THE INFLUENCE OF THE FOREIGN DIRECT INVESTMENT UPON THE FOREIGN TRADE

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Abstract: The increase of the foreign direct investments' volume intercepted by a country determines the increase of the trade balance deficit, due to the imports of technology and of know-how realized by the multinationals' subsidiaries in the host countries, to which are added important profits repatriated proceeded from the exploitation of the economical objectives. The paper proposes to study the effects that the foreign direct investments have upon the imports and the exports of the host countries, concretized in analyses of correlation and regression basing on the data regarding Romania.

Keywords: foreign direct investment, foreign trade, exports, imports, trade balance

The relationships created between the foreign direct investment (FDI) and the commerce of the involved countries, both on the host countries and also on the origin countries, was and still is a subject for study for numerous economical analysts. These ones tried to establish in what measure the foreign direct investments affect the foreign trade and what correlations are established between the two variables.

The economist Rock analyzed[58] the activity of the multinationals' subsidiaries' activity in the developing countries, establishing that FDI affect the size and the direction of the commercial flows. He found arguments that supported his hypothesis according to which the subsidiaries localized in the host countries import equipments, cars and various components from the mother-company localized in the origin country. After the realization of the production, most of the commercial flows take place, conversely, towards the USA. The analyst concluded that there is a significant correlation between the commerce of these countries with the USA and with the American investments realized in these countries.

Unlike this one, Solomon and Ingham, following their study[59], reached the conclusion that despite the fact that FDI localized in one country involve important imports necessary in the production process, the multinationals' subsidiaries export few products that need technologies and that have high added value. They show that, although it seemed that the multinationals are oriented towards an intensive commerce, this thing was more a reflection of the activities in which these are involving in and not an own feature of behavior.

Most recently it has been concluded that the multinationals' subsidiaries have a various influence upon commerce, both from the host countries and also from the origin

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[58] M.T., Rock, *Cross-country Analysis of the Determinants of U.S. Foreign Direct Investment in Manufacturing in Less developed Countries*, Ph. D. dissertation, University of Pittsburgh, 1973.

[59] R.F., Solomon, K.P.D., Ingham, *Discriminating between MNC Subsidiaries and Indigenous Companies: A Comparative Analysis of British Mechanical Engineering*, Oxford Bulletin of Economics and Statistics, vol. 39, 1977, pp. 127-138.

countries. This way, the quota of the multinationals' subsidiaries proceeded from the developing countries in the total of the exports was of 0,6% in India in 2000, of 11% in China in 2002 and of 2% in USA in 2003. According to the studies[60] effectuated for the ASEAN area, the transnational's subsidiaries belonging to the developing countries exported 77% of the production in 2005, comparing with the transnational's subsidiaries belonging to the developing countries for which the percent was of only 67%. Unlike these ones, in the same year, in the African host countries the proclivity towards exportation of the developing countries multinationals was a little bit bigger than that of the firms' subsidiaries belonging to the developing countries (17,6% comparing to 15,8%)[61].

Nowadays there are controversies regarding the report between FDI and exports, meaning, if between these two variables is a relationship of complementarity or of substitution. In other words, in what measure the production and the sales of the subsidiary of some multinational replace or stimulate the increase of the exports from the country where it is localized?

One of the reasons which plead in favor for the substitution of the commerce by FDI is the fact that both of them represent alternative ways of entering on the market. On the other way, the realization of FDI in a country allows the company to establish a new base of production which involves the increase of the distribution market, enlarging this way the range of sold products on the host country's market in a much higher measure than it could have realize only by exporting on the respective market. At the same time, there are commercial flows in a double way, reported to the host country: the localization of the subsidiary brings about imports of raw materials, technologies, equipments etc., and the activity of production leads most of the time to exportation of finite products.

According to Mucchielli, the FDI can influence the exports of the host country, acting in many ways[62]:

-they can localize in a country in order to realize production for the export, be it for the origin country or for third countries or for the gain of new markets in the region;

-FDI can compete with the local firms, obliging them this way to become more competitive or to disappear;

-FDI modify the specialization of the host country exportation.

In their turn, Bouteiller and Fouquin studied[63] the evolution of the exports from South-East Asia's country, including Japan. The structure of these countries' exports knew an evident improvement once with the amplification of the international subcontracting phenomenon. Most of these countries initially realized exports of national products with a low added value, which led in time to the increase of the trade balance deficit. At the same time, the authors focused in their study upon the importance of the training effects of the exportation industries upon the rest of the economy. They reached the conclusion that FDI were at the base of three waves of industrialization which succeeded in the Asian countries, thing that determined each

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[60] UNCTAD, WIR 2006, pp.190-191.

[61] Idem.

[62] J. L. Mucchielli, *IDE et exportations: compléments ou substituts?*, Problèmes économiques nr. 2751, 2002.

[63] E. Bouteiller, M. Fouquin, *Le développement économique de l' Asie orientale*, Edition La Découverte, Paris, 2001.

time the increase of the exports with a high added value in order to keep up with the concurrence of the countries that wanted to impose themselves on the market.

A study[64] made by Maxwell Fry concentrated on the analysis of the FDI flows' entrance effects upon a group of 6 Asian countries: Indonesia, Filipinas, Korea, Malaysia, Singapore and Thailand. Using regression equations, he determines five channels through which FDI influence the balance of payment, and implicitly, the economy of some country: the investments, the economy, the imports, the exports and the economic growth. The first four variables determine positive effects upon the balance of payment, with a delayed answer for exports. The impact upon the economic growth takes place indirectly through the effects of the investments and of exports.

The result of the dynamic simulation showed that once with the increase of the investment rush, has also grown the current account deficit. Fry sustained that a constant flow of FDI leads to the increase of the economy in a bigger proportion than the investments do, having as effect in the long run the improvement of the balance situation. Though, his study was contradicted by the reality of the Asian crisis in the following years, determined, among others, by a too big deficit of the current account.

A special case and very interesting to analyze is China. A study of the Economist Intelligence Unit from 1996 draws the conclusion that the effect of FDI upon the balance of payment was positive, reported to the level of the 90's, due to the large volume of FDI entrance in the country. In exchange, the net commercial effect of the multinationals was negative because these ones were centered on raw materials imports, on the usage of cheap labor for their procession and on goods exports with a low added value. This aspect has improved in time by diminishing the report between the imports and the exports of less manufactured products from 92% in 1994 to 78% in 1996. Though, they situated at the level of 1996 under the local firms' values, whose exports implied an added value of 66%.

The specialists' study of the profile magazine predicted an increase of the payment balance deficit of China due to the increase of the repatriation of the afferent products to the foreign capital, being maintained at the same time, at high quotas the volume of the investment flows, which will allow the deficit's financing.

And still, analyzing in time the economical evolution of China, the specialists[65] conclude that the reality contradicted the predictions. FDI contributed, approximately with about 0,6% per year to the increase of the China's GDP during 1992-2004. The current account of the payment balance records surpluses from one year to another[66], while the economic growth is registered at values of over 8%. This "miracle in the history of the economical human development"[67] has as a starting point a total change of optics regarding the macro economical politics of the state which consist, among others, in imposing conditions to the investors in order to realize exports with a high

[64] M. Fry, *How Foreign Direct Investment in Pacific Asia Improves the Current Account*, Journal of Asian Economies, 7, 1996, pp. 459-486.

[65] Justin Yifu Lin, *The China Miracle:How OECD Country Policies Contributed?*, May 2004, Paper prepared for the Conference "The Impact and Coherence of OECD Country Policies on Asian Developing Economies," held at Paris on June 10-11, 2004, p. 29.

[66] According to the statistics OECD, in the year 2004, the current payment balance account of China registered a pozitive balance account of 69.69, and in 2005 this one has increased at 160.818 $.

[67] Justin Yifu Lin, op. cit., p. 2.

added value and in reinvesting the profits, corroborated with an immense tank of natural and human resources.

In Romania, priority after 2000, when we can speak of positive economic growth, the foreign trade of goods recorded an ascendant evolution, the growth being of 197,4% in 2005 at exports comparing with the year 2000 and of 228,8% at imports reported to the same years[68].

At the level of the year 2000, the multinationals' subsidiaries localized in Romania had an intense capacity of export in proportion of approximately 75% of the business number, and more than 50% of these imported raw material and the materials in proportion of 100%[69].

The firms with foreign capital from the processing Romanian industry activated most of the time in branches that present competitive advantages of Romania, branches that can be characterized by a low added value: the wood processing industry, the confections' industry, the leather goods' industry and the shoes' industry. Though, the foreign capital had a significant presence and in branches with a superior degree of processing, such as the industry of electrical and optical equipments, the industry of road ways of transportation or the chemical industry.

Also, in accordance to the Romanian specialists, foreign firms are more performing than those with an autochthonous capital concerning the productivity of work and of the capital, the capacity of exportation, the investment effort and the usage of subcontracting. Though, at an aggregate level, the weight of the added value in the business number was at minimal values, which shows that FDI were oriented prevalent towards activities with a low added value by the practice of the processing with lohn.

The situation maintains unchanged in the following years, 2001-2004, the main source of the Romanian export being the processing industry that supplied 97,1% of Romania's exports. These practices led in time to the worsening of the current account deficit.

In 2005 can be noticed a small modification in the structure of the foreign trade, meaning that the exportation of goods with medium and high degree of processing and diminishing their weight concerning the goods processed with lohn increased. Altogether with these ones, the import of raw materials, alongside with machines, outfits, devices, equipments and know-how afferent to foreign investments increased.

In our opinion, the practice of lohn, characterized by massive imports of raw materials and materials, followed by the exportation of products with allow added value (clothing, shoes, knitwear, confections etc.) is totally negative for the Romanian industry, contributing in an exaggerated measure to the growth of the trade balance deficit. This deficit is diminished in a small measure by the exports with a low added value practiced by the multinationals' subsidiaries, the report between the value of expatriated incomes and that of exports being totally unbalanced. These firms only exploit the cheap labor from Romania and have in view to repatriate the profits.

In such situation, we consider that the Romanian state has the duty to interfere in order to discourage the investments that use the technique of processing with lohn and to orient them towards production sectors with a high added value.

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68 Acording to the NIS, the annual of External Commerce of Romania, 2006, p.10.

69 V. Boşcaiu, D. Liuşnea, C. Munteanu, L. Puşcoi, *Impactul comerţului exterior şi investiţiilor străine directe asupra productivităţii în industria prelucrătoare. Cazul României*, CRPE, Lucrare nr. 22/iulie 2000.

Further on our study, we will realize correlation and regression analyses between FDI variables, exports and imports in order to determine the degree in which the foreign direct investments influence Romania's trade.

The correlation and regression analyze between FDI variables and the foreign trade of Romania

For an analysis as relevant as possible we have in view the evolution of the three indicators, FDI, exports, imports for the entire period 1991-2005:

Table 1. The volume of FDI and of foreign trade

Year	FDI (mil. dolari)	Exports FOB (mill. dollars)	Imports CIF (mill. dollars)
1991	973,988	4164	5723
1992	563,399	4892	6522
1993	385,855	6151	7109
1994	851,203	7910	10278
1995	220,785	8084	11435
1996	511,039	8431	11280
1997	352,762	8302	11838
1998	789,096	8503	10395
1999	1872,938	8487	10557
2000	754,243	10367	13055
2001	203,471	11385	15552
2002	888,029	13876	17862
2003	1407,087	17618	24003
2004	2948,882	23485	32664
2005	3149,044	27730	40463

Source: NIS, The Statistical Annual and The Monthly Statistical Report nr.12/2005

1. The correlation and regression analysis between FDI variables and imports

Correlations

		exports	foreign direct investment
Pearson Correlation	exports	1.000	.827
	foreign direct investment	.827	1.000
Sig. (1-tailed)	exports	.	.000
	foreign direct investment	.000	.
N	exports	15	15
	foreign direct investment	15	15

The Pearson correlation coefficient is equal with 0.827, which signifies that the connection between the two variables is direct and very tight.

The correlation coefficient Sig=0,000<0,05, so the connection between the two variables is statistically significant. It results that the FDI variable influences the exports' variable.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.827[a]	.684	.660	3940.3339

a. Predictors: (Constant), foreign direct investment

b. Dependent Variable: exports

The determination report R Square is equal with 0,648. It results that 64,8% from the variation of the exports is explained by the variation FDI.

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4,37E+08	1	437295106,7	28.165	.000[a]
	Residual	2,02E+08	13	15526231,59		
	Total	6,39E+08	14			

a. Predictors: (Constant), foreign direct investment

b. Dependent Variable: exports

Through ANOVA is tested the significance of the correlation R report.

The Fisher test is significant statistically because Sig=0,00<0,05. With a probability of 99% we can affirm that the connection between the two variables is significant statistically.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	Constant	4878.372	1579.786		3.088	.009	1465.451	8291.293
	FDI	6.062	.001	.827	5.307	.000	.004	.009

a Dependent Variable: exports

We admitted a linear connection between the two variables. The regression equation has the form:

$$Y=a+bX,$$

where:

a-the constant;

b-the regression coefficient (the straight slope).

The regression equation is:

$$Y=4878,372+6,062X,$$

where:

Y=exports

X=FDI.

Sig=0,00<0,05, so the beta regression coefficient is statistically significant.

In conclusion, if the FDI grow with one unity (one unity = one million dollars), then the exports grow with about 6,062 million dollars.

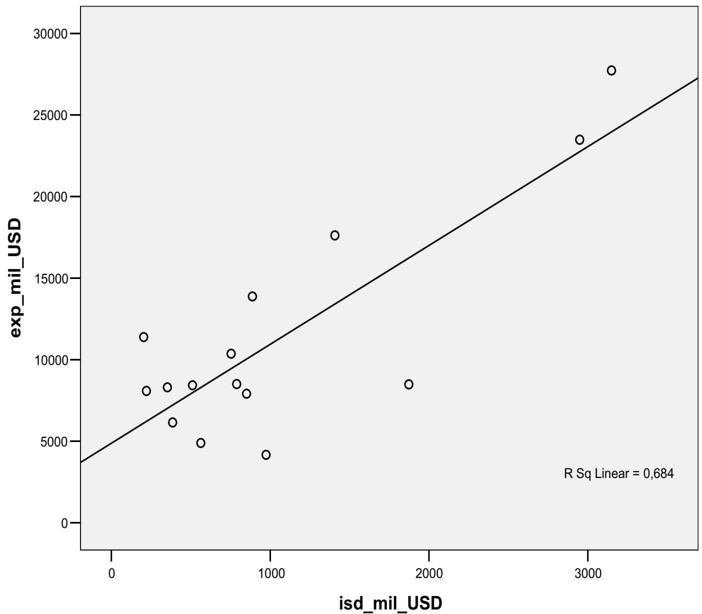

Figure 1. The connection between FDI and FOB exports, at Romania's level, during 1991-2005.

2. The correlation and regression analysis between FDI variables and imports

Correlations

		imports	foreign direct investment
Pearson Correlation	imports	1.000	.826
	foreign direct investment	.826	1.000
Sig. (1-tailed)	imports	.	.000
	foreign direct investment	.000	.
N	imports	15	15
	foreign direct investment	15	15

The Pearson correlation coefficient is equal with 0.826, which signifies that the connection between the two variables is direct and very tight.

The correlation coefficient Sig=0,000<0,05, so the connection between the two variables is statistically significant. It results that the FDI variable influences the imports.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.826[a]	.682	.657	5796.9513

a. Predictors: (Constant), foreign direct investment

b. Dependent Variable: imports

The determination report R Square is equal with 0,682. It results that 68,2% from the variation of the imports is explained by the variation FDI.

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9,36E+08	1	935919677,3	27.851	.000[a]
	Residual	4,37E+08	13	33604644,44		
	Total	1,37E+09	14			

a. Predictors: (Constant), foreign direct investment

b. Dependent Variable: imports

The Fisher test is significant statistically because Sig=0,00<0,05. With a probability of 99% we can affirm that the connection between the two variables is significant statistically.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	Constant	5865.708	2324.155		2.524	.025	844.678	10886.739
	FDI	8.868	.002	.826	5.277	.000	.005	.012

a Dependent Variable: imports

The connection between the two variables is linear. The regression equation has the form:

$$Y=a+bX,$$

where:

a-the constant;

b-the regression coefficient (the straight slope).

The regression equation is:

$$Y=5865,70835 + 8,868\ X,$$

where:

Y=imports

X=FDI.

The beta regression coefficient is statistically significant: Sig=0,00<0,05.

If the FDI grow with one million dollars, then the imports grow with about 8,868 millions.

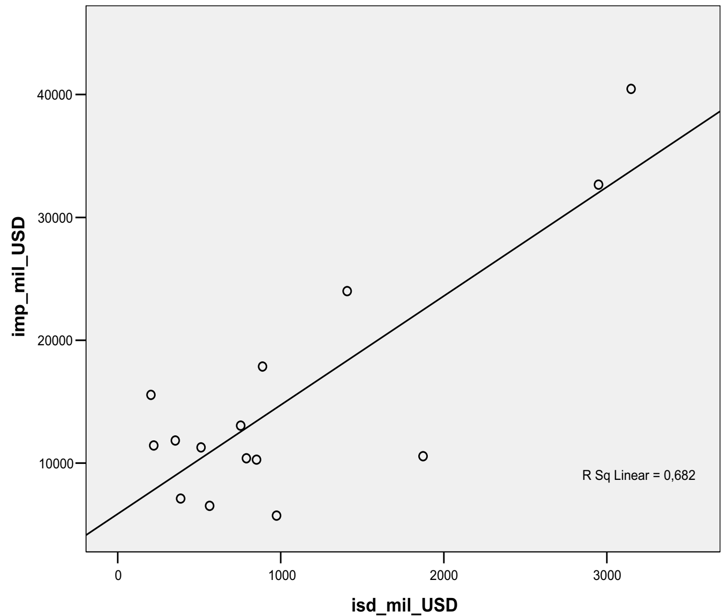

Figure 2. The connection between FDI and CIF imports, at Romania's level, during 1991-2005

In conclusion, the foreign direct investment influence the size and the redirection of the commercial flows but, despite the fact that the FDI localized in one country bring about important imports necessary in the production process, multinationals' subsidiaries export few products than need advanced technologies of fabrication and which have high added value.

The investments intercepted by Romania influence both the imports and also the Romanian exports, but the rhythm of the imports' increase outruns the exports one. This aspect has as direct effect the accentuation of the current account deficit from one year to another. This is why we suggest the implication of the Romanian state through adequate macro economical politics, by reorienting the foreign investors towards economic sectors with a production of high added value, which should produce both for the interne market in order to diminish the imports and also for the external market for the equilibration step by step of the trade balance.

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