



Poznań-Atlanta

**Working Papers
in Management, Finance
and Economics**

No. 2

**The attractiveness of the
automotive industry
in Poland for foreign
direct investments**

by

Andrzej Maksymiuk

June 2006

Editorial Committee:

Tadeusz Kowalski, Steve Letza

Henryk Mruk, Konrad Śniatała

Anna Matysek-Jędrych, Secretary of the Editorial Committee

Editing and layout:

Anna Matysek-Jędrych

Cover design:

H&S

© Copyright by MBA Poznań-Atlanta Program

Publisher:

MBA Poznań-Atlanta

Akademia Ekonomiczna w Poznaniu

al. Niepodległości 10

60-967 Poznań

tel. 61 854 38 68 fax 61 856 94 15

mba@ae.poznan.pl

www.ae.poznan.pl/aemba

ISSN: 1895-5479

Printing:

Zakład Graficzny Akademii Ekonomicznej w Poznaniu

Andrzej Maksymiuk*

THE ATTRACTIVENESS OF THE AUTOMOTIVE INDUSTRY IN POLAND FOR FOREIGN DIRECT INVESTMENTS

Abstract

The article describes the influences of foreign direct investments (FDI) on the automotive industry in Poland. The data and indices provided in the work confirm the close relationships between FDI and the automotive industry. The author compares areas of activity of the automotive suppliers in Poland. The main aspects include finance and sales, HR, logistics, quality and production. The used measures allow us to compare the competitiveness of Polish and foreign suppliers. The article emphasizes the major strengths and weaknesses of the sector in Poland, which is ultimately a measure of the attractive the sector for FDI.

The article includes results of research based on the author's questionnaires (with feed-backs from 147 Polish and foreign suppliers). The results illustrated in graphs present tendencies, where foreign suppliers are more competitive than their Polish counterparts. The research also shows a dualism in the Polish automotive industry.

The final part provides an assessment of the perspectives for the automotive industry in Poland. Although competitors are developing rapidly in Central and Eastern Europe, China and India, Poland is still an exceptionally attractive country for FDI, mainly because of the positive attitude of workers, a large number of highly qualified specialists, participation in the EU market, a growing economy, a high standard of living and the development of suppliers based in Poland.

Keywords: attractiveness, competitiveness, FDI, automotive industry.

JEL codes: F23, L62.

Attractiveness for Foreign Direct Investments

The Value of Foreign Direct Investments (FDI) per annum or per capita is one of the most common indices used to compare the attractiveness of countries. The attractiveness of a country for FDI consists of many factors (which are valid also for sectors): low transaction costs, low risks for investment, a developed capital market, assured property rights, high expenditure in research and development (R&D), a highly developed infrastructure, a liberal economy, a lack of barriers for the entrance or exit from the market, a high quality of institutions supporting entrepreneurship and innovations, low taxes for employees, highly qualified specialists, a big domestic market, positive perspectives for the development of the country and political and social stability (Bossak and Bieńkowski 2004, p. 59). The attractiveness of the automotive industry can be increased by additional factors: the number of automotive suppliers qualified by ISO 9000/2000 or TS 16949, the close proximity of car manufacturers, the access to raw materials, a good climate guaranteed by government, operational clusters and co-operation between the industry and universities as well as R&D institutions and consulting companies.

The attractiveness of a sector is strictly related with an assessment of investors. The assessment includes (among other factors) the attractiveness of the local market, production factors and the potential increase of advantages for the sector resulting from FDI. The main measures of attractiveness for FDI are net investments and the

balance of cumulative FDI (i.e. the balance between export and import of capital). Another measure is the share of FDI value in total investment in a country (Bossak and Bieńkowski 2004, p. 133). An analysis of the inflow of direct investment (both local and foreign) into individual sectors reflects the attractiveness of..... Not only the value of such investment is important, but also the foreign investors' attitude and their perspectives or number of investments in R&D centers. Another key factor is share of FDI in GDP.

FDI has an influence on the attractiveness of a sector. However, FDI is also dependent on the competitiveness of the sector. Therefore, the attractiveness of a sector can be measured by its own competitiveness – by comparing indices in the following areas:

- finance (e.g. sales per annum or per capita, dynamic of the sales change, value of export, investment in R&D);
- human Resources (e.g. number of employees, rotation of employees, organizational structure of employees – split into departments: production, R&D, quality, logistics, purchasing);
- quality (e.g. approval for quality standards, PPM level);
- purchasing and Logistics (e.g. number of suppliers, level of safety stock, share of just in time deliveries);
- production (e.g. efficiency of equipment, number of shifts).

The attractiveness of a sector can be compared with other sectors (or industries) in the same or different countries. Some groups of factors can also be separated into individual sectors and then compared with

other sectors. Such a comparison could show which factors have the biggest influence on the attractiveness for FDI.

Indices of attractiveness can be a kind of road map for individual enterprises active in a sector. Based on such a map companies can compare their status with different companies and check their average status in the sector. Such maps can also be a help for companies, which are considering relocation. The investors could easily compare the same sectors in different countries. Of course such maps would be used in parallel to indices published by banks or consulting companies (e.g. Standard&Poors, Moody's, Fitch). The indices used in the maps would present numerical relations and relative changes of the current situation among institutions, economic policy and political, financial and market risk. The investment attractiveness would combine an assessment of the future prospects and the perspectives for development. This is closer to the concept of competitive ability than it is to competitiveness (Bossak and Bieńkowski 2004, p. 134).

The investment attractiveness of a sector does not mean only an investment risk. The risk reflects the probability of achieving the strategic goals of investors (assessed using macroeconomic results), the political and social risk, the financial balance, financial liquidity, debts indices, the ability and access to credits and capital markets (Bossak and Bieńkowski 2004, p. 134). The list of factors can be modified according to needs, sectors and available databases.

FDI in automotive industry in Poland

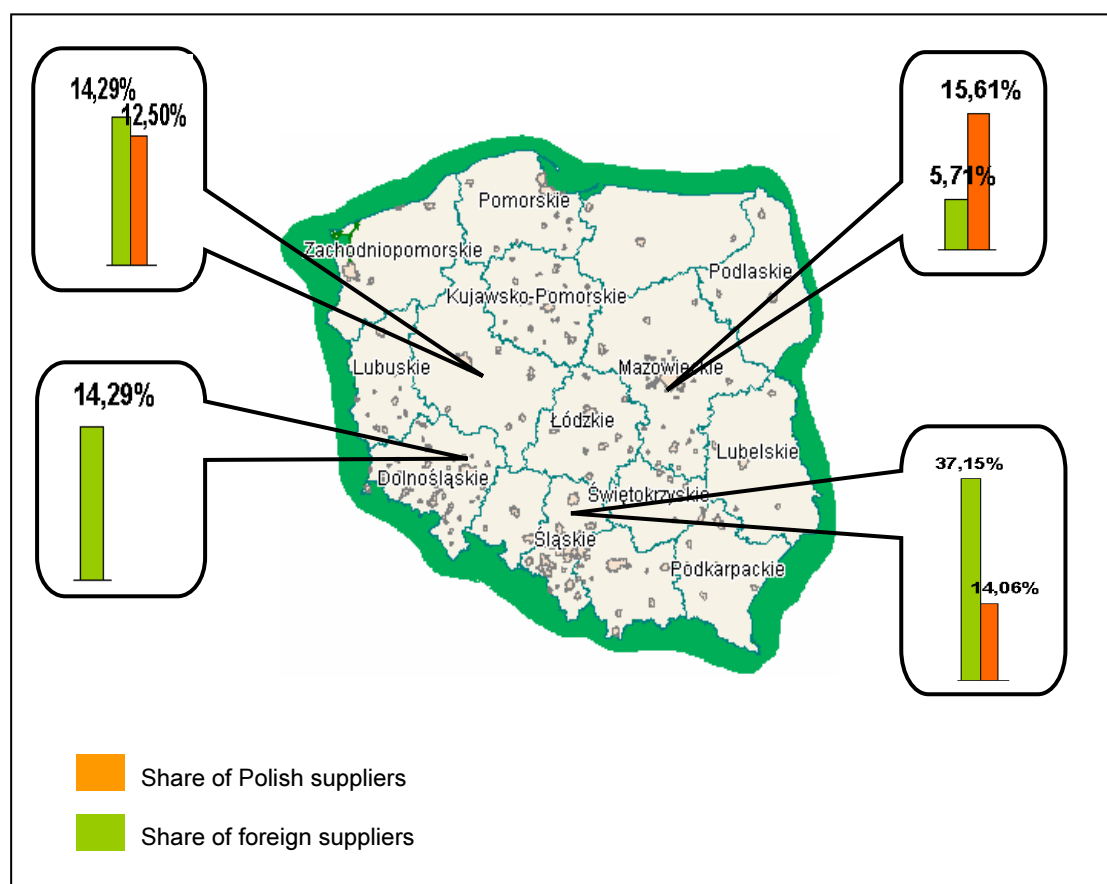
After analyzing the latest reports concerning the attractiveness of Poland for FDI, it is easy to see that Poland is performing below expectations and potential. Many countries from Central and Eastern Europe (CEE) are more competitive. However, the attractiveness of the Polish automotive industry is high estimated – especially since joining the EU. For example, an Ernst&Young report (2005) described Poland as one of the top 5 countries most attractive for the automotive industry in Europe. The automotive sector is the most attractive sector for foreign investors targeting CEE. Although Poland is not highly ranked in IMD or World Bank reports, Poland ranks as one of the top countries (in 4th position according to E&Y's report), where international automotive companies are going to invest. The perspectives for CEE are also very positive. For example, 20% of German automotive suppliers declared that they would increase their activity in this region in the period 2006-2011 compared with 18% in Asia (Automobilproduktion, 2004).

The attractiveness of CEE countries for FDI increased after joining the EU. However, political and economical issues have generate additional barriers, which have slowed the inflow of the next big investors into this region of Europe. Investors from the automotive industry play the main role among foreign investors. They open new factories or take over existing companies, which allows them to increase their market share and meet the requirements of their cus-

tomers (mainly through the high pressure of cost reduction and high quality). This automotive FDI reflects 8% of the total FDI value in Poland and 25% of the FDI value located in the industry (PAIiIZ 2005). The biggest foreign automotive investors in 2005 were Fiat Auto Poland (1,6 billion USD), General Motors Corporation (1 billion USD), Volkswagen AG (835 million USD) and Toyota (507 million USD).

Graph 1.

The most popular regions among the automotive suppliers in Poland



Source: Author's study based on own questionnaires.

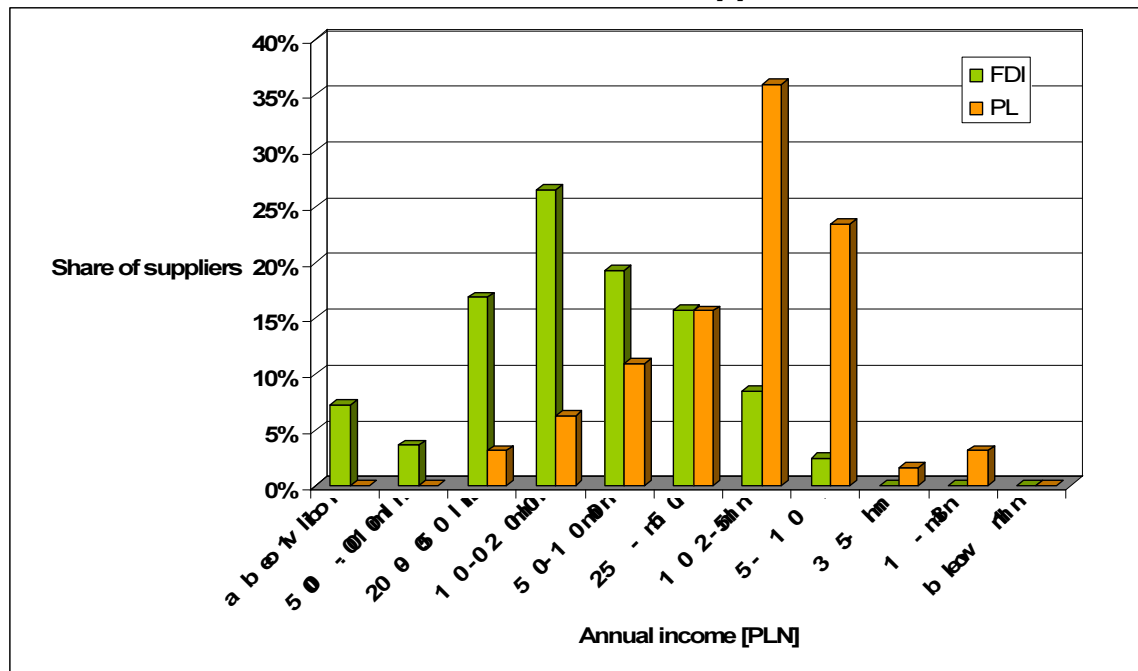
Foreign automotive investors located their activity mainly in four regions in Poland: Śląsk, Dolny Śląsk, Wielkopolska and Mazowsze. The major advantages were the close proximity of car manufacturers, fa-

favorable tax conditions in special economic zones, acquisitions of existing plants, access to good infrastructure (roads and highways) and the close proximity with neighboring countries, where many car producers are located. Graph 1 shows the most popular regions in Poland for foreign investors.

Measures of automotive industry's attractiveness

The measures presented below are based on questionnaires sent to 326 automotive suppliers located in Poland. The researched period included the years 2001-2003. The feed-back received from 147 automotive suppliers show some tendencies, which confirm the general opinion about the influence of FDI on the attractiveness of the automotive industry in Poland. The questionnaires included the following aspects: finance and sales, HR, logistics, quality and production.

Graph 2 shows the share of suppliers relative to annual income. The graph illustrates tendencies among foreign and Polish suppliers. All companies with an income higher than 500 million PLN are foreign investors. No Polish company had income higher than 500 million PLN. Moreover, the ranges 50-500 million PLN were dominated by foreign investors. The Polish companies were in the majority with income in the 'below 10 million PLN' category. This higher income generates not only higher profits, but also decreases the risk of bankruptcy during recessions. Moreover, income's increase was more dynamic for foreign investors than for Polish ones.

Graph 2.**Annual income and percentage share of Polish and foreign suppliers in total number of automotive suppliers in 2003**

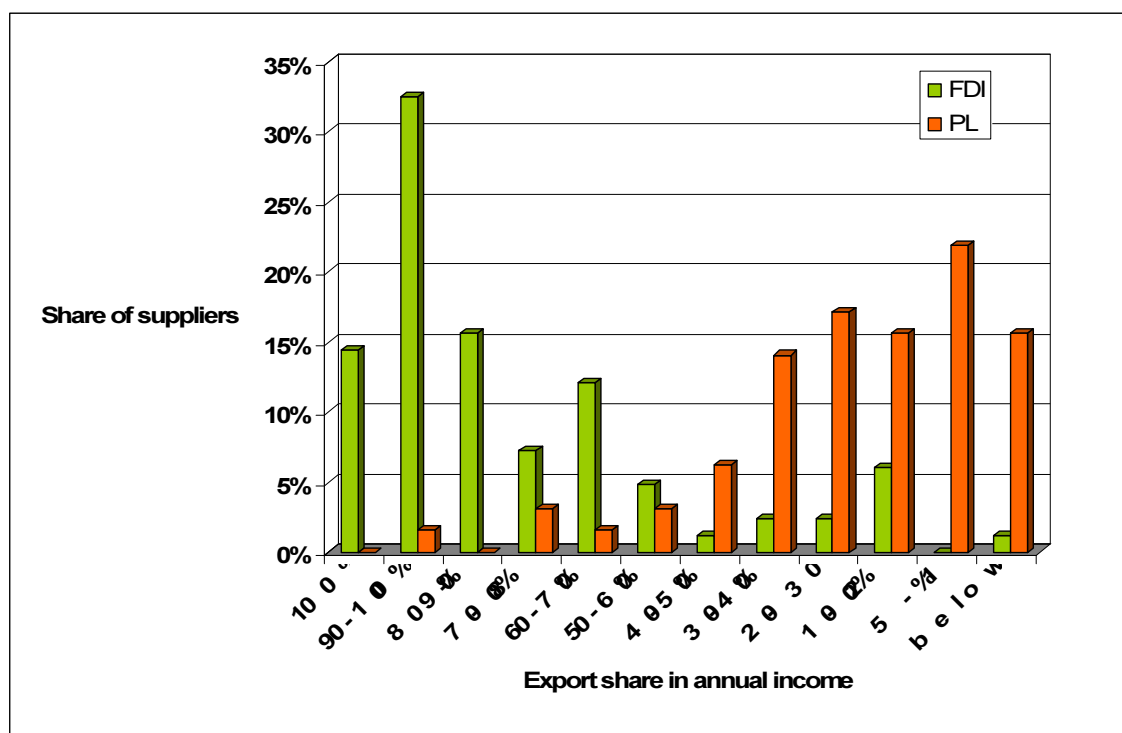
FDI – foreign direct investors

PL – Polish suppliers

Source: Author's study based on own questionnaires.

Significant differences between the Polish and foreign suppliers are easily seen in the evidence looking at the share of export in incomes. Most foreign suppliers export their goods (exports amount to 90-100% of total income), while the Polish suppliers dominate in the ranges, where exports determine 50% of total income (details are presented in Graph 3).

Graph 3.**Export and share of Polish and foreign suppliers in total number of suppliers in 2003**



FDI – foreign direct investors

PL – Polish suppliers

Source: Author's study based on own questionnaires.

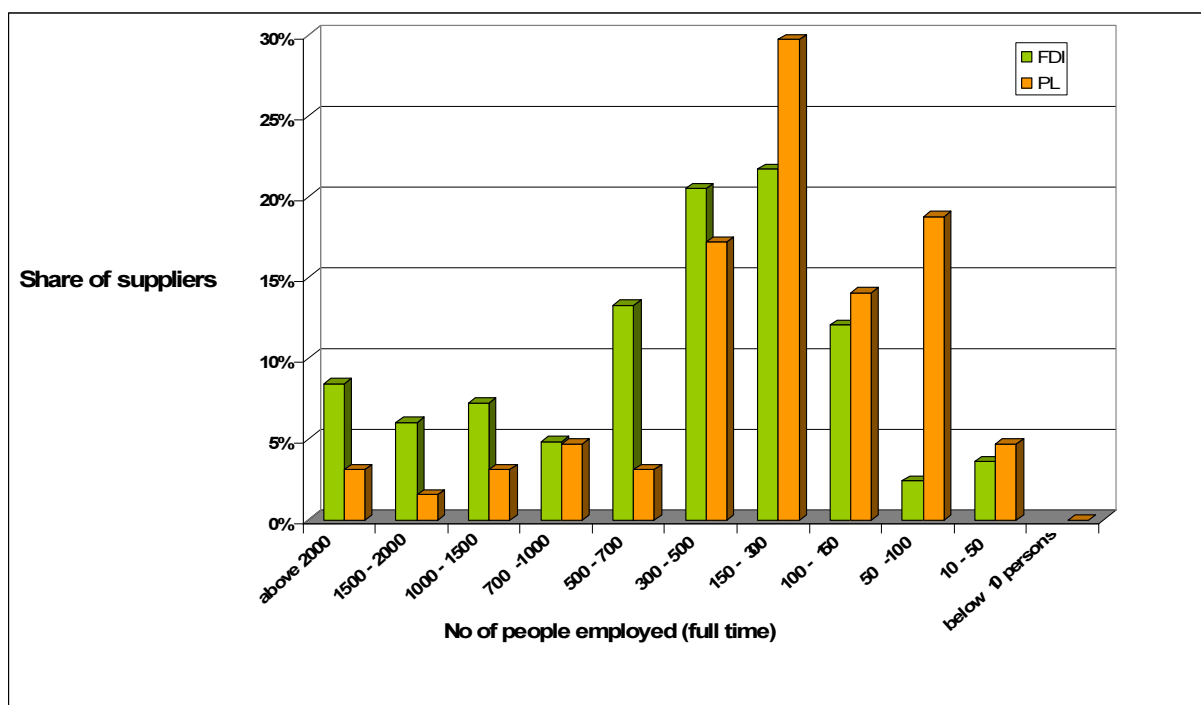
Another factor showing the importance of FDI is a share of sales (to foreign investors based in Poland) in total income. 75% of analyzed foreign suppliers delivered 100% of their goods to other foreign companies in Poland, while 40% of Polish suppliers sold more than 60% of their goods to foreign customers in Poland. Some of the foreign customers are the major players and lay the directions of development in the automotive industry. Usually their requirements are higher than the smaller and local suppliers. Therefore, it could be assumed that suppliers with a higher share of income from foreign companies are more competitive. Very often foreign customers re-

quire their suppliers to follow them to low cost countries (LCC), thus reducing their costs considerably.

Foreign companies increase their competitiveness not only by transferring their equipment to LCC, but also by employing local specialists, who are more enthusiastic and more positively oriented to implement more and quicker improvements than their counterparts abroad. The tendencies are very similar, however foreign investors employ more people in their plants, employ better educated staff, pay better salaries and have lower absence rates.

Graph 4.

Employment and share of Polish and foreign suppliers in total number of suppliers in 2003



FDI – foreign direct investors
PL – Polish suppliers

Source: Author's study based on own questionnaires.

Graph 4 presents relationships between number of people employed by foreign and the Polish suppliers. Polish suppliers dominate among smaller plants, however a majority of the Polish and foreign plants employed 150-249 people. Almost 10% of foreign suppliers employed more than 1999 of people. Such companies could be compared with car manufactures operating in Poland like Fiat (3600 persons employed in 2003). The figures confirm the widely held opinion that FDI (especially green-field) contributes to the increase of employees in the country of localization. Hence, we can conclude that component suppliers in Poland have a bigger influence on the employment rate than car manufactures.

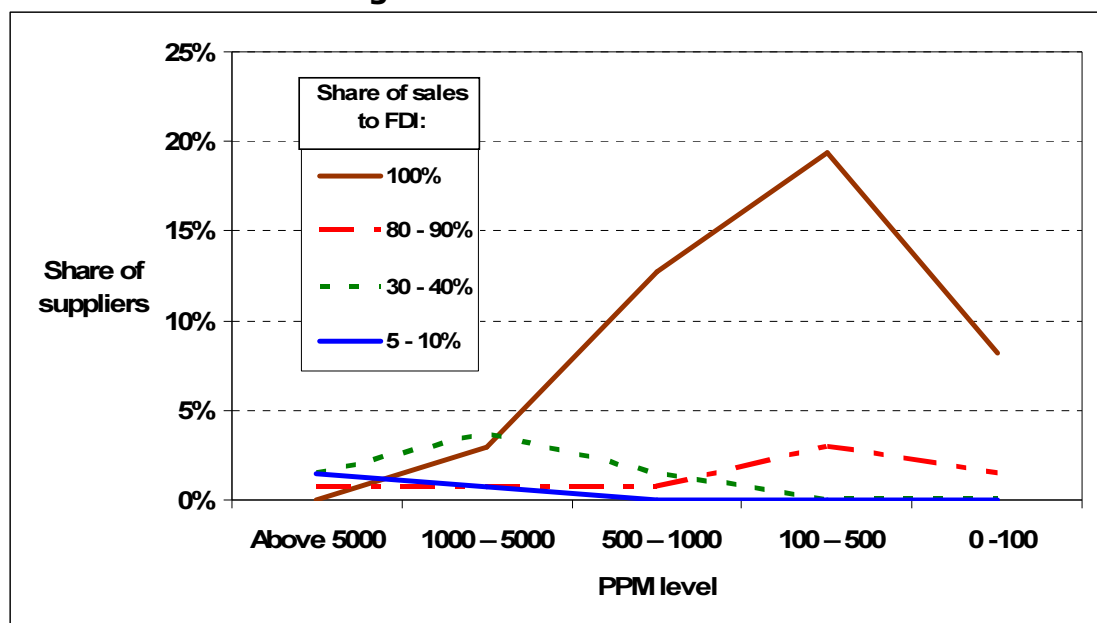
The number of certificated suppliers is another measure of the attractiveness of the automotive industry. The operational quality system is also a key factor of a product's quality. Additionally one of the basic requirements for start co-operation is certificated quality system. The analysis of received questionnaires shows differences between the Polish and foreign suppliers. 63% of foreign suppliers had quality system QS9000 (in comparison of 33% of Polish suppliers). Foreign suppliers (28%) dominated also in quality system TS16949 (21% of the Polish suppliers).

Another quality measure is the PPM (part per million) level. Graph 5 presents PPM level depending on sales to foreign customers. The most common level among the Polish suppliers was range 1000-5000 PPM, while 100-500 and 500-1000 PPM among foreign suppliers.

The analysis of received data shows the influence of FDI on the competitiveness of automotive suppliers. Based on the analysis it could be assumed that if the share of sales to customers with foreign capital is higher, then the PPM level is lower – so the level of defects is lower, which confirms the higher quality of goods. Higher quality increases the competitiveness of a company.

Graph 5.

PPM level and percentage of suppliers with sales to foreign customers in Poland in 2003



FDI – foreign direct investors

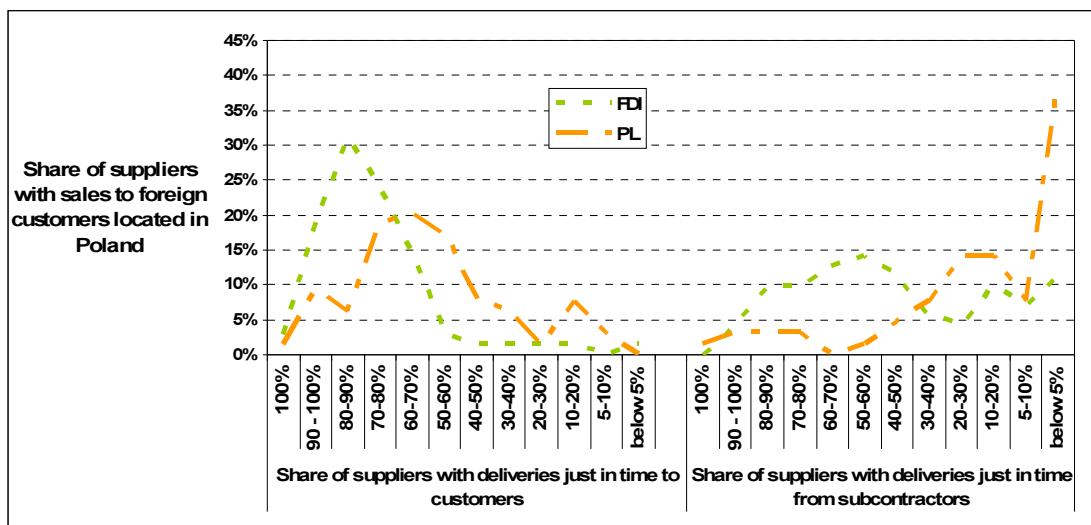
Source: Author's study based on own questionnaires.

The attractiveness of the automotive industry can be assessed by the number of suppliers delivering 'just in time'. The number of suppliers was divided into two areas: deliveries to clients and deliveries from subcontractors. Similar to the previous measure there are differences between the Polish and foreign suppliers. The share of just in time

deliveries for foreign suppliers is significantly bigger than for the Polish suppliers. Most of the foreign suppliers were in ranges 70-100%. The Polish ones were mainly in ranges 50-80%. Similar tendencies are shown for deliveries from subcontractors: 50-90% for foreign suppliers and 0-30% for the Polish ones. The results confirm that the foreign suppliers are more competitive than the Polish ones. It also confirms the positive influence of FDI on the automotive industry in Poland. The number is larger for suppliers, who deliver just in time to their foreign customers based in Poland (Graph 6).

Graph 6.

Share of deliveries just in time and share of suppliers with sales for foreign customers based in Poland in 2003



FDI – foreign direct investors

PL – Polish suppliers

Source: Author's study based on own questionnaires.

Perspectives for the automotive industry in Poland

According to international institutions as well as PAIiIZ (Państwowa Agencja Informacji i Inwestycji Zagranicznych), the plans of automotive suppliers are very positive for Poland as a future location for the development of existing projects and the launching of new ones. Poland was ranked as the 4th most attractive country after the EU, China and India (Ernst & Young, 2005). The main advantages of Poland are its low labour costs (27% less on labour and material (Boston Consulting Group 2005)), its large domestic market, the lack of borders and barriers between Poland and the EU, and the availability of qualified personnel (Global Competitiveness Report, 2003-2004).

Poland's main weakness in attracting the next foreign investors is its weakly developed infrastructure and the low number of suppliers of sub-products and services based in Poland. A similar situation is faced by Poland's main competitors in CEE as well as in Asian countries, including China and India. However, the importance of Asian countries is growing very rapidly, so the weakness can be deleted very soon. Due to long lead times and transport costs many of these components will be manufactured and assembled in Europe with a focus on CEE. Slovakia, Romania and Ukraine can dominate in products that are labor-intensive. In the initial period transnational corporations will move their activity to these countries. The start of this process is currently easy to notice, if we look at the value of FDI in the automotive industry in CEE. These corporations are able to overcome

legal and infrastructural problems quicker, but the overcome increases the transaction costs. Small and medium-sized enterprises (SME) will choose more stable and better developed countries.

Therefore, Poland has a big chance in attracting new investors representing SMEs. 71% of SMEs with annual sales below 100 million EUR are going to invest abroad 2004-2008, mainly in CEE and China (Roland Berger Strategy Consultants 2004). It can not be excluded that components, which are easy to store and transport, will be manufactured in China and then dispatched to CEE to be assembled.

One of the fundamental advantages of FDI is development of local suppliers. They are required to implement the same standards like their customers (e.g. quality systems). They are also followers of the same solutions in the areas of manufacturing, management and logistics. Governments stimulate the process by launching new directives, which very often push suppliers to development (Ernst&Young 2005). This increases the attractiveness of the whole automotive industry.

The importance of the suppliers will also increase in the automotive industry. They will not only deliver a bigger amount of systems, but they will also decide about the design and solutions used in the cars. They will completely decide about 74% of driving systems 53% of interior, 24% of engines, 20% of body (VDA Report 2005). More and more systems will become common for different cars. This will result in the growth of the effectiveness of invested capital and

a higher specialization of employees. The suppliers will also deliver more automotive systems especially in the face of growing car sales in CEE. According to PricewaterhouseCoopers the automotive suppliers will be able to employ 5-6% additional people globally by 2010. Large growth in this type of employment could materialize in CEE, not only in manufacturing but also in R&D (IMD, 2005).

Rapid technical progress is the main factors which make the automotive industry more attractive. For example, electronic systems will boost the automotive industry by approximately 30-40% in sales by 2010 (VDA Report, 2005). Information technologies (IT) are essential in all phases of development of the product (concept, design, prototyping), through manufacturing, logistics (shorter lead times, just in time deliveries, small safety stock), purchasing (including e-auctions) and up to sales and after-sale services. IT reduces the period of implementation of solutions and the costs of implementation. It supports the transfer of data around the world and makes it easier for transnational corporations to develop their products in a country that offers the most favorable conditions for FDI. IT is also one of the first tools which helps during mergers and acquisitions.

The automotive industry could face some issues in the future. There could be a fall in the popularity of cars because of increases in car prices (e.g. raw material), increases in maintenance costs (taxes and fuel) and the appearance of substitutes for the car (Auto Annual Report, 2005). Another threat for the automotive industry could be

triggered by an increase in transaction costs. It would be rather difficult to find such a situation in all automotive regions in the world, however decline in one of the regions (e.g. nationalization or a change of law against FDI in a big country) would bring higher losses and an extension of profits from investments in the longer term (Key Indicators on the competitiveness of the EU's Automotive Industry, 2005). Many companies could be stopped because of a lack of components. Poland with its strengths and opportunities reduces the risk of losses and is an attractive place for future investors (European Competitiveness Report 2004).

NOTES

*

Bibliography

Auto Annual Report 2005 (2005). VDA, Frankfurt/Main.

Badanie: Produkcja samochodów w Europie Zachodniej zagrożona? (2005). Ernst&Young.

Bossak, J.W., Bieńkowski, W. (2004). „Międzynarodowa zdolność konkurencyjna kraju i przedsiębiorstw”, Wydawnictwo Szkoły Głównej Handlowej, Warszawa.

Emerging Economies Stake Their Claim (2005). Ernst&Young, European Attractiveness Survey.

Entwicklungsverlagerung auf Zulieferer, Automobilproduktion, 10.05.2004.

European Competitiveness Report 2004 (2005), EU.

FDI Confidence Index (2004), AT Kearney October.

The Global Competitiveness Report 2003-2004 (2004), World Economic Forum, Oxford, Oxford University Press.

Global footprint design – Mastering the rules of international value creation (2004), Munich, Roland Berger Strategy Consultants.

Hunya, G. (2004). Foreign Direct Investment in South East Europe in 2003-2004, Vienna, WIEW and OECD.

Lista największych inwestorów zagranicznych w Polsce w 2004 roku (2005), Warszawa, PAIiIZ.

Key Indicators on the competitiveness of the EU's Automotive Industry (2005), EU/Brussels, 13.01.2005.

The World Competitiveness Yearbook 2005 (2005), Lausanne, IMD.

Wziątek-Kubiak, A. (2003). Konkurencyjność polskiego przemysłu, Dom Wydawniczy Bellona, Warszawa.