLS because in essence there are no significant results. We also tried to use employment rate instead of the unemployment index but the results remained the same.

These results are not very surprising since FDI in the Balkan countries in the majority of cases went towards the privatization of state-owned enterprises and usually enterprises undergo restructuring and reorganization of their human resources during privatization resulting in job cuts (Estrin & Uvalic, 2013). These cuts are due to the fact that state-owned enterprises hire workers way in excess of their productive needs. Also some productive processes are automated, in addition to this the foreign investors appoint their own managers. Besides, when foreign investors come, it is often the case that even those who were demotivated and were not looking for a job start looking for a job again and consequently are regarded as unemployed unlike previously when they were not considered as such.

5. Conclusions

In this paper we have examined the impact of foreign direct investment in the Balkan countries on the argument that foreign direct investment is essential for the reconstruction and economic development of the host countries.

We have examined the effects of FDI using three different models. The first model analyses the impact of FDI on the productivity in the Balkan countries. The second model dealt with the effect of FDI on university enrollment, whereas the last model tried to verify the effects of FDI on unemployment.

The empirical analysis showed that the positive effects of FDI on productivity are such only when there is a strong correlation between FDI and GFCF, i.e., only when FDI is real investment and complements total investments, turning thus into an important source of productivity growth in the host countries. All this highlights the institutional aspect in selecting and favoring FDI that complements total investment. FDI are positively correlated with productivity. On the other hand, when we consider both FDI and investments, productivity is correlated positively only with investments in general and not with FDI. This result suggests that investment is the main factor leading to increased productivity and that FDI are influential when they complement investment.

Moreover, this study shows that FDI does not have a positive effect on reducing unemployment, quite likely because FDI in the respective region is related to the privatization process and consequently foreign investors carry out a restructuring and reorganization of domestic firms.

Thus, the empirical analysis confirms what the majority of the literature on FDI says, that foreign investments generally have positive externalities in the country. Also, the empirical analysis confirmed that countries with qualified human capital attract FDI

and in turn it encourages young people to get a quality education at the same time. An interesting result of this paper is that foreign direct investments stimulate productivity growth in countries before they become part of the European Union. Once they are part of the EU their impact seems to fade away in some cases. This result highlights the need to understand the role of institutions in the impact of FDI in the host countries.

This paper contributes to the debate on the effects of FDI on the economic growth and development of the host country, with Balkan countries as the focal point.

Thus, our paper serves a dual purpose. First, it studies the impact of FDI through the analysis of macroeconomic data. Hence it differs from other studies that measure the impact of FDI at the enterprise level, or country level, however, limited to a small number of countries, being unable to extrapolate its effects on different countries, distinguishing between those who are part of the EU as well as those who aspire to become part of the EU. This is to explain the different ways in which FDI impacts countries with different economic and institutional structure, i.e., to know (understand) whether the effects of FDI are different in countries with different economies and in different stages of integration.

Finally, this paper seeks to provide a correlation between FDI and the long-term economic development of a host country by assessing the impact of FDI on university enrollment and employment. Education is considered to be the key to a country's economic growth in various theoretical and empirical studies. The political implication of this article is: providing incentives to attract only foreign direct investments that complement total investments can increase the productivity of the host country and help its economy to grow as a whole.

References

- Apergis, N., Lyroudi, K., & Vamvakidis, A. (2008). The relationship between foreign direct investment and economic growth: evidence from transition countries. *Transition Studies Review*, 15(1), 37-51, <https://doi.org/10.1007/s11300-008-0177-0>.
- Bartlett, W. (2008) Europe's Troubled Region: Economic Development, Institutional Reform and European Integration, London: Routledge, <http://eprints.lse.ac.uk/32879/>.
- Bartlett, W. (2009). Economic development in the European super-periphery: Evidence from the Western Balkans. *Economic annals*, 54(181), 21-44, <https://doi.org/10.2298/eka0981021b>
- Bevan, A. A., & Estrin, S. (2004). The determinants of foreign direct investment into European transition economies. *Journal of comparative economics*, 32(4), 775-787, <https://doi.org/10.1016/j.jce.2004.08.006>
- Borensztein, E., De Gregorio, J., Lee, J.W. (1998). How does foreign direct investment affect economic growth, *Journal of International Economic*, Vol. 45, Issue 1, 115-135, [https://doi.org/10.1016/S0022-1996\(97\)00033-0](https://doi.org/10.1016/S0022-1996(97)00033-0)
- Brada, J. C., Kutan, A. M., & Yigit, T. M. (2006). The effects of transition and political instability on foreign direct investment inflows. *Economics of Transition*, 14(4), 649-680, <https://doi.org/10.1111/j.1468-0351.2006.00272.x>
- Bruno, G. S., Crinò, R., & Falzoni, A. M. (2012). Foreign direct investment, trade, and skilled labour demand in Eastern Europe. *Labour*, 26(4), 492-513, <https://doi.org/10.1111/labr.12001>
- Buckley, P. J., Casson, M. C. (1976). *The future of the multinational enterprise*, Cambridge, Mass, <https://doi.org/10.1007/978-1-349-02899-3>
- Buckley, P. J., Clegg, J., & Wang, C. (2007). Is the relationship between inward FDI and spillover effects linear? An empirical examination of the case of China. *Journal of International Business Studies*, 38(3), 447-459, www.jstor.org/stable/4540433
- Campos, N. F., & Kinoshita, Y. (2002). Foreign direct investment as technology transferred: Some panel evidence from the transition economies. *The Manchester School*, 70(3), 398-419, <https://doi.org/10.1111/1467-9957.00309>
- Caves, R. E. (1993), Japanese Investment in the United States: Lessons for the Economic Analysis of Foreign Investment, *The World Economy*, Vol. 16, Issue 3, 279-300, <https://doi.org/10.1111/j.1467-9701.1993.tb00168.x>
- Cipollina, M., Giovannetti, G., Pietrovito, F., & Pozzolo, A. F. (2012). FDI and growth: what cross-country industry data say. *The World Economy*, 35(11), 1599-1629, <http://dx.doi.org/10.2139/ssrn.1971172>
- Dunning, J. H. (1977), *Trade location of economic activity and the MNE: A search for an eclectic approach*, in: Ohlin, B., Hesselborn, P.D. and Wijkman, P.M. (ed.), *The International Allocation of Economic Activity*, London, Macmillan, 395-431, https://doi.org/10.1007/978-1-349-03196-2_38
- Estrin, S., & Uvalic, M. (2013). FDI into transition economies: are the Balkans different? In *12th EACES conference and the International Conference on occasion of the 75th Anniversary of the Faculty of Economics, University of Belgrade (Belgrade, 20-22 September 2012)*.
- Findlay, R. (1978). Relative backwardness, direct foreign investment, and the transfer of technology: a simple dynamic model. *The Quarterly Journal of Economics*, 92(1), 1-16, www.jstor.org/stable/1885996
- Girma, S., Greenaway, D., & Wakelin, K. (2001). Who benefits from foreign direct investment

in the UK? *Scottish Journal of Political Economy*, 48(2), 119-133, <https://doi.org/10.1111/sjpe.12023>

Hall, D. (2002), *Albania in Europe: condemned to the periphery or beyond*, in Dawson, A. H. (ed.), *The Changing Geopolitics of Eastern Europe*. Frank Cass, <https://doi.org/10.1080/14650040108407709>

Haskel, J. E., Pereira, S. C., & Slaughter, M. J. (2007). Does inward foreign direct investment boost the productivity of domestic firms?. *The review of economics and statistics*, 89(3), 482-496, www.jstor.org/stable/40043043

Helpman, E. (1984). A simple theory of international trade with multinational corporations. *Journal of political economy*, 92(3), 451-471, <https://www.jstor.org/stable/1837227>

Holland, D., & Pain, N. (1998). *The diffusion of innovations in Central and Eastern Europe: A study of the determinants and impact of foreign direct investment*. London: National Institute of Economic and Social Research, <https://www.semanticscholar.org/paper/The-Diffusion-Of-Innovations-In-Central-And-Eastern-Holland-Pain/31129c01f3ca2743d48f3afb8113841faaa1343c>

Hymer, S. H. (1960). *The international operations of national firms: A study of direct foreign investment*, PhD Dissertation. Published posthumously The MIT Press, 1976 Cambridge, Mass.

Hymer, S. H. (1972), The internationalization of capital, *The Journal of Economic Issues*, Vol.6, Issue 1, 91-111, <https://www.jstor.org/stable/4224124>

Javorcik, B. S. & Wei, S. J. (2000). Corruption and composition of foreign direct investment: firm-level evidence, NBER Working Paper No. 7969, <http://www.nber.org/papers/w7969>

Javorcik, B. S. (2004a). Does foreign direct investment increase the productivity of domestic firms? In search of spillovers through backward linkages. *American economic review*, 94(3), 605-627, <https://www.jstor.org/stable/3592945>

Javorcik, B. S. (2004b). The composition of foreign direct investment and protection of intellectual property rights: Evidence from transition economies. *European economic review*, 48(1), 39-62, [https://doi.org/10.1016/S0014-2921\(02\)00257-X](https://doi.org/10.1016/S0014-2921(02)00257-X)

Jones, G. (1996), *The evolution of international business: an introduction*, Routledge London, New York.

Kersan-Skabic, I., & Orlic, E. (2007). Determinants of FDI inflows in CEE and Western Balkan countries (Is accession to the EU important for attracting FDI?). *Economic and Business Review for Central and South-Eastern Europe*, 9(4), 333, <https://www.bib.irb.hr/327474>

Kindleberger, C. P. (1969), *American Business Abroad*, New Haven, Yale University Press.

Kinoshita, Y., & Campos, N. F. (2003). Why does FDI go where it goes? New evidence from the transition economies, IMF Working Paper No. 03/228, <https://www.imf.org/en/Publications/WP/Issues/2016/12/30/Why-Does-Fdi-Go-Where-it-Goes-New-Evidence-From-the-Transition-Economies-16954>

Knickerbockers, F. (1973), *Oligopolistic Reaction and Multinational Enterprise*, Harvard University Press, Cambridge, MA, <https://doi.org/10.1002/tie.5060150205>

Kostevc, Č., Redek, T., & Sušjan, A. (2007). Foreign direct investment and institutional environment in transition economies. *Transition Studies Review*, 14(1), 40-54, <https://doi.org/10.1007/s11300-007-0140-5>

Lall, S. (2002), *FDI and development: research issues in the emerging context*, in Bora B. (editor) *Foreign Direct Investment Research Issues*, Routledge London, New York, 2002

Lee, B. H. (2002), *FDI from Developing Countries A Vector for Trade and Development*, OECD

Publishing, 31/5/2002

Mitaj, A., Muco, K., & Avdulaj, J. (2016). The Role of Human Capital in the Economic Development and Social Welfare In Albania. *International Journal of Human Resource Studies*, 6(1), 63-72.

Muco, K. (2015). *L'analisi del modello di sviluppo albanese nel periodo post-comunismo: il cambiamento economico e la specializzazione* (Doctoral dissertation, Università degli Studi dell'Insubria).

Nicoletti, G., & Scarpetta, S. (2003). Regulation, productivity and growth: OECD evidence. Policy Research Working Paper Series 2944, The World Bank, <https://ideas.repec.org/p/wbk/wbrwps/2944.html>

Penev, S. (2012). *Economic and European perspectives of Western Balkan countries*. Westminster Foundation for Democracy (WFD).

Popescu, G. H. (2014). FDI and economic growth in Central and Eastern Europe. *Sustainability*, 6(11), 8149-8163, <https://doi.org/10.3390/su6118149>

Pournarakis, M., & Varsakelis, N. (2004). Institutions, internationalization and FDI: the case of economies in transition. *Transnational Corporations*, 13(2), 77-94.

Rodriguez, X. A., & Pallas, J. (2008). Determinants of foreign direct investment in Spain. *Applied Economics*, 40(19), 2443-2450, <https://doi.org/10.1080/00036840701367606>

Rodrik, D. (1999). *The new global economy and developing countries: making openness work* (Vol. 24). Washington, DC: Overseas Development Council.

Sun, X. (2002). How to promote FDI? The regulatory and institutional environment for attracting FDI. *Foreign Investment Advisory Service*, <http://unpan1.un.org/intradoc/groups/public/documents/UN/UNPAN006349.pdf>

Vernon, R. (1966), International investment and international trade in the product cycle, *Quarterly Journal of Economic*, Vol. 80, 190-207, <https://www.jstor.org/stable/1880689>

Zakharov, V., & Kusic, S. (2003, September). The role of fdi in the eu accession process: The case of the Western Balkans. In *etsgs 5th Annual Conference, Madrid* (Vol. 1113).