

DETERMINANTS OF FOREIGN DIRECT INVESTMENTS IN ROMANIA

Empirical
Study

Keywords

Foreign direct investments
Determinants
Cross-country study
OLS method

JEL Classification

C21, F60, F21

Abstract

Foreign direct investments have known an increased importance in the worldwide economy. Theoretical approaches highlight the positive externalities foreign direct investments generate in the beneficiary economy through different channels. The aim of this paper is to emphasize, based on an econometric analysis using data for Romania, the fundamental determinants of foreign direct investments attractiveness. The analysis will be followed by the recommendations for increasing the inflows in our country and measures to enhance their effect in the national economy. Further analysis will be developed focusing on the emerging countries from Europe using a panel technique.

1. Introduction

During the era of globalization, foreign direct investments (FDI) have gained an increased key role in the beneficiary economies. The process of globalization has enhanced the interdependencies between worldwide economies, leading to rapid integration of production and financial markets.

In this framework, FDI have become major coordinates of globalization, stimulating the economies' development.

FDI inflows have become an important catalyst for achieving higher rates of economic growth, improving the standard living of the countries. Their long – term feature and stability, by contrast to foreign portfolio investments, transform these foreign flows into major vectors of economic development. Political and macroeconomic stability, as well as transparent legal regulations concerning foreign ownership and profit repatriation are all important determinants of foreign investment decision making (Demekas, et. Al. 2005, Resmini, 2000).

The present paper is structured as following: in the second section, we present the determinants of FDI inflows – theoretical perspective, the third part presents the econometric model, data and the methodology used. The forth part of the paper is dedicated to results and discussion, meanwhile the last one present the main conclusions.

2. Determinants of FDI – theoretical framework

FDI have been generally recognized as key factors for economic development. Policy makers, economic and financial institutions focus on developing the strategies which will increase the volume of FDI inflows.

However, it is mandatory to identify which are the host country characteristics that increase its degree of attractiveness? On one side, it is very important to identify the economic sectors and activities which are the most important destinations of foreign flows and contribute to economic growth. On the other side, policy makers must search for the reasons why in some economic activities or geographic regions the FDI inflows have a very reduced volume and concentrate on developing the appropriate strategies and tactics through which the situation can be improved.

Previous empirical and theoretical studies appreciate that FDI inflows accross different countries are determined by two mai explanatory factors: gravity factors (proximity, market size) and factor endowments (infrastructure, human capital) (Mateev, 2012).

Past theoretical and empirical papers focusing on the motivational factors for foreign investors have revealed that the degree of openness will exert a significant and important impact on the volume of FDI. Openness is often used as a proxy value for trade liberalization and increased interdependencies

between economies, emphasizing as well a higher propensity from multinational firms to export. (Falk, Hake, 2008).

The beneficiary country's attractiveness is highly influenced by the main features – macroeconomic and socio-political indicators. Good infrastructure is often considered a pre-condition for achieving a higher rate of economic growth through the volume of FDI inflows.

Infrastructure development represented an important determinant of FDI inflows, especially in Central and Eastern European countries, during their transition process to market economy. Demekas (2007) carried out an analysis on the FDI determinants in CEEC, using as a proxy for infrastructure the indicator developed by the European Bank for Reconstruction and Development, which reflects the state of regulation of infrastrucre services. Their fidings highlight the importance of this indicator in less developed economies, meanwhile in the developed economies it becomes insignificant.

FDI inflows are motivated by the internal conditions and foreign investors place their investments in countries which have macroeconomic stability, are not affected by the worldwide volatilities and risks.

As well, Bellak et. al (2009), using principal component analysis accross telecommunication, electricity and transport production facilities to derive an overall infrastructure index and find a positive correlation with FDI.

Macroeconomic determinants of FDI attractiveness are GDP growth or GDP per capita, which are often used as a proxy for market size. FDI in emerging market countries are increasingly being undertaken to service domestic demand, rather than to tap cheap labor.

Policy makers and national institutions develop important startegies to increase the volume of FDI inflows. In this context, the stability of the political environment, a s well he conditions that support physical and personal security, are an important benchmark used for assessinf the likelihood of these adverse changes in the investment climate.

Foreign investors are often concerned by the corruption degree and the governance degree and how their businesses will be affected.

The degree of corruption and level of governance strongly influence the investment prospects. Financial incentives and tax regimes play a key role in attracting FDI.

Recent economic and financial crises, as well as worldwide turbulence have drown attention on increased regulatory and legislative framework, enhancing the investors' uncertainty in the market efficiency. The stability of the legal environment, the certainty that the investment contracts are respected, is creating an appropriate environment for attracting increased FDI inflows.

Frenkel, Funke, and Stadtmann (2004) have studied the determinants of FDI inflows in emerging economies, using data set of bilateral FDI flows. Their objective was to investigate both home and host country motivational factors, highlighting which exert an influence on the foreign capital flows destination. The findings have shown in the selected economies that distance and internal features have a major importance in the volume of FDI in flows, the most relevant pull factor being the economic development degree (GDP growth rate), the extend of risk and market size.

The analysis implemented by Bevan and Estrin (2004) in developed Western and transition economies has revealed that labor cost, the size of the economies and distance are the main determinants of these countries attractiveness. By contrast to our case studies, their analysis has demonstrated that country risk is not affecting the volume of FDI inflows.

During the past decades, many papers and researchers have focused their attention on identifying the ways through which policy makers might increase their country inflows. Using various and modern econometric techniques, the results aim at emphasizing which are the main features influencing the FDI level in certain economies: Uygur (2005) implemented an analysis in Turkey using a VAR. In developed economies, with high degree of openness and low country risk are more successful in attracting FDI.

The conclusions on what are the key determinants of FDI inflows in several economies are far from unanimous. Using various variables, the results are controversial: some studies have shown the existence of a significant and positive relation between the indicators (Mhlanga et al., 2010; Vijayakumar et al., 2010), meanwhile others have not succeeded in finding a positive connection between infrastructure and FDI (Cleeve, 2008; Mohamed and Sidiropoulos, 2010).

Increased market volatility and higher risks have caused negative effects on the dynamic of FDI inflows in both developed and developing economies. Higher inflation rates have become an impediment to FDI flows (Botri and Škufli, 2006).

The aspects regarding the FDI inflows and the country risk of the beneficiary economy are not very straightforward. Despite the overall perspective that increased risk leads to lower foreign capital inflows, Mhlanga et. al. (2010) have shown that higher risk countries attract more FDI.

This situation is explained by the fact that these economies have its vast endowments of natural resources (oil and natural gas, for example).

3. Econometric analysis - data and methodology

FDI are considered development vectors and important catalysts in our countrys path to economic development.

Starting 2000, Romania has attracted an increased volume of FDI, sometimes higher than other countries in Central and Eastern Europe; however, by contrast to these countries, Romania has not succeeded in achieving a higher rate of economic development and to ensure the welfare of the economy.

The dynamic of FDI inflows and GDP growth rate is presented in figure 1.

The figure above emphasizes the interdependencies between FDI inflows and GDP growth in Romania. Starting 2000 till 2004 Romania has known an ascending trend of FDI inflows, stimulating economic development of our country. The dynamic of the two indicators highlights oscillatory trends till 2007, when FDI inflows reached the highest value. The economic and financial crisis has had a negative influence both on FDI flows and GDP growth rate.

According to the Romanian institution in charge with FDI, FDI volume in our country is mainly influenced by the internal features: low labor cost per unit, skilled workforce, the availability of natural and material resources, high development potential.

The aim of our paper is to investigate which are the determinants that enhance the attractiveness of our country, highlighting the interdependencies between the selected variables. We have selected from World Bank data base the following variables, over the period 1995 – 2013: FDI, inflation, GDP growth rate, unemployment rate and trade openness (as a % of GDP).

4. Results and discussion

We perform an econometric analysis to investigate the extend to which the inflows of FDI, as a dependend variable is influenced by the other selected variables.

We have included in our study the inflation, in order to emphasize the impact that macroeconomic volatility and vulnerability exerts on the dynamic of FDI volume.

First, we perform the Augmented Dickey - Fuller test, to determine if the selected variables are stationary at level and if not, at first or second difference. The results of Augmented Dickey – Fuller test are presented in the table 1 in the Appendices These highlight that all selected variables are stationary at first difference, except the inflation rate which is stationary at level.

The regression equation we have constructed has the following form:

$$FDI = f(GDP, Trade, Infl, Unemploy)$$

In Eviews we have tested the regression equation using OLS method to determine the existence of

any correlation between selected variables. The results of the OLS method are presented in table 2.

The results above obtained in Eviews emphasize the presence of a positive correlation between FDI inflows and GDP growth in Romania. The finding confirms the theories and is in line with previous researches which sustain that FDI inflows are an important catalyst for economic development.

However, the results demonstrate also the positive direct correlation between FDI inflows and trade openness, for a level of significance of 5 %. During the era of globalization, the national markets have increased the interdependencies between the economic and financial markets. These phenomena have led to increase both in commercial flows and FDI inflows, being favourable for achieving long term economic development.

The correlation between FDI inflows and inflation rate is negative, for a 5 % level of significance. This demonstrates the impact exerted by the macroeconomic instability (especially, during times of crises) on the volume of FDI inflows.

The analysis carried out in this study was not able to determine any relation between FDI inflows and the unemployment rate in Romania. However, many researchers, theoretical and empirical studies have sustained that FDI inflows determine an increase in the employment percentage and stimulate the job occupancy by creating new labour opportunities.

5. Conclusion

During the era of globalization, FDI are an important vector in achieving high and sustainable economic development. Relevant theoretic and empirical studies have been carried out using divers econometric techniques (time series, cross-country studies, panel analysis) to determine which are the most important factors influencing the volume of FDI inflows in a certain country or region.

The aim of the current paper was to investigate the existence of a positive or negative correlation between FDI and independent variables selected. The results have confirmed that FDI is positively influenced, at a 5 % level of significance, by the GDP growth rate and the trade volume.

However, the inflation rate exerts on FDI inflows in Romania a negative influence. Foreign investors are attracted by the presence of national economic environment stable, resilient to external shocks (such as financial worldwide crises) which my negatively influence the businesses they develop in the beneficiary country and the expected benefits. Further analysis will be developed focusing on the emerging countries from Europe using a panel technique, investigating as well the

interdependencies between FDI inflows and the unemployment rate.

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Appendices

Table No. 1
Table Augmented Dickey – Fuller Test results

Variable	Level (Prob.)	1st difference (Prob.)*
FDI	-2.2277375 (0.1940)	-4.199510 (0.0088)
GDP_gr	-2.621059 (0.1137)	5.273656 (0.0016)*
Unemployment	-1.949389 (0.3023)	-5.196152 (0.0023)*
Inflation	-3.915790 (0.0140)*	
Trade	-1.496285 (0.5036)	-3.365862 (0.0348)*

Note: made by author, using Eviews
**stationary at 5 % level of significance*

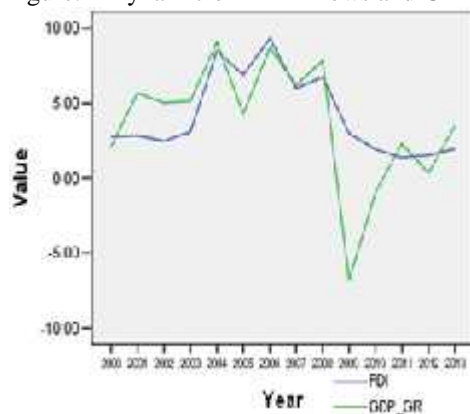
Table No. 2
Table Ordinary Least Square results

Dependent Variable: FDI
 Method: Least Squares
 Sample (adjusted): 2000 2012
 Included observations: 13 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INFLATION	-0.136870	0.042197	-3.243566	0.0118
LN_TRADE	0.343893	0.109289	-3.146643	0.0137
LN_UNEMPLOYMENT	0.770104	0.841336	0.915334	0.3868
LN_GDP_GR	0.616043	0.113877	5.409740	0.0006
C	25.13770	8.165023	3.078705	0.0151
R-squared	0.795214	Mean dependent var		4.359231
Adjusted R-squared	0.692821	S.D. dependent var		2.757778
S.E. of regression	1.528463	Akaike info criterion		3.970125
Sum squared resid	18.68959	Schwarz criterion		4.187413
Log likelihood	-20.80581	Hannan-Quinn criter.		3.925462
F-statistic	7.766304	Durbin-Watson stat		1.330906
Prob(F-statistic)	0.007353			

Note: made by author, using Eviews

Figure. 1 Dynamic of FDI inflows and GDP growth



Source: made by author