

THE EXTENT TO WHICH DEVELOPING COUNTRIES ARE INVOLVED IN INTERNATIONAL FINANCIAL FLOWS AND THE MAIN EFFECTS ON ECONOMIC DEVELOPMENT

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Abstract:

Foreign direct investments are an important factor for economic growth and development. Throughout time, the source and destination of foreign direct investments have undergone significant changes and thus, starting with the 2000's there has been an increasingly more global involvement of developing countries in the global flow of foreign direct investments. These countries are currently accountable for more than a quarter of the global outward FDI flows and for almost half of the total global inward FDI flows.

In light of the changes that have occurred worldwide after the global financial crisis, the economic policy measures tend to vary from encouraging FDI's to limiting them. If some countries see FDIs as an important factor for economic growth and global expansion, others only perceive the strong competition from foreign companies, which can lead to a loss of control over domestic capital. At the same time, as the North-South disparity faded, there is evidence that developing countries have become more involved in international financial flows during the past few years.

In order to highlight this issue, we have analysed the existing data for a period that has seen a strong financial integration of emerging markets and a decreased volatility of financial flows in advanced industrialised countries (1970-2013). We will particularly approach the relationship between economic growth and international capital flows, with specific reference to foreign direct investment flows (FDI).

Key words: international capital flows, foreign direct investment flows, financial crisis, economic growth

JEL classification: G12, G01, G15

1. THEORETICAL BACKGROUND ON THE RELATIONSHIP BETWEEN FOREIGN DIRECT INVESTMENTS AND ECONOMIC GROWTH

There are certain research studies that have either revealed the presence of a negative causality relationship or haven't succeeded in identifying a positive relationship between inward foreign direct investments and economic growth. [9]

Despite the positive relationship between FDIs and economic growth, empirical studies also show the negative associations between the two. Theoretically, FDIs can cause both positive and negative contagion effects on the recipient country. This standpoint is supported by dependency theorists who say that the dependency upon foreign direct investments tends to create a negative impact on economic growth and the distribution of income. The presupposition behind the dependency theory lies in the fact that an economy that is controlled by foreigners will not develop normally but rather evolve in a disorganised manner. This occurs due to the multiplication effect, which shows that the elasticity of the demand between the two sectors is not unitary, thus causing stagnant growth rates in developing countries. [2] Dependency theories also state that giant foreign players can create a negative effect on the growth and development of local companies in the recipient country in the long term, as the former hold a large proportion of capital, better technology, increased access on certain markets, advanced marketing networks and much better managerial abilities.[6] [3] This situation could be even worse for the new companies on the market that have limited resources, as they might find themselves unable to compete with multinational corporations (CMN). Moreover, this unequal competition could even lead to the disappearance of these small local companies. Similarly, FDIs tend to create a monopoly industrial structure that could lead to the "underuse of the productive work force".[4] According to dependency theories, FDIs can also have a negative impact on employment, the distribution of revenue, sovereignty and on the autonomy of a country.[7] FDIs can also have a negative influence on the position of a

country's balance of payments if the raw materials needed for production are largely imported.[7] Moreover, a country's financial stability could be affected due to the diminishing currency reserves when its profits and capital are repatriated. Thus, dependency theories argue that FDIs do not generate economic development but rather impair the development process. [1]

This confusing theoretical and empirical proof related to FDIs and economic growth lead us to believe that FDIs are country specific and they can be positive, negative or insignificant, depending the economic, technological and organisational circumstances of a country benefitting from foreign direct investments.

2. ANALYSIS OF THE RELATIONSHIP BETWEEN FOREIGN DIRECT INVESTMENTS AND THE GROSS DOMESTIC PRODUCT PER CAPITA IN DEVELOPING COUNTRIES

The purpose of the present research is to analyse the relationship between foreign direct investments and the economic growth of the group of developing countries during a period of time when most countries in the world have faced a high level of financial integration. In order to reach the said objective, we shall resort to the econometric analysis of the available data provided by the UNCTAD data base, for the period 1970-2013, concerning the evolution of the two indicators: foreign direct investment flows and the gross domestic product per capita for the group of developing countries. In order to measure the correlation and the dependency between the two variables under consideration, we will use the SPSS 22 statistical programme.

On a global level, the GDP per capita in transition economies is twice as high as the one in developed countries. Things are, however, different, if we consider the total GDP, as transition economies (less numerous in terms of population) have a total GDP that is lower than the one of developed countries. Therefore, we believe that the GDP per capita is a more relevant indicator than the total GDP, for comparisons concerning the economic development of one particular country.

The analysis of the relationship between inward foreign direct investments and the GDP per capita can be conducted by means of the graphical method, the regression method or the correlation method. These methods enable us to identify the relationship, its purpose and type, as well as determine the intensity of the relationship between the two variables under consideration.

The graphical representation in a dual axis system of the GDP and of the inward FDI flows is depicted in Figure no. 1.

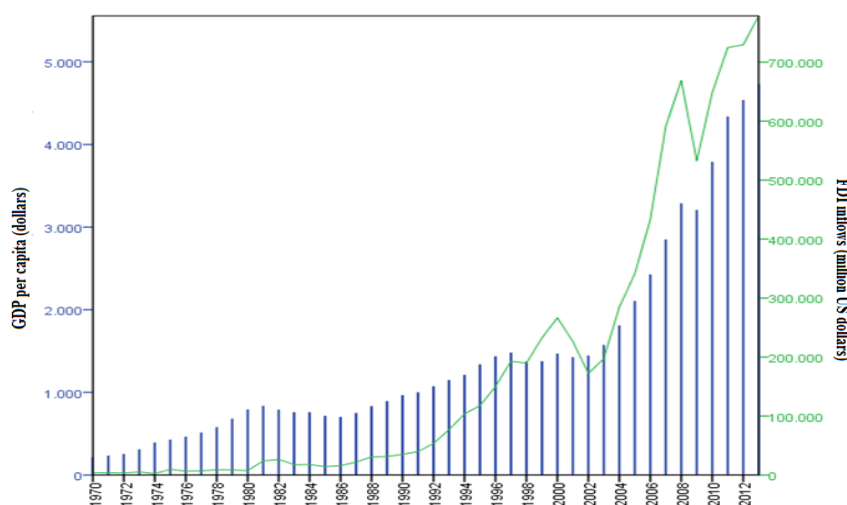


Figure no. 1. The evolution of the GDP per capita and the inward FDI flows in developing countries, during 1970-2013

Source: author's own, according to the data provided by the UNCTAD, Database

The analysis of the above figure reveals that the two indicators have followed a similar trend in developing countries during 1970-2013, particularly starting with the year 2000. Thus, the increased amount of inward FDI flows will lead to an increased GDP per capita.

If we start from the hypothesis that inward FDI flows influence economic growth, then we will consider the inward FDI flows as an independent variable and the GDP per capita as a dependent variable, depicting FDIs on the Ox axis and the GDP on the Oy axis, while the period under analysis (1970-2013) is the one covered by the data available on the UNCTAD website.

The graphical representation in the same axis system of the relationship between the two variables, for the period 1970-2013, is depicted in Figure no. 2.

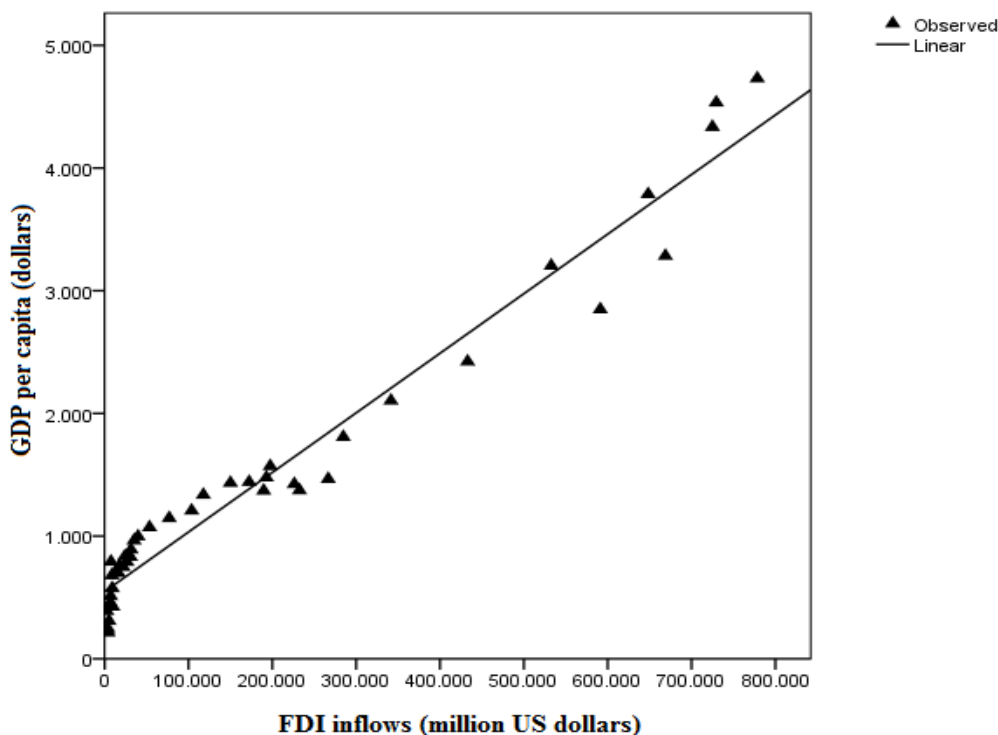


Figure no. 2. The relationship between FDIs and the GDP per capita in developing countries

Source: author’s own, processed in the SPSS statistical programme

The graph in Figure no. 3 outlines the presence of a direct relationship between *inward FDI flows* and the *GDP per capita* in developing countries during the period 1970-2013. We can argue that the relationship is linear, of the linear model type:

$$y = a + bx$$

$$PIB_{/100} = a + b * FDI$$

The coefficients of the model have been estimated based on the least square method, in the SPSS 22 programme, while the results are summarised in Table no. 1.

Table no. 1 Coefficients of the linear model

	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Standard error	Beta		
Inward foreign direct investment flows	0,005	0,000	0,980	31,608	0,000
Constant	547,565	45,923		11,923	0,000

Based on the values presented in the above table, we can write the estimated equation of the *GDP per capita* model in developing countries during the period 1970-2013, thus:

$$PIB_{i,toc} = 547,565 + 0,005 * FDI$$

In order to measure the intensity of the relationship between the variables under analysis, we have used the *Pearson correlation report* (R)

$$R = \sqrt{1 - \frac{\sum (y_i - y_x)^2}{\sum (y_i - \bar{y})^2}}$$

The values obtained for the Pearson correlation report, the determination coefficient and the estimated standard error are summarised in Table no. 2.

Table no.2 Estimates for the correlation report, the determination coefficient and the standard error in the case of a linear model

Correlation report (R)	Determination coefficient (R^2)	Adjusted determination coefficient (R^2 ajustat)	Estimated standard error
0,980	0,960	0,959	240,826

Note: The independent variable consists of the *FDI flows in developing countries*, *GDP per capita* – dependent variable.

The value of the Pearson correlation report shows that there is a strong relationship between the inward flows of FDIs and the GDP per capita variables in developing countries during 1970-2013. The correlation report equals 0,980 for the linear model. The calculated determination coefficient amounts to 0,960 and shows the proportion of the dependent variable explained by the linear model. Thus, in the case under analysis, the determination coefficient in the table shows that the variation of the GDP per capita variable is determined by the FDI variable by up to 96%, while the remaining 4% is due to random factors.

The selection of this regression model was based on the determination coefficient that shows the extent to which the dependent variable is explained by the regression model.

In order to check whether the correlation report we have obtained is significant, we will resort to the Fisher test:

$$F = \frac{n-k}{k-1} \cdot \frac{R^2}{1-R^2}$$

Where: n is the number of observed values;

k is the number of groups organised in relation to the independent variable;

R^2 the determination coefficient.

Table no. 3 presents the estimates of the two variation components, the corresponding degrees of freedom, the estimates for the explained and residual variables, and the calculated value of the Fisher report and its significance.

Table no.3. ANOVA

	Sum of deviations	df	Mean Square	F	Sig.
Regression	57943659,401	1	57943659,401	999,077	0,000
Residual	2435881,804	42	57997,186		
Total	60379541,205	43			

Note: The independent variable consists of the *FDI flows in developing countries*, *GDP per capita* – dependent variable.

If the value of the Fisher test exceeds the one shown in the table, and the corresponding Sig. value is lower than 0,05, we can state that the linear relationship between the two variables under analysis is rather significant.

In order to check whether we have a bivalent relationship between FDIs and GDP per capita in the case of developing countries, we have measured the correlation between the two variables by using the Spearman coefficient, calculated by means of the SPSS 22 programme.

Table no.4. The Spearman correlation coefficient

		Inward FDI flows	GDP per capita
Inward FDI flows in developing countries	Correlation coefficient	1,000	0,983**
	Sig. (2-tailed)	.	0,000
	N	44	44
GDP per capita in developing countries	Correlation coefficient	0,983**	1,000
	Sig. (2-tailed)	0,000	.
	N	44	44

** . the correlation is significant at the 0,01 level (2-tailed).

The results presented in Table no.4 show that there is a very strong correlation between the two variables. The value arrived at for the Spearman coefficient amounts to 0,983, which is a significant value statistically speaking. Thus, we argue that the inward flows of foreign direct investments influence economic growth, but, similarly, a higher GDP per capita level attracts larger inward FDI flows in developing countries as well.

For the category of developing countries, we have considered the data for a shorter period of time (2000 – 2013) in order to identify the correlation between the two variables, FDI and GDP per capita respectively.

The graphical representation in a dual axis system of the available data for inward FDI flows and GDP per capita in developing countries only for the period 2000-2013, is depicted in Figure no.3.

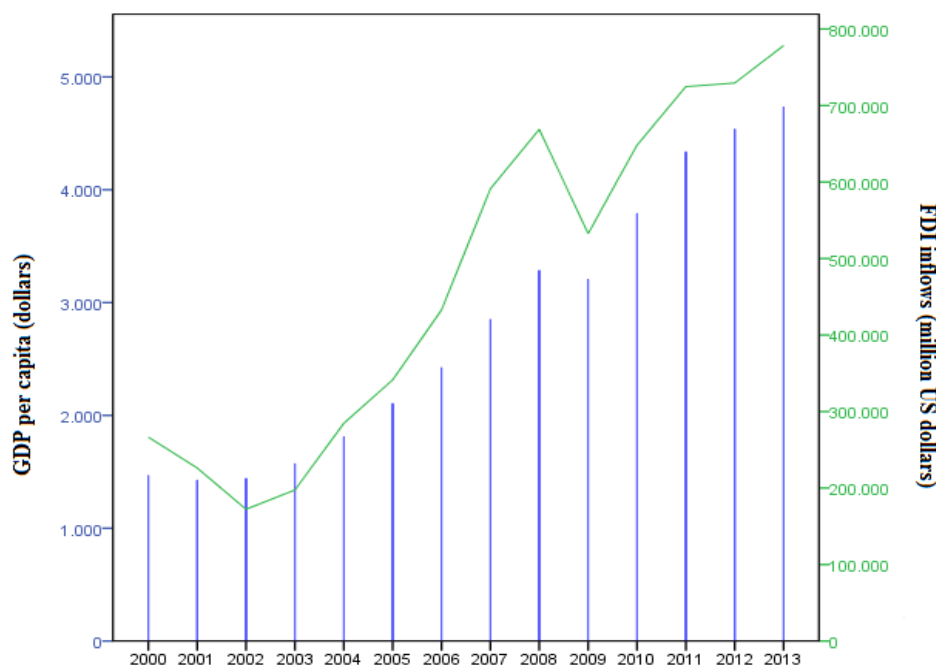


Figure no. 3 Evolution of the GDP per capita and inward FDI flows in developing countries, during 2000-2013

Source: author's own, according to the data provided by the UNCTAD, Database

The graph in Figure no. 3 highlights the fact that the inward FDI flows have had a very similar evolution to that of the GDP per capita in developing countries during the period under analysis.

The calculations conducted only for the period 2000-2013, by means of the correlation method, reveal the fact that the dependency between the inward FDI flows and the GDP per capita in developing countries remains very strong, as the Spearman coefficient calculated for the period 2000-2013 amounts to 0,969 (Table no.5).

Table no.5 The Spearman correlation coefficient for the period 2000-2013

		Inward FDI flows	GDP per capita
Inward FDI flows in developing countries	Correlation coefficient	1,000	0,969**
	Sig. (2-tailed)	.	0,000
	N	14	14
GDP per capita in developing countries	Correlation coefficient	0,969**	1,000
	Sig. (2-tailed)	0,000	.
	N	14	14

** the correlation is significant at the 0,01 level (2-tailed).

The obtained results show that there is a very strong correlation between the two variables. The inward FDI flows influence economic growth, but, similarly, a higher GDP per capita level will attract larger inward FDI flows.

3. CONCLUSIONS

The analysis of the level of economic development on each main group of countries has revealed the presence of a rather significant gap between developed and developing countries, even though the latter have recorded important steps forward in terms of economic development during the period under analysis.

Even though the rate of growth of FDI flows to developed countries has been higher, as compared to developing countries in 2013, this did not prove to be enough in order to re-establish their position as main recipients of FDI inward flows. Thus, note an increased presence of transition economies and developing countries among the recipients of global inward FDI flows. Thus, in 2013, developing countries received more than half the amount of inward FDI flows on a global level (54%), as compared to developed countries (39%).

The inward FDI flows and the GDP per capita in developing countries during 1970-2013, have followed a similar trend. The analysis has revealed the presence of a direct relationship between inward FDI flows and the GDP per capita during the period 1970-2013 that can be described as a linear model. The value of the Pearson correlation report (0,980) has confirmed the presence of a very strong connection between the two variables under consideration. The value of the Spearman coefficient (0,983) has shown that the inward FDI flows influence economic growth, but, similarly, a higher GDP per capita level will attract more inward foreign direct investment flows.

The existing relationship between the amount of financial flows and economic growth in developing countries, both before and after the global crisis, has revealed the presence of a mixed and complex image. After conducting the analysis, we believe that the relationship between economic growth and foreign direct investment flows depends on the types of financial flows, on the economic structure of the recipient country, on the presence of a stable and solid financial market, as well as on the existing global models of economic growth.

Thus, in light of the research findings, we believe that there is a direct, solid and sustainable relationship between foreign direct investments and the level of economic growth per capita in developing countries.

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