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FOREIGN DIRECT INVESTMENTS AND INTERNATIONALISATION PROCESSES IN MANUFACTURING SECTORS IN POLAND

Abstract. The main feature of the development of the Polish economy is increasing importance of international capital flows. In 2005 capital inflow having form of FDI was estimated at 7.7 billion euros. Continual increasing of foreign enterprises having their fillies in Poland becomes a challenge for the Polish firms. Modern sectors high innovation potentiality are involved into highest international competitiveness, i.e. manufacture of motor vehicles, manufacture of electronic equipment, manufacture of pharmaceutical products). Now foreign investors explore other sectors earlier recognising as local. Appearance of new strong players like international corporations on the local markets (sectors) tends to competitiveness increase of resources and abilities of the Polish enterprises (technological, marketing, management and production abilities) and requires increasing of their internationalisation rate.

Key words: foreign direct investment, manufacturing sectors, exports, imports.

1. INTRODUCTION

The vital characteristic of the development of the global economy is the impressive intensification of the international capital flow. It especially concerns Foreign Direct Investments (FDI) which in huge quantities come to Poland now. In the year 2005 the inflow of capital due to the FDI reached about 8 billion USD, 81% of which involved the investments coming from the European Union.

After the enlargement of EU in the new member countries including Poland, new prospects have appeared in terms of inflow of foreign capital in the form of direct investments. As a member of European Community the Polish economy is perceived as more stable, opened, in which a potential investment will be returned quickly and it will be safe. Examples of other countries which entered the EU earlier (e.g. Spain and Ireland) show that integration can contribute for considerable boost of FDI inflow.

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As miscellaneous research result show overseas investments make chances as well as threats for economy of country being hosted, but whether one or the other will occur depends on many factors, first of all on the character of economic policy and subsequent regulation. Decrease of deficiency of capital is, among the others, potentially the most crucial benefit of inflow in economy. That is particularly important for economies proceeding transformation system.

The aim of the research is the presentation of the directions of FDI inflow to Poland (sectoral approach according to Polish Classification of Activities) in the years 1998–2005 and their impact on the international exchange. Data used in the paper come from Polish Statistical Office and detailed information about FDI from Polish Information and Foreign Investment Agency.

2. FOREIGN DIRECT INVESTMENTS IN POLAND IN THE YEARS 1996–2005

Capital flowing in the form of FDI to the Polish economy plays key role in the process of restructurization and privatization. Due to the shortage of native capital, FDI is potentially most desirable because of long duration character and positive external effects. In Poland the capital in the form of FDI appeared in early 90s. Former system transformation in that period was the key factor of locating of foreign capital. Due to it, advantageous legal conditions emerged for foreign investors both from economic and infrastructure point of view. From year to year the scale of phenomenon increased systematically in next years which was caused by greater interest in privatization of Polish enterprises as the consequent aspiration for membership in European Union, which followed in May 2004. After the accession the growth of interest of foreign investors investing in Poland was expected. An important turn in dynamics of inflow happened in the year 2004, when record level of value of capital was achieved (about 13 billions USD). It was expected on this basis that the same growing trend occur in the following years. However, 40% decrease of inflow of capital was observed in the year 2005 in comparison to former year. Table 1 presents detailed information of inflow of capital to Poland during last 10 years.

In the analysis of FDI influence on the host country economy not only the scale of inflow is important but also the type of foreign direct investment. The recent years confirm the growth of investments related to establishing new enterprises (greenfield investments) and decrease of privatization process in economy. Greenfield consist of investors starting up a new activity on the Polish market and reinvesting their increment. In the year 2004 greenfield investments accounted for over half of all investments (58%) and 87% of this type was the increment achieved in the previous years. The value of the foreign capital in the privatization process of Polish companies throughout the previous years decisively decreased (in 2002 36%, in 36%–22%, up to only 17% in 2004).

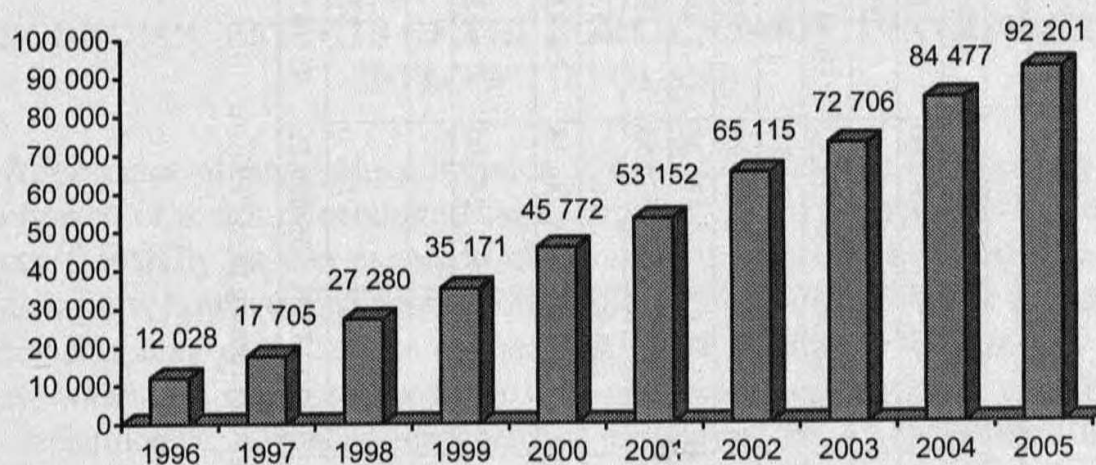
Table 1

The inflow of foreign capital to Poland between the years 1996-2005 (in million \$)

	Years									
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Value of capital	5 197	5 678	9 574	7 891	19 601	7 147	6 064	6 420	12 873	7 724
Dynamics: Previous year = 100	–	109.3	168.6	82.4	134.3	67.4	84.8	105.9	200.5	60.0

Source: own calculation based on data coming from PI&FIA.

The accumulated value of foreign direct investment exceeding 1 million USD in Poland at end of year 2005 amounted to 87.5 billion USD. The value of capital invested in the entities not included in the research (with the participation of foreign capital not exceeding 1 million USD) has been estimated at about 5 billion USD, and thus the accumulated value of FDI exceeded 92.2 billion USD. The Graph 1 presents detailed information of accumulated value of foreign capital in Poland.



Graph 1. The accumulated value of foreign capital in Poland between years 1996–2005 (in million \$)

Source: own calculations based on data coming from PI&FIA.

The next step of the analysis is the value and structure of inflow of FDI according to sections and subsections of economy (Statistical Classification of Economic Activities in the European Community – NACE Rev.1.1). Data used in this chapter came from The List of Major Investors from the years 1998 – 2005. Table 2 presents accumulated value of inflow of FDI to Poland according to section of the economy (investments over 1 million USD).

Table 2

Capital invested in Poland (in million \$) between 1998–2005 by sections of the economy

Section of the economy	1998	1999	2000	2001	2002	2003	2004	2005
A – Agriculture	44.30	41.00	55.70	63.90	68.30	73.10	123.30	46.10
C – Mining and Quarrying	33.8	69.75	29.75	88.45	219.95	224.50	228.60	144.60
D – Manufacturing	14 181.38	15 876.47	18 647.72	20 906.63	23 354.23	25 661.26	29 401.33	31 825.14
E – Electricity, Gas and water supply	1 040	720.8	1 477.35	1 830.65	2 598.1	3 561.80	3 305.80	3 213.79
F – Construction	1 928.85	2 227.78	2 842.6	2 744.65	3 243.35	2 170.95	3 022.55	3 832.84
G – Wholesale and retail trade	2 521.65	3 139.65	3 643.1	5 888.8	7 253.8	7 706.22	10 835.17	10 850.18
H – Hotels and restaurants	468.23	474.53	755.9	676.9	711.7	847.20	944.41	946.65
I – Transport, Storage and Commun	684.95	1 877.7	5 378.9	5 568.95	6 304.35	7 735.32	6 640.77	8 122.34
J – Financial Intermediation	5 962.87	8 786.18	10 829.2	13 110.63	14 502.03	17 282.13	20 510.79	22 951.27
K – Real Estate, Renting and Business Activities	93.06	247.65	533.17	703.07	1 361.02	21 40.92	2 932.92	2 731.18
N – Health and Social Work	–	–	–	–	–	–	–	12.90
O – Other community, Social and Personal Service Act.	319.5	1 547.6	1 574.2	1 569.6	1 824.6	2 036.50	2 704.90	2 800.15
Total	27 278.59	35 009.11	45 767.59	53 152.23	61 441.43	69 439.9	80 650.54	87 477.14

Source: own calculations based on data coming from PI&FIA.

In the recent years the sectoral structure of the foreign capital has remained unchanged as manufacturing and financial intermediations sector are dominant. The largest share of the capital about 32 billion USD has been invested to the manufacturing sector of the Polish economy, which constituted 36.4 share in total FDI inflow. Development of manufacturing sector is quite stable and it is observed that there is the tendency to decrease of the share of this sector of economy in the accumulated value of investments. In 2005 this share was by 18 percentage points lower in comparison to year 1998 when the share was estimated on 52%. The increasing tendency is observed in the share of services sector. In this sector financial intermediation (J) is widely recognized as the most attractive section for foreign investors. In 2005 the investors located about 23 billion USD in this section of the economy, which constituted 26.2% of the total inflow of FDI. Such a structure of foreign direct investments in Polish economy seems to be quite similar to other developed economies, which means that there is a dominant position of FDI in services. The lowest inflow of FDI we can notice in the agriculture sector (A) and mining and quarrying (C). In all period of analysis the share of invested capital has been estimated on the same level (only 0.2%) of total FDI inflow.

3. ECONOMIC EFFECTS OF THE FOREIGN DIRECT INVESTMENT INFLOW TO POLAND

Appearance of new foreign investor on the local market (a host country, region branch or sector of economy) evoke different economic and non-economic effects. Generally we can expect to observe positive aspects of foreign investments inflow, however one cannot forget about threats and problems that those investments may cause on the national market. Regarding effects of the FDI inflow which are expected by the host country we should mention transfer of new technologies, advanced management techniques. As a consequence those two are mainly influencing improvement of work efficiency and production quality (Witkowska 1996, p. 157).

The role of the foreign direct investments in a host country depend on many factors which can be recognized both on the macroeconomic as well as on the microeconomic level. The effects of the inflow of foreign direct investment can be divided into four groups (Zorska 2006, p. 15)

- effects in the access to the production resources,
- effects in goods' market,
- external effects,
- institutional and system effects.

From the perspective of the companies located in the host country, external effects and the level of competitiveness inside the sector seem to be the most important among all mentioned above effects of FDI inflow. Appearance of new foreign investor is always associated with stronger competition in all aspects (Gorynia, ed., 2005). The entrance of foreign players to the specific sector of the host country can usually cause the increasing interest of other foreign firms to invest in that country. Having better information about the market of the host country other firms decide about expansion, mainly because they are afraid of losing their competitive position on the market. The competition inside the sector between firms is getting tougher because of technological and quality advantages of foreign investors. Those competitive advantages force other firms that are already in the sector to invest in development of their products and technologies as well as to searching for new markets.

Poland is facing similar situation to that in Central and Eastern Europe which means that there is a strong link between foreign direct investments and development of the process of system transformation. First period of changes was associated with activity of foreign investors, whose main motives to invest were to possess a greater market share in the host country and to get profits which derives from the access to cheap location of production. At the moment Polish economy is regarded as so called export platform for labor-absorbing industries which are being moved from the countries of their origin. The inflow of foreign technologies, investment in human resources, cooperation with foreign companies as well as better access to the distribution channels lead to the growth of the production efficiency.

Analysis of FDI structure proves the stable tendency for new investment inflow especially to the traditional sectors of economy. Industry is certainly the dominant sector which is encouraging foreign investors to locate their capital and know-how. In Polish industry foreign investors are mainly searching for these branches which are characterized by cheap resources and cheap labor force. Regarding those factors we can mention automobile industry, food production, chemical industry, manufacturing of wood and wood products, manufacturing of non-metallic mineral products, manufacturing rubber and plastic products.

In total investments in the sectors mentioned above surpasses 75% of the total investments in Polish manufacturing. The biggest capital was invested in the food production, where the total amount of invested capital value was 8 billions USD in 2005, moreover its value was almost doubled in comparison to 1998 (see Table 3). The second position took the automobile industry, in which the total amount of invested capital was 5 billions USD. Quite surprising is the fact, the inflow of FDI to automobile industry in Poland caused almost total take-over of this sector by the foreign capital. Also quite interesting for foreign investors was the sector of non-metallic mineral products. This sector in general receives significant number of the FDI inflow in the majority of countries in Central and Eastern Europe.

Table 3

Capital invested in the manufacturing production in Poland between years 1998–2005 (in million \$)

Subsection	1998	1999	2000	2001	2002	2003	2004	2005
DA - Manufacture of food products and beverages; manufacture of tobacco prod.	4 475.45	4 635.35	4 951.25	5 430.32	5 975.92	6 455.15	6 802.65	7 997.71
DB - Manufacture of textiles	409.6	424.3	442.7	438.3	498.8	247.30	290.50	288.75
DC - Processing of leather and Manuf. of leather products	13.8	16.2	18.9	16.3	14.6	31.40	31.40	31.40
DD - Manufacture of wood and products of wood and cork	13	269.2	269.2	1 394.9	1 451.3	1 499.00	1 696.30	1 570.10
DE - Manufacture of pulp, paper and paper products	1 383.2	1 447.43	1 663.23	1 772.6	1 881.85	2 193.30	2 356.95	2 341.28
DG - Manufacture of chemicals and chemical products	1 104.25	1 364.3	1 358.55	1 431.1	2 007.25	2 230.60	2 759.00	2 729.57
DH - Manufacture of rubber and plastic products	412.75	464.03	607.13	612.2	667.6	960.50	1 453.10	1 559.54
DI - Manufacture of other non-metallic mineral products	1645	1 925.45	2 654.55	3 042.3	3 374.45	3 973.70	4 194.60	4 429.56
DJ - Manufacture of basic metals	418.9	337.9	408.5	457.9	549.1	696.50	1 221.40	1 763.89
DK - Manufacture of machinery and equipments not elsewhere classified (n.e.c.)	431.75	612.1	590.05	564.35	800	877.00	1 074.80	991.27
DL - Manufacture of office machinery and computers	1 209.78	1 536.73	2 069.83	2 023.98	2 096.93	2 310.73	2 705.10	2 663.55
DM - Manufacture of motor vehicles, trailers	2 246.97	2 717.68	3 478.28	3 507.63	3 850.38	3 988.08	4 480.58	5 101.19
DN - Manufacture of furniture; manufacturing n.e.c	416.93	125.8	135.55	214.75	186.05	198.00	334.95	357.33
Total	14 181.38	15 876.47	18 647.72	20 906.63	23 354.23	25 661.26	29 401.33	31 825.14

Source: own calculations based on data coming from PI&FIA.

4. ANALYSIS OF FDI INFLOW IMPACT ON THE EXPORT PERSPECTIVES OF POLISH COMPANIES

In this analysis about correspondence between FDI and foreign trade of host country, generally we can notice two types of effects: direct and indirect. In respect to direct effects, foreign companies are more willing to export their products than local companies which experience strong barriers that prevent them from export activities. The most important barriers are restricted to possibilities to build distribution channels and adjust the company's offer to the changing preferences of customers as well as implementing appropriate quality standards and norms. Inability of the company to fulfill those requirements is a very serious barrier in accessing export markets. We can assume that existence of foreign investors on the local markets enables promotion of local companies from the host country through the local linkages. Those linkages can be associated with market transactions which consist of exchange of goods, services, semi-final products, components and resources. On the Polish market we usually notice those linkages in deliveries of components for final products. Analysis of Polish automobile market give very interesting final remarks regarding local content. It is proved that significant number of Polish components are used by foreign companies which produce cars in Poland. On the basis of those assumptions arrived a fact, that Fiat Seicento which is produced in Poland in more than 70% contains components that are Polish. Similar situation was noticed in relation to Polish production of Deawoo Lanos, which in 94% is a Polish car regarding the components that are used in production process (Sztaudynger 2002). The research which was addressed to foreign companies proved that those who are cooperating with local companies underline high quality of semi-final products (38.1%) and deliveries lead time accuracy (30%) of Polish external entities (Gorynia (ed.) 2005).

Concerning that local companies are outside suppliers for foreign companies, it is obvious that they have to regularly improve efficiency and the quality of their services. Cooperation between foreign companies and local firms leads to their better competitive position and give them more chances to compete in export activities.

Apart from direct effects of FDI flow on growth of export, indirect effects should be mentioned as well which can be characterized mainly by deliveries of components by local companies and market access spillovers. We can talk about spillovers effects when local firms are implementing market techniques used by foreign companies and accessing foreign markets, which can be also very fruitful experience for local companies. This means that foreign companies are a great source of information about foreign markets and this is very helpful for local companies which are deciding about expansion to foreign markets.

Direct investments especially those regarding starting a new businesses require import of new machines and appliances that are necessary for production. After starting a business, products can be offered on the local markets but this means reduction of import. So, at the beginning FDI may worsen trade balance, but in a long perspective the trade balance should be improved. The results of this analysis about range of export and import of industry prove significant changes in those economic effects. Between 1998-2005 Polish export was almost tripled. The special attention should be stressed on the analysis from the year 2004, when the growth of export compared to the previous year was estimated at 36%. Those result should be mainly explained by Polish accession to the European Union.

Table 4

Value (in million \$) and dynamics of exports and imports of manufacturing products in Poland between years 1998–2005

Years	1998	1999	2000	2001	2002	2003	2004	2005
Exports								
In million \$	25 881.9	25 254	29 369	33 377.6	38 129.7	50 099.5	68 155	82 670
Dynamics 1998 = 100	100	97.6	113.5	129.0	147.3	193.6	263.3	319.4
Previous year =100	–	97.6	116.3	113.6	114.2	131.4	136.0	121.3
Imports								
In million \$	41 691.8	37 676.1	41 610.9	43 166.1	48 018.1	59 536	76 765	86 328
Dynamics 1998 = 100	100	90.4	99.8	103.5	115.2	142.8	184.1	207.1
Previous year =100	–	90.4	110.4	103.7	111.2	124.0	128.9	112.5
Exports/Imports								
In %	62.1	67.0	70.6	77.3	79.4	84.1	88.8	95.8

Source: own calculations based on data coming from Polish Statistical Office between years 1998–2005.

Interesting conclusion may be drawn from the exports – imports relationship in the period under investigation. In 1998 exports of manufacturing goods accounted 62 per cent of total imports. In next years this percentage was significantly improved reaching in 2005 level of 95 per cent. The analysis proves that FDI were changing in relationship to imports. Low level of this share may lead to the conclusion that FDI play a complementary role of imports as it was in the 90s. Further years, however, changed the character of FDI which substituted imports for domestic production.

Table 5

Results of correlation between FDI, exports, and imports by subsections of manufacturing production

Subsection	FDI and exports		FDI and imports	
	Coefficient of correlation	Determination coefficient in %	Coefficient of correlation	Determination coefficient in %
DA – Manufacture of food products and beverages; manufacture of tobacco prod.	0.93	86	0.90	81
DB – Manufacture of textiles	-0.85	73	-0.79	62
DC – Processing of leather and manuf. of leather products	0.88	77	0.87	75
DD – Manufacture of wood and products of wood and cork	0.69	47	0.69	48
DE – Manufacture of pulp, paper and paper products	0.97	95	0.93	87
DG – Manufacture of chemicals and chemical products	0.92	84	0.95	89
DH – Manufacture of rubber and plastic products	0.98	96	0.99	97
DI – Manufacture of other non-metallic mineral products	0.89	79	0.79	63
DJ – Manufacture of basic metals	0.98	97	0.99	98
DK – Manufacture of machinery and equipments not elsewhere classified (n.e.c.)	0.86	75	0.78	61
DL – Manufacture of office machinery and computers	0.87	76	0.84	70
DM – Manufacture of motor vehicles, trailers	0.94	89	0.88	77
DN – Manufacture of furniture; manufacturing n.e.c	0.44	20	0.48	23
Total production	0.95	91	0.93	87

Source: own calculations.

Table 5 presents results of correlation between FDI, exports and imports for subsections and total manufacturing production based on annual data from 1998 to 2005.

Analyzing the Table 5 the most important correlation between FDI and exports (0.95) and FDI and imports (0.93) is observed for total manufacturing production. It proves that enterprises are highly internationalized. Further analysis across subsections shows such industries which are most competitive in terms of their relationship with exports. There are the following sectors: manufacture of rubber and plastic products (0.98), manufacture of basic metals (0.98), manufacture of pulp, paper and paper products (0.97), manufacture of motor vehicles (0.94), manufacture of food products and beverages; manufacture of tobacco products (0.93), manufacture of chemicals and chemical products (0.92). Such branches like: manufacture of nonmetallic mineral products (0.89), manufacture of leather (0.87), manufacture of office machinery and computers (0.87), manufacture of machinery and equipment not elsewhere classified (0.86) are characterized by relatively high correlation between FDI and exports and imports as well. The lowest positive values of coefficient of correlation are observed for manufacture of furniture (0.44), and high negative correlation FDI and exports (-0.85) and imports (-0.79) for manufacture of textiles. This case proves that manufacture of textiles seems to be less competitive in terms of foreign trade.

As it was stressed high correlation between imports and exports is feature of the most of analyzed branches, because correlation coefficients between FDI and exports and imports are similar, respectively except of four subsections: DI, DK, DM, DB.

5. CONCLUSION

Poland as a member of the European Union should be characterized by strong and competitive economy, which allows to diminish development gape between Poland and Western Europe. There the question arises, whether FDI inflow may accelerate this process generating desired structure and technological changes.

FDI inflow into the Polish industry has significantly modernized the factories with old fashioned production methods and this process started from privatization of state – own enterprises. Moreover, new, so called greenfield companies appeared with modern technologies and innovative techniques of enterprise organization and management. These factors significantly improved labor productivity and production competitiveness which caused dynamic increase of exports of the Polish manufacture products.

The conducted correlation analysis proves high relationship between FDI and foreign trade in mostly analyzed sectors. Branches, where FDI have a positive impact on the exports are: DH, DJ, DE. The lowest correlation is observed in case of DN. Manufacture of textiles shows negative relationship between FDI and foreign trade (imports and exports as well).

So, concluding we may stress that FDI inflowed into Poland significantly caused increase of the Polish exports having a positive impact on the competitiveness of the Polish economy.

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BEZPOŚREDNIE INWESTYCJE ZAGRANICZNE A PROCESY INTERNACJONALIZACJI SEKTORÓW PRZETWÓRSTWA PRZEMYSŁOWEGO W POLSCE

Istotną cechą rozwoju polskiej gospodarki jest rosnące znaczenie międzynarodowych przepływów kapitałowych. W roku 2005 napływ kapitału z tytułu zagranicznych inwestycji bezpośrednich wyniósł 7 668 mln euro.

Stale rozszerzająca się konkurencja ze strony przedsiębiorstw zagranicznych, mających swoje filie w Polsce, jest wyzwaniem dla polskich przedsiębiorstw. Największej konkurencji międzynarodowej poddane były przedsiębiorstwa działające w nowoczesnych sektorach o dużym potencjale innowacyjnym (przemysł samochodowy, elektroniczny, farmaceutyczny). Obecnie ekspansja zagranicznych inwestorów objęła wiele sektorów uprzednio uznanych jako lokalne. Pojawienie się nowych silnych graczy na rynku lokalnym (w branży), jakimi są korporacje międzynarodowe, skłania do wzrostu konkurencyjności zasobów i umiejętności polskich przedsiębiorstw (umiejętności technologicznych, marketingowych, zarządzania, produkcji) oraz wymaga wzrostu stopnia ich umiędzynarodowienia.

Celem autorów jest prezentacja kierunków napływu bezpośrednich inwestycji zagranicznych do Polski (ujęcie branżowe wg klasyfikacji PKD) w latach 1998–2005 oraz ich wpływu na wymianę międzynarodową.

Słowa kluczowe: bezpośrednie inwestycje zagraniczne, sektor przedsiębiorstw, eksport, import.