Cross-sectional analysis of foreign direct investments (FDIs) in Albania

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Abstract

For developing countries, foreign direct investments (FDI) have had and continue to have an important role in meeting the strategic needs of the development of these countries. If a host country offers competitive advantages and untapped resources such as: lower production costs, unexploited natural resources, fiscal and legal incentives, etc., the development potential of FDI in that country will be very high. The main purpose of this paper is to provide an analysis of the performance of FDI with the focus in Albania as part of the Western Balkan. The paper reflects the connections between the macroeconomic indicators (GDP, GDP per capita, total tax rate, the distance between countries, and dummy variables) and the level of the stock of FDI in Albania. In order to explain these connections, it is used a cross-section analysis with a panel data of 21 origin countries of foreign investors in Albania, data are annual time series from 2007 to 2013. Furthermore, to analyze the existence of potential for attracting foreign investors in Albania likewise their concentration referred to economic activities or origin countries, it is used the analysis of Herfindal-Hirshman Index.

Introduction

According to the OECD (2008) foreign direct investment is called a physical investment made by a company or entity, into another country by engaging financial funds or other productive resources. In emerging economies, foreign direct investments (FDI) play an important and multidimensional role for meeting the emergency needs and also the strategic view of the development of these countries. In order to attract investments from foreign investors and

expand their activity in a non-origin country, the host country should have some advantages that can be better used there. The main forms of benefit of these advantages lead to the emergence of foreign direct investments which are: (1) Creation of companies' branch in host countries, instead of export or the use of the licenses. (2) Use of distance and geographical areas (finding the strategic location in the use and exploration). Furthermore, according to these authors, investors expand their activity to exploit international transfers of owners and to use the specific resources of the host countries in relation to competing companies, etc. However, the attraction or not of the foreign investors and foreign direct investment in a host country is still affected from more factors than those mentioned above. If we focus on attracting FDI in the Western Balkan countries, we can list some advantages that these countries have offered and still offer:

- Production costs, especially low labor cost.
- The use of primary natural resources.
- Government's policies and institutional facilities, however, frequently the problem has been the presence of corruption that has deterred foreign investors to be encouraged doing business in these countries, "New Institutional Economics and FDI Location in Central and Eastern Europe" (Grosse and Trevino, 2005, pp.5-6).
- Trade agreements and memberships in common markets.

FDI in the Western Balkans after 1990

During the first post-communist decade of the Western Balkans countries, the level of FDI stocks was very low. In some economies of these countries, FDIs were negligible in relation to gross domestic product. During that time there were still many unsolved problems between these countries. The political environment and moreover geopolitical environment had significant problems and diplomatic aggravated conditions. Non-resident investors classified this region as a high risky one, especially in legal and political terms. On the other hand, as transition countries, countries of the Western Balkans had just entered the path of development and the markets were still not merged. Many researchers in economy think that FDI were and still remain at low levels in Western Balkan countries, especially for those countries that are not members of EU European Union, because of the small domestic markets of some countries and also the distance and the barriers between their markets, compared with many other economies in transition. This fact was noticed significantly compared with other countries of Eastern and Southeast Europe, "Trade in Southeast Europe" (Uvalic, 2006, pp.4).

During the period 2000 – 2008 Eastern European countries (including several Balkan countries) were characterized by economic growth, trade development, macroeconomic stability, market liberalization, improvement of business environment, privatization of many public assets especially in the banking sector, "Foreign direct investment into transition economies" (Estrin, S., & Uvalic, M. 2013, pp.12-14). Until 2007 and early 2008 the Western Balkan countries had an average economic growth of 6.3%. Economic activities especially in the financial services, telecommunications, transport and trade, gave the largest contribution in the economic growth

of this region. In Croatia and Montenegro, the highest economic growth sector was tourism; in the Republic of Macedonia and Albania, the highest economic growth sector was the construction sector, "The Western Balkans in transition" (European Commission, 2009, pp.8-10). However, how much have these developments influenced in attracting foreign investors in these countries and how competitive are they with each other? We will see the answer graphically on the performance of FDI inflows in million dollars and FDI inflows in relation to Gross fixed capital formation, for the Western Balkan countries not members of the European Union as in the graph below:
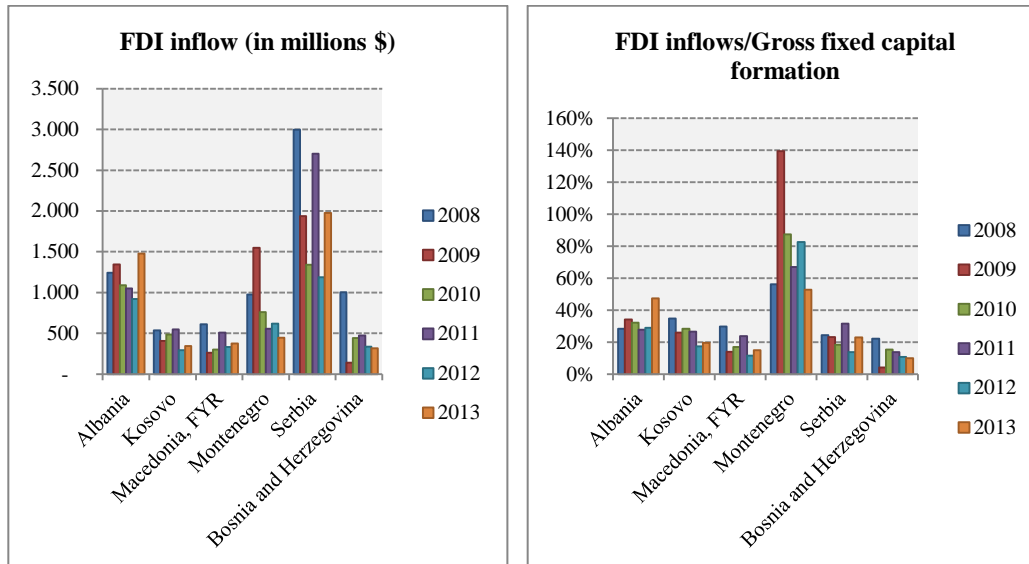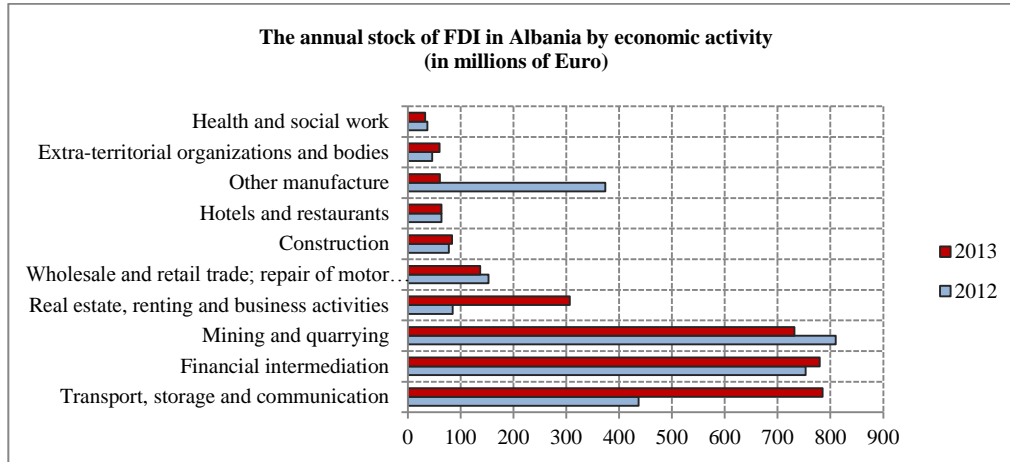

Source: Author's calculations, data World Bank, International Statistical Institute, 2013.

We can obviously see that from 2008 to 2013 the level of FDI inflows has its higher value in Serbia, while this indicator in relation to Gross fixed capital formation in Montenegro has the highest share of foreign direct investment FDI affecting the economy in investments, compared to the entire region.

FDI in Albania and analysis Herfindal - Hirshman Index (HHI)

In Albania, Foreign Direct Investments (FDI) are particularly important for the whole economy, where in addition to promote increasing competition in the market, foreign investments also bring: funding sources for the development of various projects, implementation of advanced technology with high capacity, experience with standards and quality of developed countries, new development potentials, increasing productivity and efficiency in the economy, etc. To identify the focus of the stock of FDI in Albania's economy, it is shown graphically below a comparative analysis for the years 2012 - 2013 as in the graph below. It is visible that the focus

of foreign investors in Albania is on the following activities: (1) financial intermediation, (2) transport, storage and communication and (3) the extractive industry.

**The annual stock of FDI in Albania by economic activity (in millions of Euro)**

Source: Author's calculations with data from publications, Bank of Albania, 2014.

One way to analyze the unequal distribution of FDI (or concentration of FDI) is the use of Herfindal - Hirshman Index, "Foreign direct investment and economic growth" (Ledyaeva and Linden, 2006. pp.6-7). This index will be used to show the distribution of the stock of FDI in Albania. Herfindal - Hirshman Index (HHI) is given by the formula:

$$HHI = \sum_{j=1}^{k} \left(\frac{FDI_j}{FDI} \cdot 100 \right)^2$$

Where: FDI_j is the level of FDI stock by by economic activity j, FDI is the level of total FDIs annual stock and k is the number of countries and economic activities. The calculations of the HHI are made during the period 2007 – 2013 and the results are presented in the graph below. If we look at the value of HHI in accordance with the distribution of FDIs stock in economic activities in Albania, there is sustainability in the concentration of the FDI stocks for the years 2007 - 2013 (except for 2007 and 2013 that have greater concentration than other years). The question is how should we see this consistency, as a positive or a negative fact? If we look at the value of the index for 2010, it shows an average value, which means that we can use this year as a basis in our analysis. In order to answer the question of whether the sustainability of the HHI by economic activities in Albania is a good indicator or not, logically we should know how the year 2010 was in the view of the FDIs distribution by economic activities. According to the Ministry of Economy, "Foreign Direct Investment" (METE, 2010), FDI should be encouraged to develop some economy sectors such as: business services, agriculture and agribusiness, mining and heavy industry, energy, tourism, because these sectors are at much

lower levels than expected. So the HHI sustainability of the FDIs stock under different economic activities in Albania shows that some sectors do not offer real competitive advantages in attracting foreign investors.

HHI (The annual stock of FDI in Albania by economic activity (in millions of Euro))
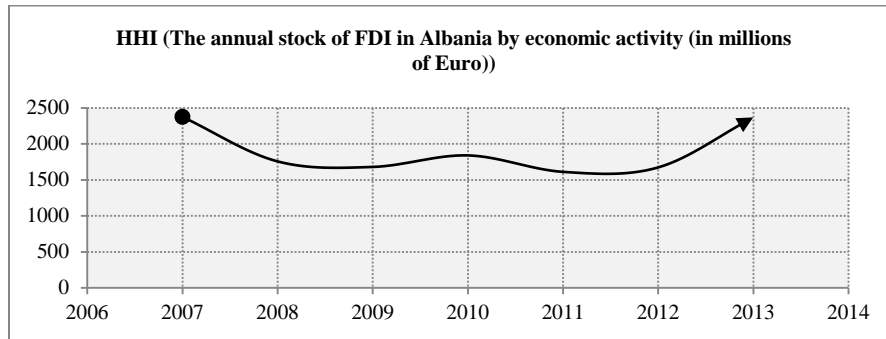
Source: Author's calculations with data from publications, Bank of Albania, 2014.

FDIs in Albania, cross-sectional analysis

Methodology: Analysis of the stock of FDI in Albania is done according to the analysis of panel data, wherein are considered 21 countries with the highest level of the FDI stock in Albania from 2007 to 2013, time series is given annually, hence the panel data analysis obtained 7 * 21 = 147 elements. The countries included in this analysis are: Greece, Canada, Austria, Netherlands, Italy, Turkey, Switzerland, Germany, Kuwait, France, Lebanon, Cyprus, FYR of Macedonia, USA, Bulgaria, Slovenia, United Arab Emirates, Kosovo, Croatia, Norway, and UK. The data on macroeconomic indicators are taken from the *World Development Indices (WDI)* calculated by the World Bank. The level of FDI stocks by country is taken from statistical publications of the Bank of Albania *(www.bankofalbania.org)* and the distance between countries is taken from *CEPII distance database*. Since the dependent variable stock of FDI takes the zero value and negative value, this means there cannot be used a gravity model (not logarithmic forms) and we have built a linear panel model:

$$FDI_{ijt} = b_0 + b_1*DIS_{ij} + b_2*GDP_{it} + b_3*GDP_{jt} + b_4*GDPC_{it} + b_5*GDPC_{jt} + b_6*TAX_{it} + b_7*TAX_{jt} + b_8*D_1 + b_9*D_2 + u_{ijt}$$

Where, *i* shows Albania, *j* - country of origin of the foreign investor, *t* - the time expressed in years. The dependent variable *FDI* is the total stock of FDI in Albania, while the independent variables are: *GDP* is gross domestic product, *GDPC* is GDP per capita, *TAX* is the total tax rate (% of commercial profits), *D1* is a dummy variable that takes the value *1* if Albania and the country of origin of foreign investors have a common border, *D2* is a dummy variable that takes value *1* if the country of origin of the foreign investor is a member of the European Union.

In order to evaluate the parameters b_0, b_1, ..., b_9, it is not used the method of least squares which means minimization of any error term u_{ijt}, but since we use panel data to analyze the effects of cross-section, there will be analyzed two statistical tests: (1) cross-section fixed effects, if the explanatory variable is not casual and (2) cross-section random effects if the explanatory variable is casual.

The results analyses: According to statistical tests, our panel data were used for two tests as in table no. 1:

Table no. 1: The statistical results of the model.

Dependent variable: FDI

Independent variables:	Cross-section fixed effects		Cross-section random effects	
	Coefficient	*Prob.*	*Coefficient*	*Prob.*
b_0 (intercept)	427.3369	0.0650	-103.7881	0.6374
DIS_{ij}	*	*	0.030545	0.2003
GDP_i	-0.124220	0.4739	-0.159841	0.3562
GDP_i	5.53E-06	0.9026	-9.43E-06	0.5130
$GDPC_i$	0.324071	0.4801	0.438709	0.3383
$GDPC_i$	0.004948	0.0517	0.003949	0.0035
TAX_i	3.262591	0.5784	2.968030	0.6124
TAX_i	-14.03605	0.0000	-4.943138	0.0105
D_1	*	*	286.2266	0.0026
D_2	*	*	211.7562	0.0097
Adjusted R^2		0.736287		0.105373
Statistical significance F-test	16.67819	0.000000	2.910723	0.003484

Source*: Authors' calculations on Eviews 7.*

According to the statistical test for fixed effects, we can say that we are interested to find connections of the panel variables that are sustainable by country over time, and if we analyze the results only the variables: GDP per capita of the origin country from which foreign investors came in Albania and total tax rate (% of commercial profits) of the origin country from which foreign investors came in Albania, they have statistically significant relation with fixed effect in time. GDP per capita has a positive relation with the stock of FDI while the total tax rate has negative relation with the stock of FDI. Economically, we can say that when GDP per capita is higher in the origin country of the investor than GDP per capita in Albania, there is a greater possibility of increasing the stock of FDI from this place in Albania. While the relation of the total tax rate with stock of FDIs according to the economic principle do not explain by model.

According to the statistical test for random effects, we can say that we are interested to find connections of the panel variables that are obtained as event case. If we analyze the results, the variables that are statistically significant according to fixed effects are even significant with

random effects (with the same side connection), as well as dummy variables D_1 and D_2 are statistically significant and with positive relationship. This means that the level of FDI stock in Albania depends on the fact that either the foreign investor comes from a neighboring country (from land or sea) with Albania, or the foreign investor comes from an origin country that is member of the European Union. Although *adjusted R^2,* which shows the relation of explanation of the dependent variable from independent variables, accepts fixed effects model as the best model, according *Hausman-test* the most appropriate model is the one with random effects.

Conclusion

Foreign direct investments (FDIs) in the economies of developing countries have a significant impact in fulfilling strategic needs of the development of these countries. In Albania's economy FDIs are particularly important investments in the development of the economy, because foreign investments bring: sources of funding for the development of various projects, the implementation of advanced technology with high capacity, experience and quality standards of developed countries, new development potentials, increased productivity and efficiency in the economy, etc. However using Herfindal - Hirshman Index shows a concentration of the stock of FDIs in less economic activities: financial intermediation, transport, storage and communication, other sectors does not offer real competitive advantages in attracting foreign investors.

In our study we analyzed a relationship Cross-sectional panel data to analyze the fixed effects and random effects on the stock of FDIs in Albania. We have analyzed 21 states that have the highest level of the stock of FDIs in Albania, with time series of data from 2007 to 2013, according to this study we say that the indicators that have sustainable impact in time, the stock of FDIs is economic indicator GDP per capita of the country of origin of foreign investors in Albania. Variables with random effected to the stock of FDIs in Albania are: GDP per capita of the country of origin of foreign investors; if the foreign investor comes from a place of origin which is the border (land or sea) with Albania; if the foreign investor comes from a place of origin is a member of the European Union.

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