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POLAND IN INTERNATIONAL PRODUCTION NETWORKS OF AUTOMOTIVE INDUSTRY

INTRODUCTION

Fragmentation and internationalization of production led to the creation of international (or global) production networks. Poland also participates in these cross-border production systems. The aim of the study is to answer the question of what role the Polish economy plays in the international production networks of the automotive industry. Due to the availability of data, the study mainly focuses on the period 1995-2011, but if possible, facts relating to later years are also included.

The automotive industry is of considerable importance to the Polish economy (especially exports), which is why I chose it as a subject of the analysis. In the years 2004-2011, the automotive industry (manufacture of motor vehicles, trailers and semi-trailers¹) produced goods representing approximately 1.2-1.4% of Poland's GDP². As far as employment is concerned, 1.3-1.6% of all employees be-

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¹ According to the Statistical Classification of Economic Activities in the European Community, Rev. 2 (NACE Rev. 2).

² Eurostat data, <http://ec.europa.eu/eurostat> [access: 06.08.2017]. In the last update of Eurostat data from 29/09/2016 2011 is the last year for which data on the share of particular industries in generating GDP and employment is available. Data before 2004 for the automotive industry is also not available.

longed to the automotive industry in the years 2004-2011³. In addition, the share of automotive industry products in the total exports of Polish goods and services in 2004-2011 was around 10% (in 1995 it was just over 3%, in 2003 over 7%, in turn in 2012-2016 it was around 9%)⁴. The fundamental factor shaping the functioning of the automotive industry in Poland is foreign direct investment (FDI). In 2012, the value of the FDI resources flowing into the Polish automotive industry accounted for over 4% of the total value of the FDI resources flowing to Poland⁵. The facts about exports and FDI encourage to study the Polish automotive industry precisely in the international context.

The study consists of two main parts. The first concerns foreign direct investment and production, while the second concerns international trade. The study uses an analytical and descriptive method using statistical data collected by Eurostat, UNCTAD, OECD and WTO, as well as information on the websites of companies from the automotive industry.

DIRECT FOREIGN INVESTMENTS AND PRODUCTION

In Poland there are production plants of many leading transnational corporations (coming from, among others, Japan, Germany, Sweden, USA or Italy) from the automotive industry. Currently, the most important automotive industry concerns whose plants operate in Poland include: Fiat Chrysler Automobiles⁶ (factory in Tychy – manufacture of cars Fiat 500, Abarth 500, Lancia Ypsilon, Ford Ka; factory of engines in Bielsko-Biała; Magnetti Marelli plants in Sosnowiec and Bielsko-Biała producing car lighting, exhaust systems, suspensions, shock-absorbers, fuel supply systems, dashboards and bumpers; the Teksid Iron Poland factory that manufactures cast iron castings in Skoczów), General Motors⁷ (Opel car factory in Gliwice), Volkswagen Group⁸ (production plants VW Caddy and VW Transporter as well as cast plant manufacturing engine heads in Poznań; in Września a new factory is being built), MAN⁹ (assembly of trucks from the TGS and TGX series in Niepołomice; factory of MAN city buses and tourist NEOPLAN in Starachowice), Volvo¹⁰ (production plant (integrated chassis and body assembly) of Volvo buses in Wrocław), Scania¹¹ (production of city buses Scania City Wide and bus chassis in a factory in Słupsk) and Toyota¹² (production of engines, gearbox, crankshafts and connecting rods in Wałbrzych). In 2019,

³ Ibidem.

⁴ UNCTAD data, <http://unctad.org/en/Pages/statistics.aspx> [access: 06.08.2017].

⁵ OECD data, http://stats.oecd.org/Index.aspx?DataSetCode=FDI_FLOW_INDUSTRY [access: 06.08.2017].

⁶ FCA Poland, <http://fcagroup.pl/fca-w-polsce/zaklady-grupy-fca-w-polsce/> [access: 21.08.2017].

⁷ General Motors Poland, <http://www.opel.pl/poznaj-opla/gmmp-gliwice/fabryka-opla-w-gliwicach/start.html> [access: 21.08.2017].

⁸ Volkswagen Group Polska, <http://www.volkswagen-poznan.pl/pl> [access: 21.08.2017].

⁹ MAN Truck & Bus Polska oraz MAN Trucks, <https://www.truck.man.eu/pl/pl/man-na-swiecie/man-w-polsce/lokalizacje/starachowice/Starachowice.html> oraz <https://www.truck.man.eu/pl/pl/man-na-swiecie/man-w-polsce/lokalizacje/krakow/Krakow.html> [access: 21.08.2017].

¹⁰ Volvo Polska, <http://www.volvobuses.pl/pl-pl/home.html> [access: 21.08.2017].

¹¹ Scania Polska, <https://www.scania.com/productionunitslupsk/pl/home.html> [access: 21.08.2017].

¹² Toyota Motor Poland, <http://www.toyotapl.com/walbrzych/> [access: 21.08.2017].

the Mercedes-Benz engine factory is planned to start in Jawor (Daimler concern)¹³.

In addition, three factories are located in Poland (Mielec, Gliwice, Gniezno) belonging to Kirchoff Automotive¹⁴, in which metal constructions and metal-aluminium connections are made to the body and chassis. On the other hand, Valeo¹⁵ has four production plants in Poland: the engine systems production plant in Skawina, the wiper systems production plant also in Skawina, the lighting systems production plant in Chrzanów and the plant for the production and regeneration of drive systems in Czechowice-Dziedzice. Automotive parts are also produced at five plants owned by Lear Corporation¹⁶ (Tychy JIT – headrests, armrests, bolsters, plating and foam of car seats; Lear Tychy Structures – car seat constructions, Lear Jarosław – car seat covers; Legnica Metals – steel constructions, guides and mechanisms of car seats. Lear Mielec – electric wire harnesses for passenger cars). In addition, ZF concern¹⁷ produces safety seat belts and air bags in Poland (plant in Częstochowa), steering systems (plant in Bielsko-Biała), control systems (plants in Czechowice-Dziedzice and Pruszków) and braking systems (plant in Gliwice). Brembo also has three production plants in Poland¹⁸. Brake systems are produced in Częstochowa and Dąbrowa Górnicza, while specialized steel casings are manufactured in Niepołomice. At the end of the review of the most important, though not all, FDI in Poland, it is worth mentioning Kapena¹⁹ producing e.g. buses (factory in Włynkówek), whose main shareholder is Cacciamali.

As I mentioned, at the beginning of this decade the value of the FDI incoming to the Polish automotive industry accounted for over 4% of the total value of the FDI resources arriving in Poland. The last year for which the OECD data on the FDI inflows to individual industries is available is 2012. As a result, the statistical data presented in this section do not cover all previously described FDI in Poland in the automotive industry, but illustrate tendencies in quite a long period, i.e. in the years 1995-2012 – see Table 1.

¹³ Mercedes-Benz Jawor, <http://mercedes-benz-jawor.com.pl/fabryka-w-jaworze/> [access: 21.08.2017].

¹⁴ Kirchoff Automotive, <http://www.kirchoff-automotive.com/pl/firma/lokalizacje-na-swiecie/europa/polska/> [access: 22.08.2017].

¹⁵ Valeo, <http://valeo-poland.com/pl/valeo-in> [access: 22.08.2017].

¹⁶ Lear, http://www.lear.pl/lear_w_polsce/lear_w_pl.html [access: 22.08.2017].

¹⁷ ZF, https://www.zf.com/poland/pl_pl/corporate/meta_folder/contact_corporate/contact_overview.html [access: 22.08.2017].

¹⁸ Brembo, <http://www.brembo.com/pl/grupa/about/brembo-na-%C5%9Bwiecie#europa> [access: 22.08.2017].

¹⁹ Kapena, <https://www.kapena.com.pl/O-firmie> [access: 22.08.2017].

Table 1. FDI incoming to the Polish automotive industry in the years 1995-2012

Year	Value of FDI inward stocks to the Polish motor industry in mln USD	Share in total FDI inflows to Poland	Value of incoming FDI inflows to the Polish automotive industry in mln USD	Share in total FDI streams entering Poland
1995	125.0	1.6%	58.8	1.6%
1996	801.4	7.0%	341.7	7.6%
1997	835.8	5.7%	193.2	3.9%
1998	1 561.3	6.9%	465.6	7.3%
1999	1 767.2	6.8%	279.9	3.9%
2000	2 070.8	6.1%	279.8	3.0%
2001	1 991.4	4.8%	55.1	1.0%
2002	2 213.9	4.6%	387.5	9.4%
2003	3 307.1	5.7%	766.5	15.7%
2004	5 687.3	6.6%	937.5	7.3%
2005	5 594.7	6.2%	391.0	3.8%
2006	6 990.8	5.6%	601.2	3.1%
2007	9 421.7	5.3%	948.2	4.0%
2008	6 715.0	4.1%	-527.7	-
2009	8 385.2	4.5%	624.1	4.6%
2010	8 654.8	4.0%	1 005.5	7.2%
2011	8 435.9	4.2%	-129.8	-
2012	10 537.8	4.5%	1 680.2	27.7%

Source: Own analysis based on OECD data, https://stats.oecd.org/Index.aspx?DataSetCode=FDI_FLOW_INDUSTRY [access: 06.08.2017].

I start by discussing the changes in the value of the FDI resources flowing into the Polish automotive industry. In the years 1995-2007 (except for minor declines in 2001 and 2005), the value of the FDI resources increased and in 2007 it was over 75 times higher than in 1995 and over 4.5 times higher than in 2000. The year 2008 brought a significant (almost 29%) decline in the value of the FDI resources flowing into the Polish automotive industry. It was connected with the beginning of the world crisis. The next two years brought an increase, there was a slight drop in 2011, and in 2012 the value of the FDI resources reached a level higher than in 2007. In the last five years of the analysed period, the value of the FDI resources flowing into the Polish automotive industry accounted for around 4% of the total value of the FDI resources flowing to Poland. Earlier, this share was subject to greater fluctuations, but beyond 1995 it exceeded 4%. These numbers, together with the presence of leading global automotive concerns in Poland, confirm that the FDI is crucial for the Polish automotive industry.

As for the value of the FDI streams flowing into the Polish automotive industry, they are subject to greater fluctuations than the value of the FDI resources (this is not due to the specificity of the automotive industry, but because the FDI streams usually fluctuate more strongly than the value of the FDI resources).

In particular, the two years in which there were the so-called divestments (negative stream value) are worth noting. It is about the years 2008 and 2011, in which divestments were probably related to the beginning and duration of the global economic crisis. In 2012, the highest value of the FDI streams flowing to the Polish automotive industry was recorded.

Table 2. FDI flowing out of the Polish automotive industry in the years 1995-2012

Year	The value of FDI outward stocks to the Polish automotive industry in USD million	Share in total FDI resources flowing out to Poland	The value of FDI outflows to the Polish automotive industry in USD million	Participation in total FDI outflows to Poland
1995	0.0	0.0%	0.0	0.0%
1996	b.d.	b.d.	b.d.	b.d.
1997	b.d.	b.d.	b.d.	b.d.
1998	65.0	5.6%	65.0	20.6%
1999	60.3	5.9%	-3.3	-
2000	56.2	5.5%	b.d.	b.d.
2001	0.3	0.0%	-53.7	60.6%
2002	1.7	0.1%	1.6	0.7%
2003	43.3	2.0%	-1.2	-
2004	113.1	3.4%	89.3	9.8%
2005	139.4	2.2%	47.4	1.4%
2006	157.8	1.1%	29.6	0.3%
2007	181.0	0.9%	27.5	0.5%
2008	134.7	0.6%	180.6	4.0%
2009	228.5	0.8%	133.1	2.6%
2010	1 308.0	2.9%	22.3	0.3%
2011	2 280.3	4.3%	641.5	7.9%
2012	2 663.1	4.6%	202.8	28.3%

Source: Own compilation on the basis of the OECD data, https://stats.oecd.org/Index.aspx?DataSetCode=FDI_FLOW_INDUSTRY [access: 06.08.2017].

The values of the FDI resources and streams flowing out of the Polish automotive industry are much lower than the value of the FDI resources and streams flowing into the Polish automotive industry. Before 2010, the value of the FDI outflows accounted for at most 2% of the value of the FDI inflows. In the years 2010-2012, there was a marked increase in the value of the FDI outflows – see Table 2. As for the share of the FDI resources flowing out of the Polish automotive industry in the total FDI resources leaving Poland, in 2011-2012 it was close to the corresponding share of the FDI inflow to Poland. On the other hand, the values of FDI flows leaving the Polish automotive industry were subject to quite large fluctuations.

An example of a Polish company from the automotive industry that has invested abroad is the Boryszew Group²⁰. It is a producer of various automotive components. The plant in Tychy manufactures air-conditioning ducts, whereas the Chełmek plant produces rubber for air-conditioning ducts as well as wires. From 2014, the Boryszew Group also includes Tensho Poland in Ostaszewo dealing with the production of plastic parts for the automotive industry (e.g. dashboards, storage compartment elements and car seats, engine covers). In 2010, the Boryszew Group began an international expansion taking over assets of the Italian Marlow Group in Italy, France, Spain, Brazil and China.

Other Polish companies from the automotive industry are worth mentioning here. Perhaps some of them in the future will decide to start production abroad. These are: Solaris Bus & Coach²¹ (bus manufacturer), Jelcz²² (currently the production of heavy-loaded trucks, until 2008 also buses), Autosan²³ (production of buses), Wielton²⁴ (production of semitrailers, trailers and body), Mega²⁵ (production of semitrailers and axles for semi-trailers and trailers), AMZ²⁶ (production of special vehicle bodies), EM-TECH²⁷ (production of semitrailers and trailers).

In summary, most of the production in Poland takes place in the branches of foreign transnational corporations operating in the automotive industry. In the years 2008-2014, the share of the production of foreign branches of KTN in total production was respectively: 87.26%; 87.18%; 90.40%; 92.29%; 89.67%; 89.48% and 88.51%²⁸.

INTERNATIONAL TRADE

Considerations regarding trade in automotive products start with the analysis of the percentage of the national added value in Poland's gross exports— see Chart 1. It is one of the key indicators allowing to determine the place of Poland in the international production networks of the automotive industry. Starting from 1998, the mentioned percentage in the automotive industry is lower than 60%, and in 2007-2008 it was even lower than 50%. This means that together with the intensification of the FDI inflows to Poland, foreign components play an increasingly important role in the production of goods exported from Poland. The importance of these components in the automotive industry is on average higher than overall in the industry and overall in the entire economy.

The average percentage of the national value added in Polish gross exports of automotive industry products in the years 1995-2011 amounts to 56.5%. For comparison, the analogous content in Czech exports is 49%, Slovakia – 36%,

²⁰ GrupaBoryszew, http://www.boryszew.com.pl/O_Grupie [access: 22.08.2017].

²¹ Solaris, <https://www.solarisbus.com/> [access: 22.08.2017].

²² Jelcz, <http://www.jelcz.com.pl/> [access: 22.08.2017].

²³ Autosan, <http://www.autosan.pl/> [access: 22.08.2017].

²⁴ Wielton, <http://wielton.com.pl/> [access: 22.08.2017].

²⁵ Mega, <http://www.mega-nysa.pl/> [access: 22.08.2017].

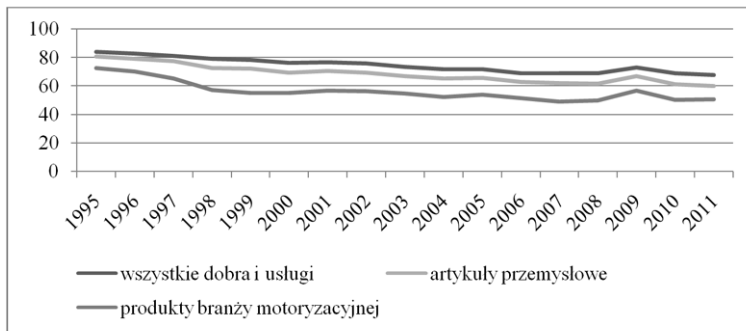
²⁶ AMZ, <http://www.amz.pl/> [access: 22.08.2017].

²⁷ EM-TECH, <https://emtech.org.pl/> [access: 22.08.2017].

²⁸ Data of Eurostat, <http://ec.europa.eu/eurostat> [access: 10.09.2017].

Hungary – 38.9%. In the case of Germany, this indicator is 73.1%, Japan 90.1%, Sweden 57.1%, the USA 72.8%, Italy 72%²⁹. Therefore, in the case of other Visegrad Group countries, foreign components play an even greater role than in the case of Poland. On the other hand, in the home countries of the largest automotive concerns, which are key foreign investors in Poland, the percentage of the national value added in gross exports is definitely (except for Sweden) higher than in Poland.

Chart 1. Percentage of national added value in Poland's gross export in the years 1995-2011



All goods and services

manufactured goods

automotive industry products

Source: Own compilation on the basis of the OECD data, https://stats.oecd.org/Index.aspx?DataSetCode=TIVA_2016_C1# [access: 06.08.2017].

The next step is to check the supposition that in the gross export of the Polish automotive industry final goods predominate, while in gross imports intermediate goods. The data contained in Table 3 generally supports this assumption, although there are some exceptions and the situation is more complex. While in all years of the period 1995-2011, the value of gross exports of final goods exceeded the value of gross exports of intermediate goods, there are many years in which the gross value of final goods was higher than the value of imports of intermediate goods. It is about the period 1995-2004 and the years 2007-2008. In addition, in many years the predominance of the export value of final goods over the value of exports of intermediate goods is not large.

²⁹ OECD data, https://stats.oecd.org/Index.aspx?DataSetCode=TIVA_2016_C1# [access: 06.08.2017].

Table 3. Export and import from / to Poland of automotive industry products in the years 1995-2011

Year	Export of final goods (mln USD)	Export of intermediate goods (mln USD)	Share of export of final goods in the exports of all goods	Share of export of intermediate goods in the exports of all goods	Import of final goods (mln USD)	Import of intermediate goods (mln USD)	Share of import of final goods in the imports of all goods	Share of import of intermediate goods in the imports of all goods
1995	764.4	362.9	67.8%	32.2%	882.1	482.1	64.7%	35.3%
1996	879.2	425.7	67.4%	32.6%	1 567.1	778.7	66.8%	33.2%
1997	986.1	499.9	66.4%	33.6%	2 286.7	1 067.8	68.2%	31.8%
1998	1 367.2	758.9	64.3%	35.7%	2 751.5	1 691.4	61,9%	38.1%
1999	1 544.2	942.5	62.1%	37.9%	2 439.1	1 577.9	60,7%	39.3%
2000	2 249.0	1 474.8	60.4%	39.6%	2 555.7	1 674.5	60,4%	39.6%
2001	2 362.9	1 680.3	58.4%	41.6%	2 526.7	1 723.0	59,5%	40.5%
2002	2 672.0	1 960.5	57.7%	42.3%	3 134.4	1 884.2	62,5%	37.5%
2003	3 763.4	3 015.6	55.5%	44.5%	4 162.6	2 719.5	60,5%	39.5%
2004	5 919.1	4 471.0	57.0%	43.0%	4 704.0	4 194.3	52,9%	47.1%
2005	7 125.8	5 413.8	56.8%	43.2%	4 366.2	4 475.7	49,4%	50.6%
2006	8 958.0	6 880.0	56.6%	43.4%	4 887.0	5 586.1	46,7%	53.3%
2007	10 719.2	8 707.5	55.2%	44.8%	8 334.4	7 955.7	51,2%	48.8%
2008	12 752.0	9 904.1	56.3%	43.7%	10 303.0	9 251.1	52,7%	47.3%
2009	10 715.7	7 379.9	59.2%	40.8%	4 718.8	4 890.9	49,1%	50.9%
2010	11 677.5	9 407.9	55.4%	44.6%	5 931.2	7 415.2	44,4%	55.6%
2011	13 214.2	10 737.8	55.2%	44.8%	6 135.0	7 696.5	44,4%	55.6%

Source: Own study on the basis of the OECD data, https://stats.oecd.org/Index.aspx?DataSetCode=TIVA_2016_C1# [access: 06.08.2017].

It is probably a consequence of the fact that some foreign branches of automotive concerns operating in Poland are assemblies of final goods, and some produce intermediate goods. The same applies to domestic enterprises. Examples of one and the other were mentioned in the previous part of the study. As a result, the average (1995-2011) percentage of both domestic and foreign value added in Polish gross exports of automotive goods is similar. There is no clear advantage of either of them, as is the case, for example, in Slovakia (pronounced foreign advantage) or in Japan (a distinct national advantage).

At the very end of this part I use the ratio of participation in global value chains for the analysis³⁰ (*participation in GVC index*; further also as *GVC index*), which is the sum of shares in these chains as a recipient of foreign components (semi-products) used in domestic production (*participation index, backward*, further also as *GVCback index*) and participation as a supplier (manufacturer) of semi-finished products for manufacturing final products abroad (*participation index, forward*, further also as *GVC for index*). The first partial indicator (*GVCback index*) equals the sum of shares of foreign inputs in the national gross

³⁰ It is an equivalent of international (global) production networks used by OECD. The production networks and value chains are exactly the same, but they are similar concepts.

exports. In simplification, it can therefore be considered as participation in the lower parts³¹ of global value chains. On the other hand, the second fractional share (*GVCfor index*) allows to measure the share of domestically produced inputs in the third countries in gross domestic exports and can be defined as the share in the upper parts of GVC.

The value of the total share in global value chains, i.e. the sum of the value of shares as a supplier of semi-products to GVC and as a recipient of foreign components under GVC, informs about the intensity of the production cooperation of the country with foreign countries. The higher this value, the more intensively the country cooperates as part of production processes with foreign countries. On the other hand, the values of partial shares (comparing them in relation to each other) in global value chains inform about the place occupied by a given country in GVC.

A relatively high value of the share ratio in the lower parts of GVC (as a recipient, *GVCback index*) with a relatively low value of share in the upper parts of the chains (as a supplier, *GVCfor index*) most often means a situation in which the country imports foreign semi-products or parts for final products and converts them in the final goods (assembling, packing, etc.) and then exports. It is reasonable to assume that such a country is internationally competitive in terms of wages and that is why assemblies are located in it, while it is not a leader in innovation, as a result of which it purchases technologically advanced semi-products abroad, combines them into a finished product and then exports. Such a country is usually not the home country of the great TCNs, but the host country of their foreign affiliates.

On the other hand, the relatively high value of the index in the upper parts of GVC (*GVCfor index*) with a relatively low index value in the lower parts of the chains (*GVCback index*) means that the country plays an important role as a supplier of components used in international production. Such a place is occupied mainly by relatively technologically advanced countries that manufacture semi-products and supply them to foreign assemblers. Therefore, it is about economies with a consolidated position of suppliers of technologically advanced products and services to global value chains. Most often these are the home countries of the largest TCNs, which account for the majority of global research and development (R & D)³².

It should be remembered that the presented interpretation of the value of partial indicators of shares in global value chains is simplified, as many factors influence the size of their shares. It is, among others, about the size of the domestic market, the level of the country's development, the sectoral structure of the

³¹ The name „upper parts” refers not only to GVC, but also to other multistage production processes. The upper parts fall on the beginning of the production process. Thus they refer to e.g. extraction and processing of raw materials into semi-products (also technologically advanced semiproducts key for international production), not to the manufacture of final products. The production of final goods (consumer and production) is, in this context, referred to as “lower parts” of the production process.

³² *Participation of Developing Countries in Global Value Chains. Implications for Trade and Trade-Related Policies*, OECD, Paris 2015, pp. 7-8.

economy or foreign economic policy³³. It does not change the fact that (assuming that it is impossible to manufacture the entire product from raw material to the final product in one country) it is considered particularly desirable to participate in the upper parts of GVC, i.e. as an intermediate supplier for manufacturing final goods abroad as part of international production networks. Such a share is associated with the production of a relatively high value added, and often also with a sophisticated production specialization, which does not allow easy replacement of a given supplier with others³⁴.

Table 4. Poland's share ratios in global value chains for the automotive industry * in years 1995-2011

Year	Share as a recipient of foreign components (GVCback index)	Share as a supplier of components in international production (GVCfor index)	Total share (GVC index)
1995	1.0	2.0	3.0
1996	1.2	2.0	3.2
1997	1.5	2.3	3.8
1998	2.1	2.4	4.5
1999	2.9	2.9	5.8
2000	3.8	3.1	6.9
2001	3.6	3.4	7.0
2002	3.8	3.7	7.5
2003	4.6	3.8	8.4
2004	5.7	3.8	9.5
2005	5.5	3.9	9.4
2006	5.9	3.9	9.8
2007	6.1	3.8	9.9
2008	5.8	3.5	9.3
2009	4.9	3.4	8.3
2010	5.7	3.5	9.2
2011	5.5	3.8	9.3

* Components coming from various industries and used in the automotive industry are considered; indicators are calculated as % of exports of all goods and services.

Source: Own study on the basis of the OECD data, https://stats.oecd.org/Index.aspx?DataSetCode=TIVA_2016_C1# [access: 06.08.2017].

Starting from the year 2000, the greater part of Poland's total share in global value chains is attributable to the share as recipients of foreign components (*GVCback index*) – see Table 4. Nevertheless, the importance of Poland as a supplier of components (*GVCfor index*) after 2004 remains at a similar level, and the ratio of GVCfor index to GVCindex was in 2004-2011 around 35-40%. This

³³ Ibidem.

³⁴ E. Czarny, P. Folfas, *Budowanie trwałej pozycji dostawcy produktów i usług zaawansowanych technologicznie w globalnych łańcuchach wartości* (example of Estonia) [in:] E. Broniewicz (ed.), *Gospodarowanie przestrzeni w warunkach rozwoju zrównoważonego*, Białystok 2017, pp. 107-121.

confirms the previous findings that neither the role of the recipient nor the supplier is strongly dominant. Although in the years 1995-2003 the ratio exceeded 40%, which indicates a decrease in the importance of Poland as a supplier of components for international production.

CONCLUSION

Referring to the research question, the role of Poland in international automotive networks is diverse. On the one hand, it would be too simplistic to say that due to relatively low labour costs, Poland is only an assembly plant for products manufactured by leading global automotive concerns. On the other hand, the activities of foreign branches of transnational corporations form the vast majority of the automotive industry in Poland. Poland is a producer and exporter as well as an importer of both intermediate and final goods. It is difficult to say unequivocally which role of Poland – whether as a recipient or as a supplier in global value chains is strongly dominant.

An undoubted limitation of the conducted empirical research is the period of the study. With the appearance of more recent statistical data, the analysis should be repeated. Another limitation is the degree of aggregation of the statistical data used. Data that is more disaggregated would be useful. Unfortunately, in the case of international input-output tables (key for the study of the role of the national economy in international production networks), it is unavailable.

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Summary: The role of Poland in international production networks of automotive industry is diversified. Poland is a manufacturer and an exporter and an importer of both final and intermediate goods. It is difficult to say unequivocally which role of Poland – whether as a recipient or as a supplier in global value chains is strongly dominating. Polish automotive industry is mostly based on the activity of the foreign affiliates of TNCs, but Poland is not only the location of assembly due to low labour costs.

Keywords: International production networks, automotive industry, Poland, gross trade, value-added trade

MIEJSCE POLSKI W MIĘDZYNARODOWYCH SIECIACH PRODUKCYJNYCH BRANŻY MOTORYZACYJNEJ

Streszczenie: Rola Polski w międzynarodowych sieciach produkcyjnych branży motoryzacyjnej jest zróżnicowana. Polska jest producentem oraz eksporterem, jak i importerem zarówno dóbr pośrednich i finalnych. Trudno jednoznacznie stwierdzić, która rola Polski – czy jako obiorcy, czy jako dostawcy w globalnych łańcuchach wartości jest silnie dominująca. Działalność zagranicznych filii korporacji transnarodowych tworzy zdecydowaną większość branży motoryzacyjnej w Polsce, ale Polska nie stanowi wyłącznie miejsca lokalizacji montowni dzięki niskim kosztom siły roboczej.

Słowa kluczowe: międzynarodowe sieci produkcyjne, branża motoryzacyjna, Polska, handel brutto, handel wartością dodaną