

Foreign direct investment and economic growth in Romania

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Abstract. *FDI issue was and is heavily debated, therefore, in this area there are concerns both at nationally and internationally level. With the hypothesis that large flows of foreign direct investment determines a number of benefits for the economy of recipient country, in recent years, global FDI flows rose eminent. This paper illustrates the trend of FDI, their structure and evolution, thus anchoring our economy among other European countries in terms of volume of FDI attracted.*

Keywords: economic growth; foreign investment; gross domestic product.

JEL Codes: E22, E27.

REL Codes: 8E, 10F.

1. Introduction

Discussion on foreign direct investments in academia, but also in political and public environment associates capital flows with a number of favorable results for welcoming countries. Thus, foreign investment becomes the essential engine of economic development strategy and modernization, of income growth and employment, especially for developing countries, emerging and in transition economies.

Increased attention to foreign direct investment is justified by the fact that they are seen as the main factor of stimulating the economic growth. They are part of the financial flows class that do not generate external debt and are considered as a complement to domestic investment, and also a significant funder of the current account deficit. Thus, it is clear that foreign direct investment is preferable to other sources of capital, taking into account that capital outflows involved in – repatriation of profits – depend on the economic results achieved by answering the specific interests of the investor and the state interested in growth. Worth mentioning are the indirect effects that FDI manifest in the local economy, for example, boosting human capital formation, technological externalities, access to foreign markets. These are listed in the new growth theory as a driver of economic growth in the long term. Researchers turned their attention to the link between FDI and economic growth, a number of empirical studies aiming if investments positively influence growth. They suggested that the positive relationship is influenced by certain economic conjuncture.

Within this theme, I will try to highlight the role and effects of foreign direct investment, our country necessity to attract foreign direct investment, which has a significant influence on the modernization of the Romanian economy. I think that attracted investments should be directed towards those sectors that contribute to sustainable economic growth – agriculture, tourism, manufacturing – and not towards speculative sectors such as real estate or retail.

2. Literature review

International Monetary Fund defines foreign direct investment as a “long-term investment relationship between a resident entity and a non-resident entity, which implies that the investor exerts a significant influence in the management of the investee company. Are considered direct investment: share capital and reserves accruing to an investor who owns at least 10% of the share capital of a company, credits between the investor and the enterprise in which he invested and reinvested profit”. According to the authors Bird, Rajan (2002), foreign

direct investment have horizon for a long time and they are more stable and have a limited mobility, representing more than simply a transfer of capital.

Over the years, there have been a number of empirical studies which have shown that between high levels of GDP and FDI flows there is a positive link, but this link is not available in all regions. It is necessary to remember that the impact of FDI depends to a large extent on economic conditions in the host country, the level of saving and investing in the receiving country, how that investment enter in the economy – whether in the form of new investment greenfield type or form of mergers or acquisitions, but also country's ability to govern foreign direct investment.

In the neoclassical model, FDI contributes to economic growth by increasing investment volume and increase their efficiency, while in the endogenous model foreign direct investment improves the dispersion technologies from developed economies towards recipient countries (Borensztein et al., 1998).

Authors such as Borensztein, De Gregorio and Lee (1998) consider that FDI has a positive growth effect when the receiving country has a labor category with a high level of education, being able to exploit spillover effects that FDI involves. Thus, a higher level of human capital skills may induce higher rates of growth at a given level of FDI (hypothesis supported by their empirical results). The authors state that countries may require a minimum level of human capital to achieve positive results in FDI.

Instead, Blomström, Lipsey and Zehan (1994) do not consider that the level of education would be crucial juncture, they advocate for the idea that FDI has a positive effect only if the host country is sufficiently rich.

Bengo and Sanchez-Robles (2003) argue that FDI is positively correlated with economic growth, but they call into question the fact that host countries need human capital, economic stability and liberalized markets in order to benefit the effects of flow FDI on long-term. In turn, Alfaro (2003) reinforces the hypothesis that FDI promotes economic growth in economies with sufficiently developed financial markets.

In 2000, Carkovic and Levine arrive at the same conclusion, but Balasubramanyam, Salisu and Sapsford (1996) note that the liberalization of trade is crucial for achieving positive effects of FDI. The study conducted by Balasubramanyam (1996) reached significant results, which are based on the assumption that FDI is more important for economic growth in countries promoting exports than in those that encourage imports. In other words, the impact of FDI varies depending on the specific of the country and the trade policy can affect the role of FDI in economic growth.

The table below provides a summary of studies on the causal link between FDI and economic growth:

Table 1

Foreign direct investment and economic growth

Authors	Aim of the research	Results and conclusions
Bloomstrom, Lipsey and Zejan (1994)	Effects of FDI on economic growth	positive, but depends on income per capita in the host country
Balasubramanyam, Salisu and Sapsford (1996)		positive effect if the country has an export-oriented strategy and negative for import substitution strategy oriented
De Mello 1997		positive, for high-income countries
Borensztein, Gregorio and Lee (1998)		positive, but depends on the level of education
Bosworth and Collins (1999)		positive
Carkovic and Levine (2002)		positive, if the economies have financial markets highly developed
Bengoa and Sanchez-Robles (2003)		positive, but depends on the economic conditions of the host country
Alfaro(2003)		the effect depends on sector of investment: positive for industry, negative for primary sector and inconclusive for the service sector
Hansen and Rand (2004)		positive effect
Kholdy and Sohrabian (2005)		no effect

Source: own processing.

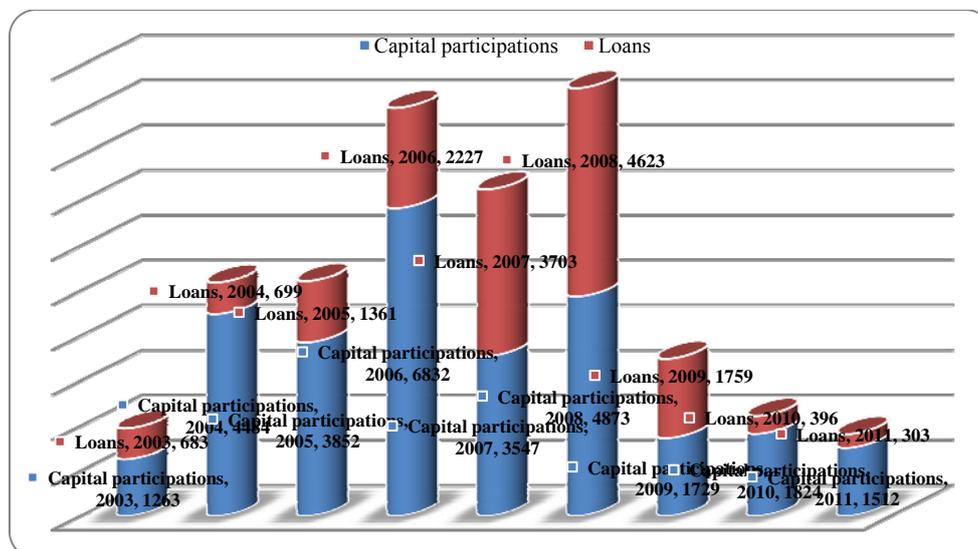
Previously presented studies highlight the importance of certain conditions for FDI to have positive effects: a minimum level of technology and macroeconomic stability, favorable business environments, a certain level of education, even in sectors where investments are held may influence the relationship FDI – growth. Analysis of the effects of FDI on economic growth cannot be considered complete, there is no universally conclusion accepted. Different results obtained in specific countries are influenced by a number of factors examined, analyzed periods, economic and technological conditions of the host country. But in general we can say without any doubt that FDI creates and develops business, encourage employment. As mentioned earlier, when it is approached the connection foreign investment – growth, we assumed that investments are those that affect growth. Specialists consider that macroeconomic results achieved in periods of economic expansion are influenced by the size of investment flows attracted in that period. 60's – twentieth century marked the most intense periods of foreign investment activity and coincided with the sudden increase of macroeconomic indicators, especially GDP. In France, England, USA, GDP grew between 1966 and 1970 by 25-30% and even 40% in Japan. In the case of developing countries, in 1970-1980, GDP grew annually by 10.1% in South Korea, 9.5% in Egypt, 8.2% in Singapore and Brazil. In the 80-90 decade, GDP grew annually by 10.2% in the Czech Republic, South Korea – 7.6%. Between 1990-1995, in the midst of globalization, economic growth rates in countries that have attracted a

considerable volume of FDI were greater: China – 12.8% annually, Malaysia and Singapore – 8.7%. But this is not always the case. The best example is our country, which, although recorded high growth rates, this was not attributed to the level of FDI attracted, since in 2005, the share of FDI in GDP was around 24.2% (below the EU average, 31.7%).

3. Dynamics of FDI and GDP in Romania during 2003-2011

Romanian business environment requires economic freedom and friendly taxation to entrepreneurs and especially for foreign investors. Among countries of the world was developed a fierce competition to create favorable conditions for attracting foreign direct investment. Thus, international experience has shown that the main condition for attracting foreign investors is improving the investment climate.

When referring to the dynamics of FDI in Romania, we can say that since 2003 they recorded a positive trend. This is explained primarily due to increased FDI flows from the EU to Romania (Romania was approaching the adherence moment), but also due to the economic performance of our country. This increase can be explained by the fact that foreign investors viewed profit opportunities, relatively large, in the Romanian economy, either as greenfield investment or through acquisitions – mergers. In the chart below it is shown the evolution of FDI flows during 2003-2011:



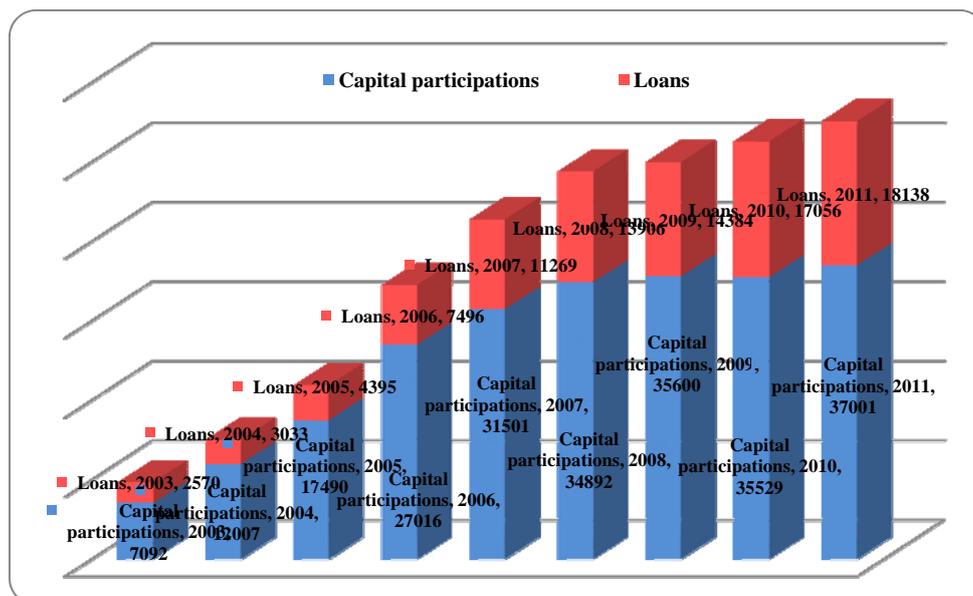
Source: own processing based on data provided by NBR

Figure 1. Evolution of FDI inflows during 2003-2011 (EUR million)

Evolution of annual FDI flows (capital participation and loans) in Romania between 2003-2011 can be divided into the following subcategories:

- 2003-2006: during this period the total flows of FDI registered a steady growth from 9,059 million Euros to 1.946 billion Euros, increased by 78.51%. The positive trend was due to large privatizations registered in Romania in banking and industrial sectors (oil and petrochemical, metallurgy, machine building);
- 2007-2008: privatization in the banking sector continued, and 2008 marks the maximum amount of FDI attracted in Romania, their value being 9,496 million Euros;
- 2009-2011: FDI volume has known a dramatic drop compared to previous years, reaching 1,815 million Euros at the end of 2011, this decrease being due to the impact of economic and financial crisis.

In the next graph it is shown the evolution of FDI balance during 2003-2011:



Source: own processing based on data provided by NBR.

Figure 2. The evolution of FDI balance during 2003-2011 (million euros)

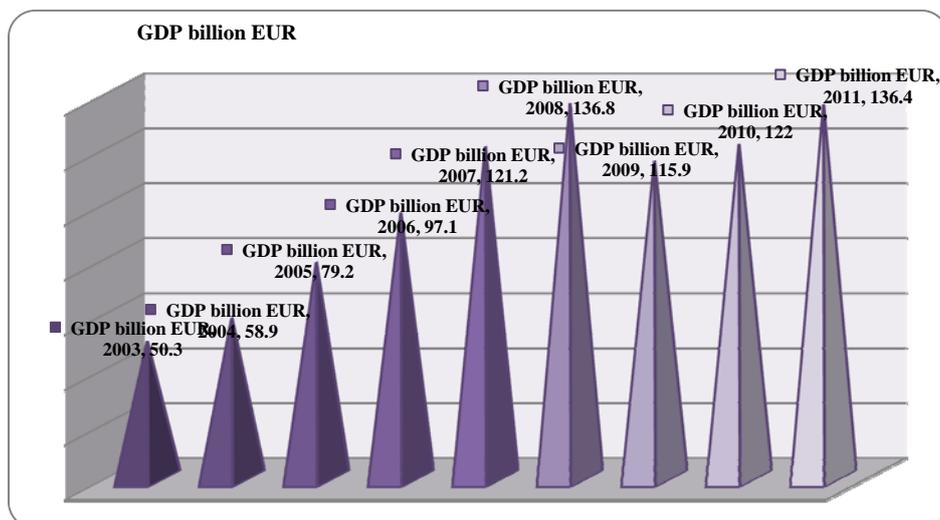
Throughout the period under review, 2003-2011, there is a continuous increase in foreign direct investment balance, but since 2008, when economic and financial crisis was felt on the Romanian economy, we can notice that the balance of cumulative FDI increases very slow. Also, it can be seen that loans increased during the period, indicating a negative situation, leading to the idea

that foreign companies have significantly reduced or even suspended their net investment income realized, since some of these companies were significantly affected by losses.

At the end of 2011, the balance of foreign direct investment reached 55.139 million Euros, 4.9% more than the balance of the previous year. According to information provided by the National Bank of Romania, foreign direct investment has been directed towards areas such as manufacturing (31.5% of total), financial intermediation and insurance (18.2%), trade (11.4%), construction and real estate (10.7%), information technology and communications (5.4%). In terms of country's origin, first four positions are occupied by the Netherlands (21.7% of total FDI stock at the end of 2011), Austria (17.5%), Germany (11.4%) and France (9.1%), unchanged positions since 2009.

Regarding the content of economic growth there have been emerged a variety of views leading to a series of definitions of it. Growth expresses those changes that occur in a given time horizon in a certain space, resulting in increasing size of macroeconomic results, in conjunction with the factors influencing its size, including economic and social environment in which it occurs. This can be measured through synthetic indicators that are significant in assessing a country's economic growth. Best measure of economic growth is GDP.

The following chart illustrates the upward trend of this indicator over the entire period analyzed, 2003-2011:



Source: own processing based on data supplied by NIS.

Figure 3. Evolution of GDP in the period from 2003 to 2011

This macroeconomic indicator has known an impressive growth during 2003 – 2008. 2008 represents the year when the GDP amounted reached 136.8 billion euros, the maximum value, a period which coincided with the increase of foreign direct investment. Since 2009, both variables decreased significantly, as a consequence of the financial crisis that affected the whole world.

Economic recovery in 2011 is due significantly to the sector of industry, exports and agriculture. Relative low increases of workload occurred in areas such as construction, trade, hotels and restaurants.

4. The impact of FDI on economic growth

In order to analyze the influence of FDI on economic growth in the period 2003-2011, we used an econometric modeling using E-views 7.1 software. Thus, I will follow the relationship between FDI and GDP, where FDI represents the independent variable and GDP is considered the dependent variable.

Table 2

Economic indicators used during the econometric study (billion Euros)

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011
FDI	9.66	15.04	21.88	34.51	42.77	48.79	49.98	52.58	55.13
GDP	50.3	58.9	79.2	97.1	121.2	136.8	115.9	122	136.4

Source: own processing.

The econometric model used to determine the influence of FDI on economic growth in the period 2003-2011 involves using a simple linear regression : $Y = \alpha + \beta \times X + \varepsilon$, where:

Y = dependent variable, meaning PIB;

α = free term;

β = independent variable parameter;

X = independent variable, meaning ISD;

ε = error term of equation.

Below are the results of the calculations based on program EViews 7.1.

Table 3

Parameter estimation obtained in E-views

Dependent Variable: PIB

Method: Least Squares

Date: 11/21/12 Time: 12:58

Sample: 2003 2011

Included observations: 9

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	34.72487	6.625917	5.240765	0.0012
ISD	1.832232	0.165065	11.10007	0.0000
R-squared	0.946241	Mean dependent var		101.9778
Adjusted R-squared	0.938562	S.D. dependent var		32.46266
S.E. of regression	8.046451	Akaike info criterion		7.201469
Sum squared resid	453.2177	Schwarz criterion		7.245297
Log likelihood	-30.40661	Hannan-Quinn criter.		7.106889
F-statistic	123.2115	Durbin-Watson stat		1.808076
Prob(F-statistic)	0.000011			

Consequently, the regression equation becomes:

$$\text{PIB} = 34.72487 + 1.832232 \text{ ISD}.$$

The value of the correlation coefficient between the two variables, $R = 0.946241$ is close to a value of 1, which indicates that between GDP and investment values there is a strong correlation, meaning that if there is a increase in the value of investments, there is also an increase in GDP.

Adjusted coefficient of multiple determination ($R^2 = 0.938562$) reveals that 93.95% of GDP is influenced by the value of investments. Since credit worthiness indicators have values close to 1, we can say that the simple regression model was well chosen.

Because $F = 123.2115$, and Prob (F-statistic) is 0.000011 (a lower value than 0.05) this model is considered to be valid.

Estimated coefficient for FDI is properly considered (accepting the null hypothesis) and has statistical significance, the t-statistic value (11.10007) is well above the critical one and standard error values are small (0.165065).

Durbin Watson statistic test is a statistical test that reveals the first-order correlation between errors. If the value of DW is around 2 (in our case $DW = 1.80$) then the errors are not correlated.

5. Conclusions

Thus, although the number of statistical observations is relatively small, we appreciate that the model constructed is representative to illustrate, at the macroeconomic level, the link between foreign direct investment and economic growth. Regarding the time period considered, the change in FDI inflows has a moderate impact on changes in the level of economic growth.

The phenomenon studied, namely the impact of FDI on GDP, considered the best indicator that characterizes growth causes a positive relationship between these two macroeconomic indicators. Thus, GDP is sensitive to changes that may occur over a period of time, but growth depends to a large extent on foreign investment flows.

Beyond the initial macroeconomic impulse, FDI has a positive impact on economic growth, improving the total productivity and, more generally, effectiveness of resource use in the recipient economy. Many experts have said that the Romanian authorities have not conducted enough activities to attract foreign investors and the large investment that our country has managed to attract during 2006-2008 was due to favorable conjuncture related to the European Union adherence. According to data published in a report by UNCTAD on the value of investments attracted, Romania ranked 10 at the end of the year 2010 and the largest share of this investments were held by greenfield investments.

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