

9. THE IMPACT OF FOREIGN DIRECT INVESTMENT ON THE ECONOMIC GROWTH AND COUNTRIES' EXPORT POTENTIAL

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Abstract

Most of the FDI specialists think that FDI had a positive impact upon the economic growth in the receiving countries. They showed that it was a direct relation between the FDI flows (as percent of the GDP) and the growth of GDP per capita not just for the developed countries, but also for most of the developing countries. In this way, the countries that had attracted an important FDI volume had the highest economic growth rates. Since the early '60s of the 20th century, the times with the most intense foreign investment activities had coincided with a sudden increase in the macroeconomic indicators (especially the GDP).

Because the economic science proved that there was a direct connection between the FDI volume and economic growth rates, the IMF and the World Bank started to recommend to all countries (recommendation that they make currently) to create favorable conditions to attract FDI for ensuring, in this way, high development rates.

The countries in transition need FDI not just to produce more goods and a higher quality. Foreign capital investments are the most efficient and safe way to integrate into the world economy. Concluding, only direct foreign investments would allow the re-specialization of the economy to surpass the situation of maintaining on the world markets only with food products and raw materials.

Indeed, the acquired experience shows that FDI substantially enhanced the national economies' re-specialization processes all over the world. The authors share the opinion of those specialists who affirm that FDI plays a determinant role in re-specializing the transition economies and in increasing the export potential. Also, FDI growth leads to increase in the manufactured production quantity.

Further, we shall examine some structural changes which occurred under the influence of FDI in the economies of new European Union member states (the Czech

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Republic, Estonia, Hungary, Lithuania, Latvia, Poland, Slovakia, and Slovenia) and in South-East Europe, drawing also the attention upon the changes in the export potential of those countries.

Keywords: foreign direct investment, exports competitiveness, multinational companies, economic growth

JEL Classification: E22, E52, E58, F21, F23, O11, O16, O23, O24, O33

1. Introduction

The FDI, whatever its source, influences the economic welfare, growth and development of host countries in several ways. First of all, in any host country, the FDI manifests itself in the form of transnational companies (TNCs) establishing local operations, usually through one or more affiliates. These foreign affiliates interact with the local economy by building production facilities and hiring workers, many of whom will require training. Second, since the affiliates are composing elements of the TNCs involved, they are parts of the TNCs' respective value chains, both within the host country and internationally. They establish backward (with suppliers) and forward (with distributors and sales organizations) linkages, which can stimulate production in supplier and distributor firms and organizations in the host country and constitute a channel for the transfer of technology.

To that extent, the FDI has an amplified effect on the local economy beyond the initial direct effect of affiliates' operations. Third, the affiliates might have a variety of indirect, spillover effects on local firms, for example through the impact of competition that might spur local firms to improve their performance; or, conversely, they might induce failures because of affiliates' greater efficiency. Finally, potential increases in employment and income due to the entry of FDI projects might result in multiplier effects on the entire host economy while, at the same time, potential crowding out of that economy's domestic enterprises by FDI might have the opposite impact.

The extent and nature of these effects and the net outcome for a host economy depend, among other factors, on the scale of the initial FDI, the technology used, the number of people employed and the training and wages offered, the market orientation of foreign affiliates in the economy, the degree to which the affiliates procure goods and service inputs locally, and the proportion of profits reinvested, as well as on the conditions prevailing in the host economy.

Section 2 presents the role of transnational companies (TNCs) in promoting foreign direct investments and, thus, the economic growth, and their role in rising exports and their competitiveness. Section 3 presents the role of direct foreign investment in re-specializing the transition economies and increasing their export potential. Section 4 shows the motivation for stimulating the FDI and exports for achieving economic growth. Section 5 shows some theoretical backgrounds and the empirical econometric results for Romania regarding the impact of the FDI on the economic growth and Section 6 concludes.

2. Transnational companies as direct foreign investment promoters and the economic growth

The annual FDI input growth is due, first, to the growth in the numbers and in the productive and financial strength of transnational companies. In this way, in 1999–2004 the total number of TNCs increased from 37 thousand to 70 thousand (1.7 times), and the number of affiliates located abroad increased from 170 thousand to 690 thousand (4 times). The accumulated global volume (the stock) of FDI of 9 trillion dollars in 2004 was, mainly, the property of 70 thousand TNCs. They had administered that year over 2/3 of the entire world trade and more than 80% of the foreign investments. On average, each TNC had moved its production activity to more than 6 countries. Goods and services sales by the foreign affiliates of TNCs represented almost 19 trillion dollars, while the total volume of the world trade – only around 8 trillion dollars. Such a situation confirms the fact that the contemporary international production based on capital migration between countries becomes more important to goods promotion foreign markets than the international trade.

The TNCs are the main factor of growth within the countries they exist. The largest transnational companies' analyses show that they activate in developed countries, such as the USA, the Great Britain, Japan, France, and Germany. The top position within this group is held by corporations such as General Electric (USA), Vodafone Group Pic (Great Britain), Ford Motor Company (USA), Toyota Motor Corporation (Japan), Total (France). In one of the largest TNCs, namely Vodafone Group Pic (Great Britain), the assets abroad amount to 92.8 % of the total volume of the company's assets, the sales abroad – approximately 84%, the number of employees abroad – 79 % of the total number.

The TNCs make investments in a certain country only on condition that they gain additional profit from making their activities international and only having the advantage of monopoly. If in the country where they place the investments there are no such conditions, then the transnational companies select other countries. The greatest TNCs invest in electric gears production and electronic industry, telecommunications, automobiles, oil extractive and processing industry.

In the last decades, the TNCs' share within the developing countries has also grown. In the current stage, these actively contribute to the world investment input increase. Their share in the total flow of FDI has grown from 6% in the mid '80s to 11% in the late '90s, and then it decreased to 7-8 % in 2001–2003. In that group of TNCs, on top there are companies from developing countries such as Hong Kong, Malaysia and South Korea.

An important consideration for those who design policies to promote development is to enhance the "export competitiveness". Transnational corporations can help to increase the competitiveness in the developing countries and in the transition economies, but it is not easy to raise their potential. In order to reap the maximum benefits from government interventions, the export-oriented direct foreign investment promotion should be part of a country's general development strategy. The distinction lays in the extent of success a host country had in attracting the export-oriented direct foreign investment, and also in the development benefits that result from such

investments, which are based on the country's ability to develop its internal capabilities. Indeed, some of the successful countries in export competitiveness and attracting export-oriented direct foreign investment have practiced a double approach, based both on the development of internal capabilities, and on the search for foreign resources and assets.

To conclude, the continuous need of the countries to create higher value added and to enhance the attractiveness of their setting is a challenging task for the policy makers in the developing countries. It is necessary to approach more sophisticated and comprehensive policies in order to consider the changes produced in the corporate strategies and in the regulation activity. Moreover, the essential point of the agenda should be the development of the internal capabilities by attracting high quality direct foreign investment that could improve competitiveness in order to promote development according to the countries' own objectives.

3. The role of direct foreign investment in re-specializing transition economies and increasing the export potential

The countries in transition need FDI not just to produce more goods and a higher quality. Foreign capital investment is the most efficient and safe way to integrate into the world economy. Concluding, only direct foreign investment would allow the re-specialization of the economy in order to surpass the situation of maintaining on the world markets only with food products and raw materials.

Indeed, the accumulated experience shows that FDI substantially enhanced the national economies' re-specialization processes all over the world. The authors share the opinion of those specialists who affirm that FDI plays a determinant role *in re-specializing the transition economies and increasing their export potential*. That happens, because, first, in the process of attracting FDI, the improvement of economies takes place *by ways of introducing and fast developing new fields and renovating the traditional ones*. Second, FDI is currently the main and real source for *economy restructuring and production modernization*; and, third, FDI growth leads to increase in the manufactured production quantity.

Further, we shall examine some structural changes, which have occurred under the influence of FDI in the economies of new European Union member states (the Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland, Slovakia, and Slovenia) and in the South-East Europe, also drawing the attention upon the changes in the export potential of those countries. In the beginning of transition, the Central and South-East European countries were specialized in traditional industries with a low degree of transformation (textiles, clothing, furniture, footwear), in intensive resource branches (metallurgy of iron, metal working, base chemistry, wood and paper industry) and in agriculture. This specialization had been formed since the socialist time and reflected the "social international division of labor" existing within the Council for Mutual Economic Assistance (CMEA). In 1994-1995, after the countries within this region acquired the status of European Union associated countries, a large flow of FDI,

mainly from Western Europe, had changed step by step the type of international specialization of this category of countries.

At the beginning of the 1990s, in these countries the FDI was attracted especially in the *manufacturing industry*. Comparing to other branches, here, the buy-out was made earlier, and the efficiency of investment was high. In the second half of the '90s, the highest growth rates of FDI flows had already been registered in *services*. The cause of this change was the shift of the buy-out centre. In this way, in 2000 the services concentrated around half of the foreign investment. In some countries, such as the Czech Republic, the foreign companies began to control the telecommunications, financial and transportation systems. There was also made considerable investment in real estate and trade, and also in the town management systems and technical-material assurance systems. In the first years of the 3rd millennium, the most attractive investment domain for foreign investors was, again, the *manufacturing industry*.

However, in the manufacturing industry one may notice a process of *FDI structure change*. Considering the rise in labor force cost in the South-Eastern European countries and in the new European Union countries, the foreign companies started to move the activities that require a large work volume to other world regions. Thus, in 2002, the monthly average income in Poland was 550 euros, and 400 euros in the Czech Republic. At the same time, in Romania and Bulgaria the monthly average income was in that year 120 euros, in Russia – 150 euros, and in Republic of Moldova – only 60 euros.

In such circumstances, i.e. moving the industries that require a large work volume to countries with lower incomes, the foreign investors in the new European Union countries (the Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland, Slovakia and Slovenia) already started to invest in fields of more advanced technologies, which require a higher qualified labor force and higher labor productivity. In this way, important investment resources had been oriented towards the automobile production industry. Thus, according to the UNCTAD and to the volume of FDI attracted to the automobile production, in 2001 the Czech Republic was first worldwide, and Hungary and Poland the third. In this way, with the help of FDI, the international specialization of these countries began to change.

The foreign investors had played an important role in **economic development**, contributing to the substantial growth of permanent capital and, collaterally, to the modernization of the capital assets of the companies bought, though the flow of FDI in these countries had been different from one year to another (Table 1).

The important volume of direct foreign investment contributed to the disappearance or the reduction of the internal macroeconomic discrepancies, and also to the improvement of the balance of payments, because FDI were auxiliary sources of foreign currency and budgetary incomes. In this way, only in 2003 the ratio of the FDI net flow to the balance of payments represented in Hungary 34.5%, in Poland – 96.1%, in the Czech Republic – 53.1%, and in Romania – 31.7%.

Table 1
The FDI flow share in the global investments in fixed assets (%)

	1992-1997 (annual average)	1998	1999	2000	2001	2002	2003	2004
Central European Countries								
Hungary	33.0	34.4	28.8	24.5	32.1	19.1	13.5	18.6
Poland	12.2	15.9	18.4	23.8	14.9	11.4	11.1	14.5
Slovakia	4.6	8.8	7.1	36.6	26.3	62.2	6.8	11.1
Slovenia	4.9	4.5	1.9	2.8	7.9	32.3	2.9	6.5
Czech Republic	9.5	22.3	41.3	32.7	33.6	44.5	11.6	15.4
Southern and East-European Countries								
Albania	25.9	9.2	6.7	20.5	25.9	15.1	22.7	26.0
Bulgaria	11.8	32.4	41.8	50.6	32.8	31.8	36.5	49.2
Bosnia and Herzegovina	-	4.2	16.5	16.4	12.3	24.1	37.4	29.7
Macedonia, FYR	2.0	20.5	5.3	30.0	86.5	12.4	16.5	16.2
Romania	5.8	26.5	16.5	14.8	13.9	11.7	12.2	31.7
Serbia and Montenegro	-	-	8.7	2.0	11.5	20.3	81.1	24.6
Croatia	-	18.5	31.6	27.1	35.0	20.3	21.8	11.4

Source: UNCTAD, FDI database, www.unctad.org/tdistatistics.

The foreign investors had invested in companies within this area, and the advanced technologies, modern management, large means in technical preparation and top education in studying languages had opened to these countries the access to new outlets. As a result, a radical change of those companies' images occurred.

The FDI had become the main way of modernization of the communication systems, and the foreign bank capital contributed to the technical modernization of the banking field. The analysis made by foreign economists showed that the new companies, with mixed capital (foreign and domestic) ensured the main part of increase in the export of the region's countries, and essentially enhanced the export orientation of such economies. In 2003, the ratio of the export to the GDP was 67% in Slovakia, 57% in the Czech Republic, 53% in Hungary and 45% in Slovenia.

In the countries that have attracted the highest FDI volume, the companies with foreign capital shares produce the largest part of the exported goods. However, step by step the share of the goods that require high capital investments and high qualified work force increased. This change in the export structure under the influence of direct foreign investment was also noticed in countries in transition within the Central and Eastern Europe. Thus, from 1991 to 2001 the share of goods "machinery and devices, electrical equipment" and "transportation means and materials" increased in Hungary from 30% to 60%, in Slovakia from 22% to 40%, in Poland from 26% to 36%, in the Czech Republic from 38% to 47%.

Generally, the EU expansion led to an increase in trade within the union without affecting the commercial exchanges with the extra EU countries. The extra-EU export

growth rate will surpass the one of the export to the EU countries due to the opening of new outlets, but also due to the consolidation of exports in which Romania already activates, as a result of increasing the competitiveness of the supply of products. At the same time, the growth of imports from the EU on average is expected, represented by manufactured goods of medium and high technology. In exchange, the imports from other areas will increase at a lower rate, as a result of reducing the energy and raw material needs of the national economies.

The multinational companies can use their already formed connections to import and export products from and to Romania, enhancing in this way the share of the Romanian economy in the world economy.

4. Stimulating FDI and trade for achieving economic growth

Most of the FDI specialists think that FDI had a positive impact upon the economic growth in the receiving countries. They showed that it was a direct relation between the FDI flow (as percent of the GDP) and the growth of GDP per capita not just for the developed countries, but also for most of the developing countries. In this way, the countries that had attracted an important FDI volume had the highest economic growth rates. Since the early '60s of the 20th century, the times with the most intense foreign investment activities had coincided with a sudden increase in the macroeconomic indicators (especially the GDP).

Because the economic science proved that it was a direct connection between the FDI volume and the economic growth rates, the IMF and the World Bank started to recommend to all countries (recommendation that they make currently) to create favorable conditions to attract FDI and to ensure, in this way, high development rates. Although none of the specialists question the existence of an economic relationship between the FDI and economic growth, the scientists had different points of view regarding the following matters: How strong is the connection between these two processes? Do they always ensure economic growth? Is FDI the main factor of economic growth in a country or another?

The existence of a strong correlation between investment and economic growth was contested by the Russian economists, especially those from the Transition Period Economy Institute. Using mathematical models as research instruments they calculated and proved that *the Russian economic growth, practically, did not depend on direct foreign investment.*

The opinion according to which it is necessary to attract significant foreign investment in order to get economic growth is also not confirmed in the interdependency analysis of the evolution of FDI and GDP growth rates in *some large developing countries*. The interdependency analysis of *direct foreign investment* and *economic growth* (in developed and developing countries) showed that FDI had a positive impact upon economic growth just in the case when the state insistently promoted its own policies regarding this matter and attracted FDI taking into account the national interest and the development priorities of that country. Where the state assigns its functions to

transnational companies, where they do business, FDI does not ensure stable and high economic growth. In addition, these countries can lose their sovereignty.

At the same time it was noticed that FDI was not the single factor of economic growth. Moreover, it does not automatically ensure a stable economic growth and at a high rate. In this way, according to the researchers in those countries, the economic growth in 2004-2005 in Slovenia and Hungary was conditioned by the increasing demand, domestic consumption activity, as a result of the fiscal system reform and income growth, and not as a result of attracting FDI. The same conclusion was reached regarding the basis of the economic growth registered in 2004–2005 in Slovakia; it had not been the FDI, but the growth of the export volume. At the same time, in Romania and Bulgaria the economic growth was caused, firstly, by the increase in the credit possibilities of the economy.

Anyway, FDI is mainly responsible for export structure reorientation of the CEE countries to products that embody high qualified labor and top technology. The foreign companies had already contributed to the integration of the East-European producers in the suppliers' networks or in the transnational production and international commercial networks. Neighboring on the EU and getting free access to its market for the industrial products made these countries attractive locations for replacing the cross-border production. The proof that these countries became parts of the new labor division results from the fact that they are participants in the world networks of production and distribution.

The current evolutions of world investment flows show that legal freedom and traditional investment stimulus (fiscal, customs, financial) are measures with a smaller efficiency in attracting significant flows, because almost all the countries turn to such measures. Many countries had changed their investment regimes over time (Table 2).

Table 2
Changes in the investments regimes around the world during 1992-2005

Ratios	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Number of countries that changed their investments regime	43	57	49	64	65	76	60	63	69	71	70	82	102	93
Number of changes	77	100	110	112	114	150	145	139	150	207	246	242	270	205
Changes favorable to FDI	77	99	108	106	98	134	136	130	147	193	234	218	234	164
Changes less favorable to FDI	-	1	2	6	16	16	9	9	3	14	12	24	36	41

Source: UNCTAD, *World Investment Report 2006*, Table 1.11.

Confronted in the past with a centralized economy and knowing the tumult of the transition, the Central and East European Countries (CEECs) conducted a policy of resumption of economic growth, more or less inspired. In Romania, except for the first years (1994-1996), when the FDI stocks were still less significant and weakly correlated with the economic progress, we can infer a quite strong interaction between the two variables starting in 1997. The accumulated FDI stock contributed step by step to the transition from negative to positive growth rates, with important jumps during 1998-2001. Even if the year 2002 brought a regress in this matter, the “FDI–economic growth” correlation remains by the side of the trend defined previously, expecting an acceleration of growth of 0.11% on average, to an increase of 1% in the FDI stock (below the region’s average).

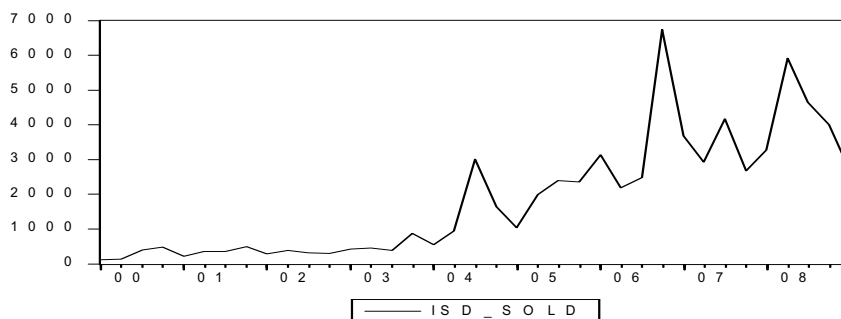
The results of Romania in attracting foreign investment did not match its expectations and potential in the last transition decade, a fact reflected by the comparison with our neighbors. “According to the World Investment Prospects analysis, the average level of the investment climate in Romania was, between 1999 and 2003, 4.86 points on a scale where the maximum reaches 10 points ... but that situation improved after 2004, taking into consideration that in 2004 the value of foreign investment in Romania reached 3.07 billion dollars, i.e., 1.7 billion dollars more than in previous year and the trend has continued until today” (Carmen Beatrice Păuna, Ileana Dumitrescu, 2005).

The evolution of the FDI stock in Romania during this period proves the increasing tendency after 2004, as Figure 1 shows, but with high variation from one period to another, which suggests a lack of consistent and permanent concern regarding the attraction of FDI by the Romanian economy.

Figure 1

The quarterly evolution of the FDI stock in Romania during Q12000-Q12009

(million euros)



Source: Monthly Bulletin of the NBR.

The international span of some strategic investors leads to the presence of “made in Romania” products on the large world markets, a fact that can improve the entire

economy. A relevant example regarding this matter, even if not a large investment, is given by the boom of the OPT exports within the last years.

For a country such as Romania, in a serious underproduction crisis, with limited possibilities of domestic capital accumulation, of all the exterior development factors, the most important stimulating role could be that of the direct foreign investment, and conditions to increase the Romanian exports by building joint ventures can be created. "The Romanian economy offers to foreign investors the major advantage of being the second largest domestic market (after the Polish one) in Central Europe" (Mariana Nicolae, Crenguța Pană, Dalina Andrei, 2005).

Estimates of the impact of the EU membership (like in all other New Member States) tend to be limited, taking into account its economic size. We can appreciate that Romania will benefit much more from its integration into the EU. The consensus among economists is that the gains are likely to be proportionately larger, reflecting the fact that almost 74% of our exports go to the EU Member States and our economy is much smaller. As summarized in the economic literature, trade-induced simulations typically show that the applicants as a group gain everywhere from 1.5% to 8% or even 10% of the GDP on short to medium term.

Briefly speaking, one may say that trade within the enlarged EU will increase, mainly due to the importance of the trade carried out between the old and the New Member States. The impact of the enlargement on trade will, thus, be positive, although limited.

In 2004, the GDP was 60784 million euros, and 79259 million in 2005 (1.30 times higher), while in 2008 it reached 137035 million (2.2 times higher). Another important remark is that Romania's manufactured goods export increased to 97% of the total exports. The markets for our products are over 80% in the developed countries, and the trade with the European Union represented 60% of the total imports and exports in 2004 and 75% in the first half of 2009. In the last years Romania had a real economic growth and the international trade was an important factor. When analyzing the data showing that almost 75% of total trade is with the European Union, one may ask whether Romania is incapable of conducting international trade relations with other non-EU developed countries. Or, maybe, has the situation of Romania become like the one in the communist period, when it had trade relations with the members of the economic union of the communist countries? This would be another possible approach. But, as a conclusion for Romania, among trade, FDI and economic growth there is a connection beyond the econometric data.

5. Theoretical foundations and empirical results

There is a wide theoretical basis that supports the existence of a positive relation between FDI and economic growth. Relevant for the theoretical role is the model of FDI with positive impact (Moran, 1998), and especially the models of endogenous economic growth that belong to Romer (Romer, 1986), Barro and Sala-i-Martin (Borensztein, De Gregorio and Lee, 1998), Graham and Wada (2001), or Aitken and Harrison (1999). Among the empirical studies that confirm this hypothesis we present those of Krkoska (2001), Borensztein, De Gregorio and Lee (1998), Graham, Wada (2001). But as the empirical results do not always confirm the positive relation "FDI-

economic growth" (especially in the microeconomic studies), also the theoretical foundations behind the hypothesis of the correlation absence, its conditionality or even of the negative correlation were set and empirically verified. Theoretical insights in this field have been brought by Moran, Solow, Aitken and Harrison, Leahy and Neary.

The FDI model with negative impact (Moran, 1998), where FDI does not generate economic growth, is based on the interaction of imperfect markets, international and national ones. According to the economic growth model of Solow, the impact of FDI on the growth rate is restricted by the existence of diminishing efficiency on the physical capital. The Aitken and Harrison model (1997) presents the negative effect that the foreign presence would have on the local companies' performance. An important theoretical contribution belongs to Leahy and Neary (2004). They develop a theoretical model for the absorption capacity and identify its implication on the stimulations that a company engages itself in a R&D and on the effective externalities level. This theoretical approach allows to Leahy and Neary to show that FDI always leads to productivity increase of the investor company, while productivity increase of the host country is conditioned by the existence of a high enough degree of externalization.

Generally, the microeconomic empirical studies (Aitken and Harrison, 1999; Germidis, 1977; Haddad and Aitken, 1993; Mansfield and Romeo, 1980) are those which do not identify strong links between FDI and economic growth. Moreover, there are some studies that bring empirical evidence for a negative influence of the FDI stocks upon economic growth (Dutta, 1997). Nor the conditionality of the correlation of some factors is missing in the empirical studies.

Among the macroeconomic studies, that of Rodrik D. and Rodriguez F. (1999) finds an insignificant correlation between the international openness of a country and its development level. Even more persuasive is the analysis of Carkovic M. and Levine R. (2002). Having solved the statistical problems associated with the endogenous character of the FDI variable, the authors find that the FDI flows do not have an independent influence on the economic fast growth.

What follows is an attempt to determine the FDI effects upon economic growth and upon exports in Romania, based on the analysis of some macro quarterly data during the interval 2000Q1- 2009Q1, based on the Eurostat data series. We used logarithmic data series because of versatility reasons. The first difference of these data series was used for stationary reasons. Also, all series are seasonally adjusted using the EViews X12 programs. We used as endogenous variables the quarterly GDP denominated in Euro – \log_{gdp} , determined as $\log(gdp_sa/gdp_sa(-1))$ – and, secondly, the quarterly export denominated in Euro – \log_{x_sa} , determined as $\log(x_sa/x_sa(-1))$. As exogenous variables we used the FDI denominated in Euro – \log_{ISD} , determined as $\log(isd_sold_sa/isd_sold(-1))$; the quarterly internal credit – \log_{credit} , determined as $\log(l_d_sa/l_d_sa(-1))$; the quarterly real labor productivity – \log_{W} ; the external demand \log_{D_ex} , determined as logarithm of the increase in external demand expressed by the internal demand of the 25 EU countries (excluding Romania and Bulgaria); the increase in the interest rate on monetary market for 3 months, Δr_sa , determined as $\Delta r_sa = r_sa/r_sa(-1)$; and m_sa , representing the import data in Euro.

The quarterly labor productivity was determined as a ratio of quarterly GDP denominated in Euro to quarterly number of employees. Thus, all data series are expressed in real terms. All the series were stationary as we could see from the ADF Tests.

We wrote one equation for GDP and one for export, in order to emphasize the influences of all the above-mentioned variables, because they could not be included all in a single equation. The first equation is for determining the GDP growth denominated in Euro.

$$\begin{aligned}
 [1] \quad \text{LOGGDP} = & 0.004279 \cdot \text{LOGISD}(-4) + 0.195380 \cdot \text{LOGW} + 0.480276 \cdot \text{LOG_D_EX}(-2) + \\
 & \begin{array}{ccc} (2.863808) & (2.600767) & (2.964768) \\ [0.0084] & [0.0154] & [0.0066] \end{array} \\
 & 0.016484 \cdot \text{LOGCREDIT}(-1) + 0.009304 \cdot \text{R_SA}(-1) / \text{R_SA}(-2) + [\text{AR}(1) = -0.635629] \\
 & \begin{array}{ccc} (1.825063) & (5.709792) & (-4.032515) \\ [0.0800] & [0.0000] & [0.0005] \end{array} \\
 & R^2 = 0.710618 \\
 & \text{DW } 2.0231
 \end{aligned}$$

Equation [1] is properly determined², with $R^2 = 0.710618$. From equation [1] we can see that GDP growth depends directly mainly on the evolution of the external demand and, secondly, on the labor productivity and on the current evolution of the real domestic credit, that influences positively the real GDP growth, as we expected from the theory. That explains why the recent international economic financial crises hit the Romanian economy via the external demand that dramatically decreased and induced a great compression of the domestic output. The FDI induces economic growth, but the direct influence is still at a low level. The results seem to prove that in Romania the FDI does not automatically ensure economic growth at a high rate, because other factors, such as a changing fiscal regime and the lack of consistent measures that should promote own policies regarding the attraction of FDI led to a slow growth of FDI until 2004. However, the tight relation with productivity could suggest great indirect effects of FDI on the GDP growth through the increase in the labor productivity of the Romanian economic sectors.

In the equation, we notice an AR process, which expresses the fact that the real GDP growth also depends on its own evolution. The DW test shows the lack of residual autocorrelation.

The second equation underlines the influence of FDI on the export growth.

$$\begin{aligned}
 [2] \quad \text{LOGX} = & 0.017703 \cdot \text{LOGISD}(-4) + 0.767648 \cdot \text{LOGW}(-1) + 0.976636 \cdot \text{LOGGDP}(-1) + \\
 & \begin{array}{ccc} (2.948613) & (1.849807) & (2.224372) \\ [0.0068] & [0.0762] & [0.0354] \end{array} \\
 & 0.049617 \cdot \text{LOG}(\text{R_SA} / \text{R_SA}(-1)) + 0.061671 \cdot \text{LOG}(\text{M_SA} / \text{M_SA}(-1)) + [\text{AR}(1) = 0.441493] + \\
 & \begin{array}{ccc} (2.365221) & (2.064054) & (2.219998) \\ [0.0261] & [0.0495] & [0.0357] \end{array}
 \end{aligned}$$

² All the tested results are presented in the Annexes, which are available in the electronic version of the paper.

$R^2 = 0.613909$

DW = 1.951095

In the second equation, we notice that the labor productivity with one lag and the real GDP growth induces the rise in exports, which is in accordance with the economic theory. This result shows us that in Romania the low cost of the labor force and other incentives were very attractive for the foreign investors, which used such opportunities in order to increase their outputs for external demand and to increase their profits. The labour productivity is the main determinant of the export growth, but its influence is smaller if compared with the GDP growth. We notice a positive relation between export and import that suggests the importance of the OPT export for Romania, because a great part of the export (especially ready-made clothes and footwear) is based on imported materials. The direct influence of the foreign direct investment on export growth is greater and statistically significant as compared to the effect of FDI on GDP growth. This fact suggests that the exports are supported by the FDI, which generate production mainly for export and that FDI generates an increase in the Romanian competitiveness, like other factors, such as the RON depreciation.

A positive relation between export growth and change in interest rate on the monetary market per three months is also important for the Romanian economy. There, we notice an AR process that influences the export growth. The statistics test shows the lack of residual autocorrelation, a stability of coefficients and normal distributions of the residuals.

These results suggest that the Romanian government must be more firm in promoting the measures to attract higher FDI in order to stimulate the Romanian export and the GDP growth, through the increase in competitiveness and the labor productivity. Also, we could consider that often changes in the fiscal regime, lack of consistent and permanent concern regarding the attraction of the FDI and the episodes of political instability could be explanations for the high fluctuations of the FDI flows to Romania during the analyzed period, which influenced directly the low level of direct effects of FDI on GDP growth and export.

6. Conclusions

Because the developing countries expand beyond their traditional involvement in international production as recipients of FDI to that of rising sources of FDI, the impact of their outward FDI on the countries of origin, as well as on the host countries, especially host developing countries, assumes increasing significance. For the countries of origin, questions arise as to whether the exports of capital, technology and other resources by their TNCs bring benefits to the firms undertaking them, as well as to the economy at large, and contribute to the development process. For the host developing countries of FDI from other developing countries, the main issues refer to what extent such FDI adds to capital and other resources available for development, and whether the benefits and costs of such FDI differ in any way from those of FDI from the developed countries. Exploring how FDI and related production decisions by TNCs from developing countries affect the countries of origin is not a simple exercise, since the characteristics of FDI vary across TNCs, industries and

countries, influencing both the behavior of TNCs and the effects on countries of origin. Furthermore, data and research on the country-of-origin impact of developing-country FDI are as yet limited. At the firm level, although it cannot be taken for granted that outward FDI necessarily contributes to enhancing competitiveness and performance, evidence from studies and surveys, related mainly to outward FDI from some East and South-East Asian economies, suggests that in most cases, developing country firms do attain their objectives: they expand markets, improve efficiency, acquire natural resources, or augment the strategic assets, thus improving their performance by investing in foreign locations.

In addition, while strengthened competitiveness of firms due to outward FDI, especially in manufacturing and services, can benefit country of origin industries and the country of origin economy in general through linkages and spillovers, it can also raise concerns relating to monopoly power and competition, as the relative size of the investing firms can be large relatively to that of other firms in the country of origin developing countries. TNCs engage substantially in trade supporting activities. It is relevant in this context to note that developing countries' focus on the balance-of-payments impact of outward (or for that matter, inward) FDI per se has diminished somewhat, partly due to an improved overall balance-of-payments situation in many outward investing developing countries, and partly because of a growing tendency to look at the balance of payments as a whole and manage it through an appropriate exchange rate policy.

Whether outward FDI leads to a reduction in the funds available for domestic investment is a question that is difficult to answer definitively. Some indirect evidence seems to indicate that developing-country firms tend to rely more on external funds than on country of origin finance for their investment activities abroad. On the other hand, if developing-country firms engage in FDI mainly because they have accumulated large financial resources or because their outward FDI is subsidized by the government, there may be grounds for concern over the diversion of resources from more welfare- or development-enhancing uses at home. With regard to the impact of outward FDI on domestic investment or capital formation itself, evidence for developing countries specifically is limited, but what little there is suggests that outward FDI and domestic investment are likely to be, with some exceptions, complements rather than substitutes, as has been found to be the case for several home developed countries.

The trade and employment effects of outward FDI on the country of origin economies depend considerably on the motivations and type of investment abroad and this applies to developing-country FDI as well. To the extent that market-seeking motivations drive the greater part of FDI from developing countries, and such FDI has been found to be generally complementary to country of origin exports (excepting where host countries pursue import-substitution policies), a positive impact on country of origin exports may be expected. Results of some studies on Asian country of origin economies and data on trade by affiliates of developing-country TNCs in the United States and Japan suggest a positive relationship that confirms the complementarity of outward FDI and country of origin exports.

From the quantitative analysis that we presented in Section 5, we can conclude that in Romania the GDP growth depends largely and positively on the real labor productivity,

the external demand and credit and interest rate with two lags, because that could attract foreign investment. FDI needs more time to induce GDP growth or exports growth and the influence is greater on export growth. These results lead us to the conclusion that the direct FDI influence is still at the low level, but the indirect influence, through the increase in productivity and competitiveness is greater and more significant in the Romanian economy. The Romanian exports seems to be influenced positively only by external trade – previous exports and imports – and, at some extent, by GDP growth and productivity growth and, also, by rise in the interest rate for monetary market on per three months.

References

- Aitken B., Harrison A., (1999), "Do Domestic Firms Benefit from Foreign Direct Investment? Evidence from Venezuela", *American Economic Review*, pp.27-29.
- Albu Liviu Lucian, (2006), "Trends in the Interest Rate – Investment – GDP Growth Relationship", *Romanian Journal of Economic Forecasting*, Institute of Economic Forecasting, 7(3):.5-13.
- Anghel, Ion E. (2002), *Investițiile străine directe în România*, București, Editura Expert.
- Anghel, Ion E. (2002), *Investițiile străine directe, modernizarea și înzestrarea cu factori*, București, Centrul de informare și documentare economică.
- Barrell, R., Holland, D. (2000), "Foreign direct investment and enterprise restructuring in Central Europe" in R. Barrell, D. Holland, *Economics of Transition*, 8(3): 477-504.
- Barro, Robert J. (1997), *Determinants of Economic Growth: A Cross-Country Empirical Study*, The MIT Press, Cambridge, Massachusetts, London, England, 145 pgs.
- Belli, N. (2000), *Tranziția mai grea decât un război. România 1990-2000*, Editura Economică, București.
- Bevan, A., Estrin, S. (2000), *The determinants of foreign direct investment in transition economies*, Discussion paper No. 9, Centre for New and Emerging Markets, London Business School.
- Bonciu, F. (2003), *Investiții străine directe*, Editura Lumina Lex, București.
- Borensztein, E., De Gregorio, José, and Lee Jong-Wha, (1998), "How Does Foreign Direct Investment Affect Growth?", *Journal of International Economics*, 45: 115-135.
- Bradu, Marcel, (2002), *Investițiile străine – pilon de bază în procesul de integrare economică*. Simpozionul internațional "Probleme regionale în contextul procesului de globalizare", București.
- Carkovic, M. and R. Levine, (2002), *Does foreign direct investment accelerate economic growth?*, Working Paper, University of Minnesota, Twin cities.

- Carstensen, K., Toubal, F. (2004), "Foreign direct investment in Central and Eastern European countries: A dynamic panel analysis", *Journal of Comparative Economics*, March, 32(1): 3-22.
- Druică, E., Cornescu, V., David, O. (2008), *The New Technologies and the Relationship between the Economic Development and the Environment. Romanian Society Case*, in The Proceedings of the 11th IBIMA International Conference "Innovation and Knowledge Management in Twin Track Economics", proceeding indexed ISI Thompson.
- Dutta, S., (1997), "Strategies for implementing knowledge-based systems", *IEEE Transactions in Engineering Management*, 44(1): 79-90.
- Filip, N. (2004), *Investițiile străine în competitivitatea economiei naționale*. Simpozionul internațional "Integrarea europeană și competitivitatea economică", București.
- Germidis, Dimitrios A., (1997), *Transfer of Technology by Multinational Corporations*, Development Centre Studies.
- Haddad and Aitken, (1993), "FDI has no independent influence on growth", *Journal of Development Economics*.
- Haddad, M. and A. Harrison, (1993), "Are there positive spillovers from direct foreign investment? Evidence from panel data from Morocco", *Journal of Development Economics*, 42: 51-74.
- Leahy, Dermot and Neary, J Peter, (2004), *Symmetrical Research Joint Ventures: Cooperative Substitutes and Complements*, CEPR Discussion Papers 4497.
- Mansfield, E. and Romeo, A., (1980), "Technology transfer to overseas subsidiaries by US-based firms", *Quarterly Journal of Economics*, 95: 737-750.
- Matei, Mirela, (2004), *Foreign direct investments. Functions and evolutions 1990-2000*, Expert Publishing House, Bucharest.
- Nicolae, M., Pană, C., Andrei, D. (2005), "The analysis of the foreign trade and investment policies in Romania in the process of accession to the European Union", *Romanian Journal of Economic Forecasting*, 6(1): 56-70.
- Păuna, Carmen Beatrice, Dumitrescu Ileana, (2005), "The Influence of Regional Disparities of Romania on Attracting Foreign Direct Investments", *Romanian Journal of Economic Forecasting*, 6(1): 35-47.
- Rodriguez, F. and Rodrik, D., (1999), *Trade Policy & Economy Growth: A Skeptic's Guide to the Cross-National Evidence*, Papers 9912, Economic Research Forum.
- Romer, P. M., (1986), "Increasing returns and long-run growth", *Journal of Political Economy*, 94(5): 1002-1037.

- Sala-i-Martin, X., and Mulligan, C.B., (1995), *Measuring Aggregate Human Capital*, Discussion Paper No. 24/723, Economic Growth Center, Yale University, January.
- Scutaru, Cornelia, (2007), "Modelarea și evaluarea impactului investițiilor directe, naționale și internaționale asupra pieței muncii și evoluției macroeconomice din România - Metodologia Error Correction Models - cerințe privind seriile de date", *Caietele Seminarului de Modelare*, 15-16, Bucuresti.
- Solow R. M., (1956), "A contribution to the theory of economic growth", *Quarterly Journal of Economics*, 70: 65–94.
- Trofimov V., Sava E. (2006), "Foreign direct investments in context of globalization" in *Identitate, globalizare și universalitate în Europa Centrală și de Est*, Sibiu, Editura ULB.
- *** *Trade and Development*, United Nations Conference on Trade and Development (UNCTAD), Reports 2004, 2005, 2006.
- *** *Transnational Corporation and the Internalization of R&D*, World Investment Report 2005, 2006.
- *** *World Investment Reports 1980-2006*, UNCTAD.
- *** *Global Competitiveness Report 2004-2005*, World Economic Forum (WEF), (www.weforum.org).

<http://www.imf.org>.

<http://www.ier.ro>.

<http://www.unctad.org>.

<http://www.wiiw.ac.at>.