

THE AUTOMOTIVE AND TRANSPORT EQUIPMENT

SECTOR IN POLAND



1. The automotive industry's position in the Polish economy

- According to the International Organization of Motor Vehicle Manufacturers, in 2005 Poland had a 1.2% share in the global production of passenger cars and a 4.3% share in the European production of cars. Owing to these shares Poland ranked 14 among the world's producers of cars and 10th among the car-producing countries of Europe. The dynamic growth in the production of cars observable in 2005 may allow Poland to win a higher position on the list of both world and European car producers.
- The automotive industry plays a more and more important role in the Polish economy. In 2005, the automotive industry's share in the generation of Poland's gross domestic product was around 4%, whereas its share in the total sold production of the Polish industry was 10.2% (Source: WYG own estimates).
- The automotive industry also plays an important role in the technological and organisational development of Polish industry. Products supplied by the automotive industry have become a leading item on the list of Polish exports. In recent years the sold production of the automotive industry has been growing faster than that of Polish industry as a whole, despite a decrease in the number of ready-made vehicles sold on the domestic market. Spare parts are beginning to win an ever higher share in the profile of the Polish automotive industry's output.

- Despite the continuing process of equalisation of prices of new cars in EU countries, these prices are usually lower in Poland than the average prices in the European Union, especially in the segment of popular cars. Their estimated average weighted selling price amounted to EUR 15,533 in 2005.

- Owing to Poland's membership of the European Union, Polish car transport enterprises have gained free access to:
 - the passenger transport market; it should be noted, however, that this freedom relates only to the international transport of passengers carried by buses and coaches (a permit

AVERAGE WEIGHTED SELLING PRICE OF A NEW PASSENGER CAR IN POLAND

	2000	2001	2002	2003	2004	2005	Jan. - Dec. 2005 (Jan. - Dec. 2004 = 100)
PLN	40,461	45,905	50,724	54,755	59,129	62,368	105.5
EUR (mean rate of exchange)	10,192	12,508	13,141	12,444	13,294	15,533	116.8

Source: Samar, 4BOSS estimates, WYG own estimates

- Licence agreements concluded with producers do not permit Polish dealers to sell cars in EU countries until the end of September 2005. At present, they may sell cars to foreigners who come to their outlets, but the share of such customers in overall sales is negligible.
- No customs duty is levied on cars imported into Poland from other EU countries. The EU customs rates (usually 10%) are applied on the import of cars from outside the European Union.
- All new cars sold in Poland are subject to 22% VAT.
- Excise tax is applied to passenger cars and passenger-cargo cars (combi vans) exclusively. The rate of tax depends mainly on the age of the car

is required to render regular or special transport services; access to the cabotage market is also subject to restrictions);

- the international cargo transport market; Polish cargo carriers can freely render two-way transport services between Poland and other EU countries as well as cross-trade transport services within EU territory (international transport between foreign countries, with cargo being loaded in one member country and unloaded in another member country); at present, cross-trade transport services are limited due to a very small number of permits that are being issued to carriers.

RATE OF INDUSTRIAL PRODUCTION GROWTH

	1999	2000	2001	2002	2003	2004	2005
The entire Polish industry	104.3	107.1	99.8	101.4	108.7	112.3	113.3
of which the automotive industry	134.5	123.7	93.6	107.1	113.2	156.7	161.4

Source: Central Statistical Office (GUS), 4BOSS estimates, WYG own estimates

2. Regulations relating to the car market in Poland

- The legal framework for the Polish automotive market is determined by EU Directive No.1400/2002, known as the Block Exemption Regulation (BER, or the German abbreviation GVO), concerning the liberalisation of turnover in motor vehicles and related repair services. However, tangible effects of the introduction of this regulation, which has been in force since 1 November 2004, could be expected not earlier than in 2005, especially as far as repair services go.

and ranges from 3.1% (1- and 2-year-old cars) to 65% (7- and 8-year-old cars, depending on the engine capacity).

3. EU membership and the motor vehicle market in Poland

- The terms of access to the market of international road transport between Poland and other EU countries are regulated by international bilateral agreements. Access to the car transport market is subject to quantitative restrictions and is granted on the basis of permits.

4. The Polish car market

- The Polish market for passenger cars and utility vehicles is among the largest in Europe (7th - 8th place). As of the end of 2005 there were 16.8 million motor vehicles registered in Poland.
- The Polish car market has been developing continually despite the periodic decline in the sales of new vehicles, especially passenger cars, recorded in 2000-2005.
- Between 1990 and 2005 the Polish car market grew by 86%. The highest growth was recorded in the number of passenger cars and trucks (their number doubled). Simultaneously, a decrease occurred in the number of buses and motorcycles.

5. Polish automotive industry's output and profile

- The sold production of the Polish automotive industry has been growing dynamically

VEHICLES REGISTERED (THOUSAND UNITS)

	1990	1995	2000	2002	2003	2004	2005	2005 (1990 = 100)
Total	9,040.6	11,185.8	14,106.3	15,525.2	15,899.0	16,701.1	16,815.9	186.0
Passenger cars	5,260.6	7,517.3	9,991.3	11,028.9	11,243.8	11,975.2	12,339.4	234.6
Lorries and road tractors	1,044.6	1,354.1	1,879.1	2,162.6	2,313.4	2,391.6	2,304.5	220.6
Busses	92.1	85.1	82.4	83.1	82.8	82.7	79.6	86.4
Ballast and agricultural tractors	1,192.0	1,211.6	1,253.0	1,292.9	1,320.2	1,317.3	1,241.6	104.2
Motorcycles	1,451.3	1,017.7	900.5	957.7	938.8	934.3	850.8	58.6

Source: GUS

since 2002. In 2005 the rate of growth of the industry's sold production exceeded 6.7%, what can be attributed to the increasing demand for automotive industry products in Europe, the introduction of new models of motor vehicles as well as new investments in the production of spare parts and components.

- Close to 80% of products manufactured by the Polish automotive industry are exported.
- In 2005 the highest rate of growth, in terms of value, was seen by the producers of motor vehicle bodies, semi-trailers and trailers (109.3%), whereas the lowest rate of growth was in spare parts and accessories (3.32%). In 2005 the fastest developing segments of the automotive industry were production of delivery vans, production of buses, production of trucks and production of passenger cars.

6. Profile of the Polish automotive industry's output (%)

- The profile of the Polish automotive industry's output has changed significantly over the last 7 years. The role of production of vehicles has diminished (in 1997 it had a share of 83% in the industry's total output, whereas in 2005 this share did not exceed 54%) and the role of production of spare parts supplied both to domestic and foreign car makers has been increasing significantly (42.6% in 2005).
- The profile of exports of the Polish automotive industry is similar to the profile for output.
- Growth in output is accompanied by an increase in the number of workers employed in the automotive industry, which, besides investments, contributes to the fast growth in labour productivity.

7. General characteristics of the Polish automotive industry

- As of June 2006 the Polish automotive sector consisted of 2,245 registered enterprises (including natural persons conducting economic activities). Since 2004 the number of enterprises operating in the sector has diminished by 1.7%.
- The majority of firms produce spare parts and accessories. They account for 78.7% of all enterprises registered in the sector.
- In 2005 firms producing cars, bodies, trailers and semi-trailers jointly employed 96,243 workers on average, i.e. 7.7% more people than in 2004.
- The principal economic and financial indicators of enterprises from the automotive sector have been clearly improving, in step with increasing output and exports. In 2005 the industry's cost index reached 93.0, whereas its net profitability was 4.34%. The highest profitability was achieved by firms producing spare parts and accessories (6.44% in 2005), whereas the lowest profitability was noted by producers of bodies (0.85%).

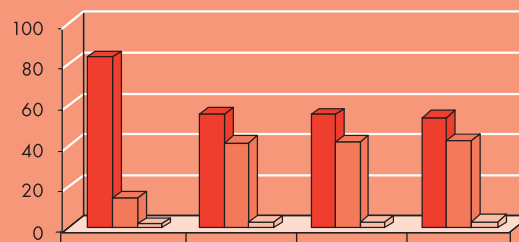
8. Sources of demand for motor vehicles in Poland

- Passenger cars are purchased mainly by Polish households. In 2004 there were 13.54 million

POLISH AUTOMOTIVE INDUSTRY'S SOLD PRODUCTION (PLN BILLION)

	2000	2001	2002	2003	2004	2005	Jan. - Dec. 2005 (Jan. - Dec. 2004 = 100)
Overall total, including:	28.90	25.70	26.30	35.20	56.83	60.63	6.7%
Motor vehicles	20.50	15.70	14.90	19.50	33.05	34.47	4.3%
Motor vehicle bodies, semi-trailers and trailers	0.75	0.72	0.77	1.05	1.50	3.14	109.3%
Spare parts and accessories for motor vehicles	7.70	9.20	10.60	14.65	22.27	23.01	3.3%

Source: GUS, 4BOSS estimates, WYG own estimates



	1997	2003	2004	2005
Motor vehicles (%)	83.2	55.4	55.1	54.0
Spare parts and accessories for motor vehicles (%)	14.7	41.6	41.8	42.6
Bodies of motor vehicles, trailers and semi-trailers	2.1	3	3.1	3.4

Source: 4BOSS estimates, WYG own estimates

AVERAGE GROSS MONTHLY PAY IN THE AUTOMOTIVE SECTOR AS OF JANUARY 2006 (PLN)

	2004	2005	2006
Management board members	24,549	26,500	27,242
Directors	11,649	15,000	15,660
Managers	6,422	6,800	7,092
Specialists	3,684	4,100	4,276
Workers	2,578	2,100	2,205

Source: AG „TEST” Human Resources: „Salary Survey as of February, 2004”, www.SalarySurvey.pl

households in Poland, which means that 8 in 10 Polish families, on average, own at least one car.

- The demand for passenger cars is also created by firms. There are 3.5 million firms registered in Poland, but the number of firms actually operating is far lower. According to the estimates of car dealers, firms annually buy over 30% of all passenger cars sold in Poland and use close to 30% of all registered cars (about 3.4 million).
- Delivery vans and trucks are purchased both by professional transport enterprises, of which there are 80,000, and firms from other sectors of the economy – industry, construction, trade, etc., which use them for their own purposes. In 2004 professional transport enterprises had a 35% share in the transport of cargo carried by motor vehicles.
- In 2005 there were 323 passenger cars per 1,000 residents in Poland, which is an index lower than that for most of the countries of the European Union.

NUMBER OF PASSENGER CARS PER 1,000 INHABITANTS

	1995	2000	2001	2005
Poland	195	259	272	323
Czech Republic	301	362	344	392
Hungary	219	236	244	287
Slovakia	190	236	240	247
EU-15	428	466	490	530

Source: Eurostat, GUS, WYG own estimates

9. Factors affecting demand for motor vehicles in Poland

- The demand for new motor vehicles depends mostly on such macroeconomic factors as the rate of economic growth, the rate of unemployment, and the cost of credit. Due to the slow-down in the rate of GDP growth, rising unemployment, and the uncontrolled import

of used cars, the sales of new motor vehicles, especially passenger cars, diminished in the 2000–2005 period.

- Fluctuations in the sales of new cars in response to changes in regulations, mainly those relating to taxes and technical requirements, are a specific feature of the Polish market.

10. Profile of sales of new cars in Poland by country of origin

- Since 2000 the profile of car deliveries has changed radically. In 2000, 1 out of every 10 passenger cars sold on the Polish market were manufactured in Poland. By 2005, more than half of all passenger cars sold on the Polish market were still supplied by domestic factories.
- One of the reasons for the decrease in the domestic production and sales of new cars in Poland was that a key car manufacturer, FSO, was renationalized after the collapse of its owner, Daewoo (South Korea), in 2001, and had to cut back production sharply. The FSO plant was not included in the sale of Daewoo to General Motors, and after long-running negotiations the Ukrainian AvtoZAZ group took a controlling stake in the company in 2005. Following deals signed with AvtoZAZ, FSO currently supplies its Lanos cars and operates as a disassembly plant for Korean-made Chevrolets that are shipped to the Ukraine before being reassembled there. In 2005 the factory manufactured almost 47,000 cars.
- The removal of restrictions on used-car imports following EU entry in May 2004 led to a surge in imports of second-hand cars in mid-2004 and the next two years afterwards, and consequently to a dip in sales of new cars. From May 2004 through June 2006 around 1.7 million used cars were imported to Poland (in 2004 the figure was 817,000, and in 2005, 872,000). This has contributed to the 26% decrease in the sale of new cars in Poland; in 2004, 318,000 new cars were sold, and in 2005 only 235,000.

11. The passenger car market in Poland

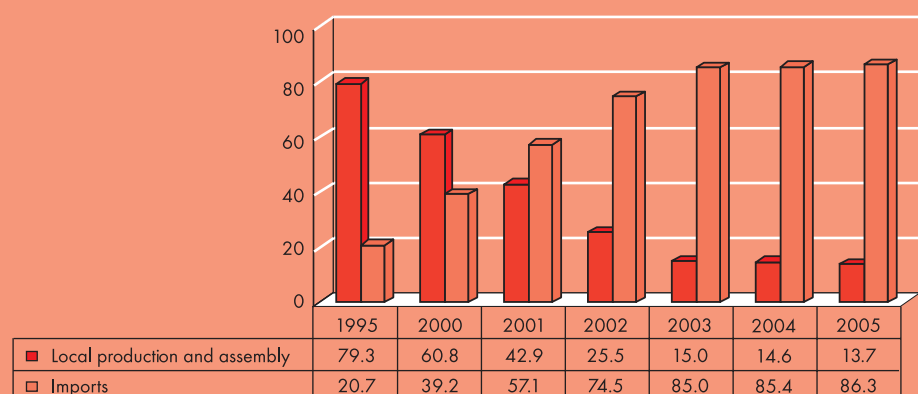
- For several years now Poland has ranked 6th - 8th in Europe in terms of the volume of sales of new passenger cars. The Polish passenger car market is undoubtedly the largest in Central and Eastern Europe.
- As far as the rate of growth of the sales of new cars is concerned, Poland regained its position in the group of the European car market leaders in 2003, after 3 years of decline, but its position fell again in 2004 and 2005.
- In 2005 Poles bought 235,521 new passenger cars, 26% fewer than in the previous year – the worst result since 1993.
- The high rate of growth of sales prevailed until May 2004. Since that month the rate of growth of sales has been declining, which can be attributed to the less favourable tax regulations pertaining to the use of new cars by enterprises (the right to full deduction of VAT depends on requirements related to load capacity) and more favourable regulations concerning the import of used cars from the European Economic Area.

SALES OF NEW MOTOR VEHICLES (THOUSAND)

	2000	2001	2002	2003	2004	2005	Jan. - Dec. 2005 (Jan. - Dec. 2004 = 100)
Passengers cars	478.8	327.3	308.2	358.4	318	235.5	74.1
Delivery vans	43.7	28.4	25	30.1	36.2	35.0	96.7
Trucks	6.5	6	6.2	8.3	11.5	10.8	93.9
Buses	1.9	1.4	1.2	1	1	1	100.0

Source: Samar, JKM

PROFILE OF SALES OF NEW CARS IN POLAND (%)



Source: Samar, 4BOSS estimates, WYG own estimates

- In 2005 the import of used cars grew 6% over the previous period. 96% of imported used cars came from other EU countries.

12. Characteristics of the car-making industry in Poland

- 2006 is likely to prove a year of record-high growth in the production of passenger cars in Poland. In the first 2 quarters of 2006 the Polish car-making industry produced 306,938 vehicles, i.e. 12.7% more than a year earlier. Such high growth in the production of cars is largely attributable to the continuing demand on export markets, Western Europe included, and the start of production of new models of cars.
- The production of cars has been growing since 2003 (after 3 years of decline).
- Passenger cars are manufactured in Poland by the following companies:

- Fiat Auto Poland (FAP) in Bielsko-Biala. After the first 6 months of 2005 the company had a 54.2% share in the total production of passenger cars. In this period FAP produced 144,100 cars, of which 80% were exported (chiefly Fiat Panda cars);
- GM-Opel in Gliwice, which has a 22.7% share in the domestic production of cars. Currently, the factory in Gliwice produces more than 115,000 vehicles (models Agila, Astra II, and, shortly, also Zafira), of which 95% are exported; as from 2005 the factory's daily output is to increase to 800 cars from 500 at present;
- Volkswagen Poznań Sp. z o.o. in Poznań supplies chiefly VW Caddy models (but it actually concentrates on the production of LT delivery vans). After the first 2 quarters of 2005 the factory's share in the domestic

DELIVERIES OF PASSENGER CARS TO THE POLISH MARKET (THOUSAND)

	1995	1997	1999	2000	2001	2002	2003	2004	2005	Jan.-Dec. 2005 (Jan.-Dec. 2004 = 100)
New cars	266.4	479.3	640.2	478.8	327.3	308.2	358.4	318.1	235.5	74.0
Used cars	55.8	76.8	114.1	213.6	228.1	179.1	35.7	817.0	872.0	106.7

Source: Samar

PRODUCTION OF PASSENGER CARS AND GROWTH RATE

	1995	1999	2000	2001	2002	2003	2004	2005	Jan. - Jun. 2006
Production of cars (thousand)	366.2	650	532.4	364	288.1	333.7	516.1	527.0	306.9
Previous period = 100	109.7	109.7	81.9	68.3	79.1	115.8	154.7	102.1	112.7

Source: Samar

production of passenger cars reached 17.4%;

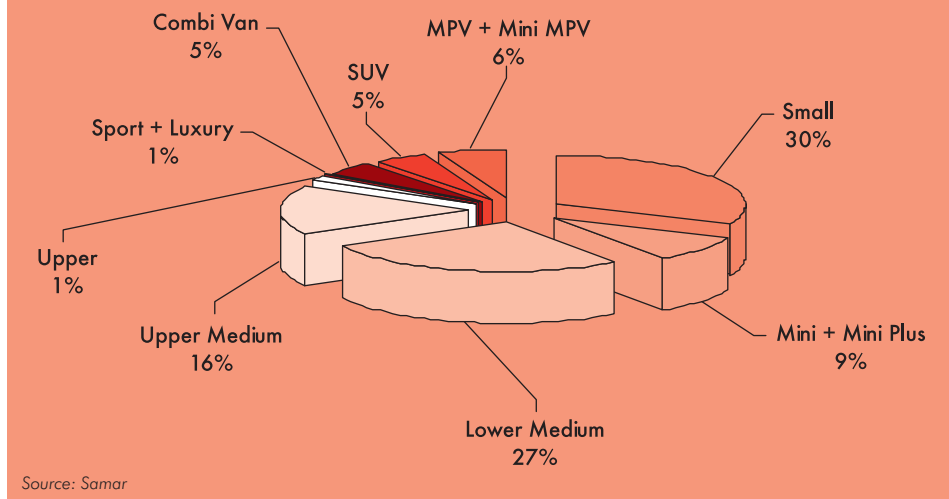
- Fabryka Samochodów Osobowych (FSO) in Warsaw (for 5 years FSO had been owned by Daewoo); 20.36% of shares were sold in June 2006 to the Ukrainian AutoZAZ by the Polish government; it will produce about 50,000 cars. It had a 5.6% market share in June 2005.

- Škoda was the best-selling car brand in Poland in 2005, with 27,649 units, ahead of Toyota (25,700) and Fiat (24,508).

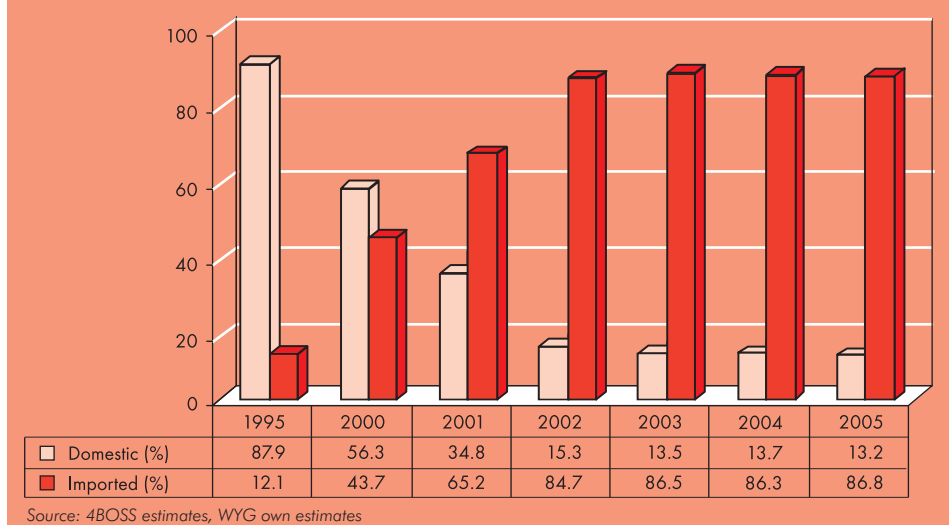
13. Profile of sales of passenger cars in Poland, by category

- Small cars account for close to half of all new passenger cars sold in Poland since low price remains the main criterion of selection for the majority of Polish car buyers.
- Simultaneously, the demand for cars from the medium and higher segments is on the rise and their share in the overall sales of passenger cars is increasing. However, the highest rate of growth is for sport-utility vehicles (SUV's). In 2004 their sales rose to 8,549 and in 2005 to 10,679 (Source: SAMAR).
- Due to the large import of used cars and the weak financial condition of Polish buyers, the age profile of passenger cars registered in Poland shows no improvement. At the end of 2005 vehicles produced more than 10 years ago accounted for 57% of all passenger cars, whereas cars up to 4 years old constituted 5% and cars between 4 and 10 years 28%. These data indirectly show that the demand for passenger cars in Poland has not been fully satisfied yet and that a further growth in the sale of new cars can be expected when the purchasing power of Polish consumers increases.

PROFILE OF THE PASSENGER CAR MARKET IN 2005, BY SEGMENT



SALES OF NEW DELIVERY VEHICLES (WITH TOTAL WEIGHT OF UP TO 3.5 TONNES) IN POLAND



14. Profile of Polish market for delivery vehicles

- The market for delivery vehicles consists of 3 segments. After the first 6 months of 2006, medium-sized delivery vans had the highest share (57%) in the overall sales of delivery vehicles, ahead of light delivery vans (39%) and heavy delivery vans (4%). Although the market share of heavy delivery vans is negligible, their sales showed the fastest growth during the period.
- Since 2000 the profile of supply of delivery vehicles has changed dramatically to the disadvantage of domestic producers. In September 2004 domestically produced delivery vans had a share of not more than 10% in the Polish market of delivery vehicles. This can be blamed mainly on the closure of 2 factories producing vans in 2001 - 2002, following the bankruptcy of the Korean concern Daewoo.

15. Characteristics of delivery van production in Poland

- The production of delivery vans is also showing record-high growth rates. In the first 6 months of 2006 domestic factories supplied 56,198 delivery vans, 16.78% more than in the same period of 2005.
- As in the case of passenger cars, the majority of delivery vans manufactured by domestic

factories are exported (around 80%). However, the increasing production of delivery vehicles is stimulated also by rising domestic demand.

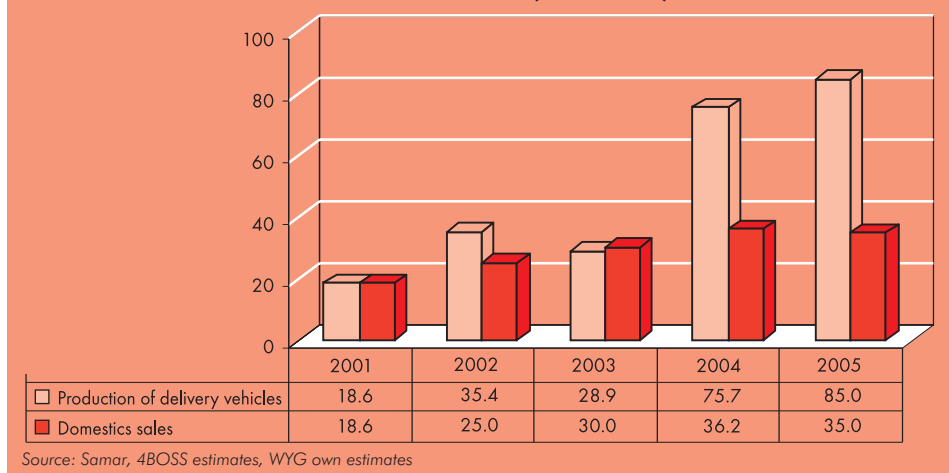
- Poland's largest producer of delivery vans is Volkswagen Poznań Sp. z o.o. in Poznań. This company also has the highest share in the Polish production of delivery vehicles (65.57% in the first 6 months of 2006). The second largest producer of delivery vehicles is Fiat (33.26%).

- A far lower market share is held by Intrail Polska, which produces Lublin-3 and Honker delivery vehicles, using the facilities of the former bankrupt Daewoo Motor Polska factory.

16. Market for delivery vehicles in Poland

- The market for delivery vans is less sensitive to changes in the general economic situation in Poland and the results recorded in the sales

PRODUCTION AND SALES OF DELIVERY VEHICLES (THOUSAND)



of these vehicles are far better than those achieved in the sales of passenger cars. In the first 2 quarters of 2006 the sales of delivery vans were 8.5% higher than in the same period of the prior year.

- This growth in sales is largely attributable to the economic upturn which started in 2003 and to the increasing role of car transport in cargo shipments in Poland.
- Between January and June 2006 18,160 delivery vans were sold on the Polish market.

17. Polish truck market

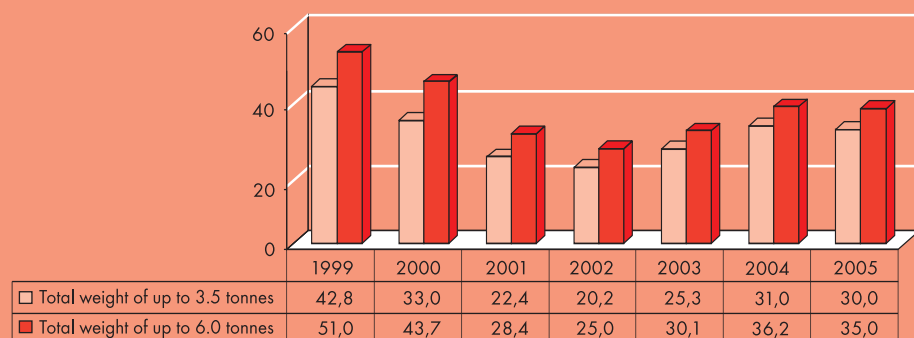
- The market for trucks is beginning to stabilise, with sales returning to the record-high level reported in 1998. In the whole of 2004, Polish dealers jointly sold more than 11,500 new trucks with load capacity of over 6 tonnes, i.e. 38.5% more than in 2003. In 2005 overall the sales of such trucks were lower by 6.35% than in 2004, but in the first 6 months dealers sold more than 6,200 trucks. A similar rate of growth is seen in sales of semi-trailers and trailers.
- At the end of 2003 and the start of 2004 Polish transport firms began to invest more in modern vehicles, encouraged by the prospect of offering services on the open EU market from May 2004. Another important factor that stimulated, and still stimulates, demand was the dynamic growth in the export of Polish commodities observable since the spring of 2003.
- These facts are confirmed by the high sales of the most expensive tractors and chassis for trucks with load capacity of over 16 tonnes. Such vehicles are used mostly in international transport, where companies want to offer their services in the enlarged European Union.

18. Characteristics of truck and bus production in Poland

- The production of trucks grew in 2005 by 15% in comparison with 2004. However, official statistics are misleading since the category of trucks covers also passenger cars that have obtained certificates to serve as cargo-carrying vehicles (they have a metal grille separating the cargo compartment from the rest of the cabin).
- Real trucks, i.e. vehicles with a load capacity of over 3.5 tonnes, are produced by MAN Star Trucks & Buses at its factory in Starachowice. Another domestic producer of trucks is Euromet in Cracow, which assembles Kamaz trucks (belonging to the Russian company AO Kamsky Avtozavod).

A decline has been recorded this year in the domestic production of semi-trailers and trailers for trucks (by 21.9% in 2005 according to GUS). Such vehicles are produced by around 300 manufacturers, including 6 large companies (which supply more than 1,000 semi-trailers and trailers annually). These 6 companies are Sommer Polska Sp. z o.o., in Zapole near Sieradz, a subsidiary of the German manufacturer Sommer; CMT Chojnice Sp. z o.o.; ZASŁAW Zakład Przymocowania i Naczepek Sp. z o.o.; Wielton S.A., based in Wieluń; Przedsiębiorstwo Produkcyjne POLKON S.A., based in Trzcianka; and Vikström & Betz S.A. in Warsaw, a joint venture company of the Swedish manufacturer Vikström Akeri AB and Polish investor Damian Betz.

SALES OF NEW DELIVERY VANS (THOUSAND)



Source: Samar, 4BOSS estimates, WYG own estimates

SALES OF NEW TRUCKS (THOUSAND)

	1998	1999	2000	2001	2002	2003	2004	2005	Jan. - Dec. 2005 (Jan. - Dec. 2004 = 100)
Trucks with load capacity of over 6 tonnes	9.1	6.5	6.9	6	6.2	8.3	11.5	10.8	93.9
including trucks with load capacity of over 16 tonnes	5.5	3.6	3.7	3.5	3.8	5.4	8.4	7.8	92.9

Source: Samar

PRODUCTION OF BUSES, TRUCKS AND SIMILAR VEHICLES (THOUSAND)

	2000	2001	2002	2003	2004	2005
Buses	2.02	1.63	1.66	1.83	4.1	5.4
Trucks*	58.1	24.7	21	18.5	59.0	67.6
Road tractors hauling semi-trailers (units)	846	799	8	14	1	7
Special-purpose motor vehicles	1.7	1.2	0.9	1.2	1.1	1.2
Semi-trailers and trailers	36.3	22.2	24	28.7	33.8	26.4

* This category covers passenger cars having a cargo compartment.
Source: GUS

- A high rate of growth characterised the production of buses in Poland in 2005. In comparison with 2004, production jumped by 31.7%, owing mainly to investments made by several producers who intend to export their vehicles.
- Buses are manufactured in Poland by 7 enterprises. There are also 3 enterprises that assemble buses using delivered components. The largest domestic manufacturers of buses, which jointly control 80% of the market, are the following companies (according to output in 2005):
 - Autosan Polskie Autobusy Sp. z o.o., which produces Autosan and Jelcz buses (the company belongs to the capital group GK Zasada S.A.) In 2005 Autosan produced 225 buses.
 - MAN Star Trucks & Buses, which has 2 production facilities (in Tarnów Podgórzny, near Poznań, for buses; and in Starachowice, for bus and truck chassis). The company is part

of the German Neoman Group. In 2005 it produced 149 buses.

- Solaris Bus & Coach in Bolechów, near Poznań. The company supplies Solaris buses (its main shareholder is Openaco Trading Co Ltd). In 2005 SBC produced about 610 buses, 80% for export. In 2006 it plans to produce 800 buses.
 - Volvo Polska Autobusy Sp. z o.o. in Wrocław.
 - Scania Production in Słupsk.
- Poland is one of the biggest bus exporters. In 2001 Polish companies produced 373 buses earmarked for export, and in 2005, 1,903 buses. Leaders in exports are Volvo and MAN.

19. Profile of truck sales in Poland

- In 2005 71.25% of trucks sold were vehicles with total permitted weight of over 16 tonnes. The market share of the heaviest trucks has been

SHARE OF HEAVY VEHICLES (OVER 16 TONNES) IN THE MARKET OF TRUCKS (%)

1998	1999	2000	2001	2002	2003	2004	2005
60.3	54.9	54.0	55.6	60.8	64.5	72.6	71.2

Source: Samar

growing for several years now (in 2002 their share in overall sales of trucks was 65%).

- The remaining 2 "lighter" segments play a far less important role in the Polish truck market. The market shares of the 2 segments are similar, with light trucks accounting for 10.10% of sales, and medium-sized trucks accounting for 18.65%.
- As far as the types of trucks are concerned, the sales profile is dominated by ballast tractors, whose market share is 77%.
- The profile of deliveries of utility vehicles has been showing significant changes for several years, according to firms that monitor this segment of the automotive market. Most vehicles that are used now, about 75%, are of Western make, whereas vehicles manufactured in Eastern Europe account for 25%. Changes are also observable in the age of exploited utility vehicles, but at the same time a fairly large number of used trucks, semi-trailers and trailers are being imported into Poland.

20. Polish market for buses

- 2005 was a consecutive year of decline in the deliveries of new buses to the Polish market. The sales of new buses were 1,059 units, off 2.2% from 2004.
- The main reason for the decline in sales of buses was the smaller number of orders placed by one of the largest groups of buyers, namely the municipal authorities, which co-finance the operation of public transport services.
- In fact, the downturn on the bus market has its source in the deepening crisis in municipal and regional transport services, caused by various social changes. The number of passengers using public transit is falling as more and more Poles travel in their own cars. The demand for everyday transport to and from work is decreasing due to changes in the Polish economy, the greater role of self-employment and the aging of the population (the number of persons at retirement age has increased). Fewer and fewer buses are purchased by firms that are not professional transport enterprises. Such firms now use a quarter of all registered buses.

21. Profile of bus sales in Poland

- In 2005 the number of new buses sold in Poland fell by 24 units, i.e. by 2.2% in comparison with 2004. In 2004 the sales of buses were lower by 15% than in 2003. Thus, there are no signs indicating that the situation on the market of buses is likely to improve.
- The supply of buses is supplemented through the import of used buses, whose deliveries in the last few years were several times greater than the number of new buses sold on the

BUS TRANSPORT (IN MILLIONS OF PASSENGER DURING THE YEAR)

	1990	1995	2000	2001	2002	2003	2004	2005
Inter-urban transport	2,084.7	1,131.6	954.5	898.7	815.0	822.9	831.6	842.5
Intra-urban transport*	7,264.1	5,909.9	4,954.1	4,569.1	4,332.7	4,198.9	4,100.2	3,980.4

* Including trams

Source: GUS, 4BOSS estimates, WYG own estimates

- Polish market. Second-hand buses are imported chiefly by small transport firms which render services in suburban areas.
- Vehicles used in inter-city transport (36.7%) and city transport (37.0%) had the highest share in the sales of new buses in 2005. Tourist buses accounted for 15.3% of sales, and school buses the remaining 11% share.
- For several years, the production of spare parts and car components has been the fastest developing and most stable segment of the Polish automotive sector. This can be attributed to the globalisation of the automotive industry as evidenced by investments made by more than 100 foreign companies that co-operate with car concerns.

DELIVERIES OF BUSES AND MINIBUSES (UNITS)

	1998	1999	2000	2001	2002	2003	2004	2005
New	1,520	1,314	1,646	1,394	1,221	1,221	1,035	1,059
Used	322	794	1,907	922	1,486	1,486	1,505	1,694
Total	1,842	2,108	3,553	1,317	2,707	2,707	2,540	2,753

Source: Infobus JKM, Ministry of Finance, 4BOSS estimates, WYG own estimates

22. Characteristics of the industry producing spare parts in Poland

- The largest number of enterprises from the automotive sector is involved in the manufacture of spare parts and accessories. In the middle of 2006, spare parts and accessories were produced in Poland by 1,565 firms. There were also 73 firms which produced safety belts, car doors and bumpers, and 124 firms which produced miscellaneous goods for the automotive sector.
- The largest investors in the production of spare parts and car components in Poland are Fiat and GM Powertrain (production of low-capacity diesel engines), Isuzu (production of engines), Toyota Motor Manufacturing Poland (production of manual gearboxes, in 2005 the company will start the production of D-4D engines), Volkswagen Motor Polska (production of engines), and Delphi.
- The estimated value of the market of car components was PLN 8 billion in 2004, and PLN 9 billion in 2005.

PRODUCTION OF SELECTED GOODS SUPPLIED BY MANUFACTURERS CO-OPERATING WITH THE AUTOMOTIVE INDUSTRY

	2000	2001	2002	2003	2004	2005	Jan. - Dec. 2005 (Jan. - Dec. 2004 = 100)
Combustion engines (thousand)	520.6	739.7	800.1	919.9	1,300.1	1,505.8	115.8
Tires (million)	23.49	25.93	28.36	32.4	36.5	35.7	97.8
Car batteries (million)	4.1	3.9	4.99	5.84	6.0	6.6	108.7

Source: GUS

23. Exports and imports of Polish automotive industry products

- Polish foreign trade in automotive industry products has been developing dynamically for many years. In 2005 its value exceeded USD 23.5 billion, which accounted for more than 10% of the total value of Polish foreign trade. Poland has a surplus in its foreign trade in products supplied by the automotive industry.
- In 2005 the value of automotive exports reached USD 14.0 billion (and grew by 114.8%), whereas the value of automotive imports was USD 9.5 billion (growth by 103%).
- The profile of Polish automotive exports is compatible with the output of the Polish automotive industry. Passenger cars and passenger-cargo cars had the highest share (38.3%) in the Polish automotive industry's exports in 2005, ahead of spare parts and accessories for motor vehicles (26.4%), and diesel engines (21.6%).
- Automotive imports are dominated by passenger cars (32.0% in 2005), ahead of parts and accessories (30.7%) and diesel engines (22.7%).
- The main trade partners for the Polish automotive sector are European countries, especially EU member states, which accounted for more than 80% of the total turnover.

24. Foreign direct investment (FDI) in the Polish automotive industry

- Poland is very attractive as a location for the production for foreign automotive concerns and firms manufacturing car components. The decisions of foreign companies to start production in Poland were traditionally dictated by such factors as the large size of the consumer market, the growing demand for new cars, good industrial infrastructure, the large number of well-educated people and their ability to compete on the labour market, as well as the relatively low operating costs, including labour costs, in comparison with Western Europe.
- In 2004 new elements encouraging foreign companies to invest in Poland appeared, name-

ly the Act on Financial Support for Investment Significant for the Polish Economy, the possibility of receiving funds from state aid, assistance for FDI from resources at the disposal of local governments, and reduction in the corporate income tax rate to 19%, which is among the lowest rates in Europe.

- Since 1990 the automotive sector has been attracting larger FDI than any other branch of Polish industry. According to data from PAIILZ, FDI in the Polish automotive industry reached USD 6.6 billion at the end of 2004. This amount accounted for over 8.3% of the total value of FDI in Poland, and almost 24% of the total value of FDI in the Polish manufacturing sector.

PROFILE OF COMBINED FDI* AS OF THE END OF 2004 (%)

Manufacturing (excluding production of means of transport)	Financial services	Trade and repairs	Transport, storage and communications	Manufacture of the means of transport	Construction	Power, gas and water supply	Other
39.9	23.4	11.8	9.7	8.3	2.6	4.0	8.6

* Investments worth over USD 1 million

Source: Polish Information and Foreign Investment Agency (PAIILZ)

MAIN ITEMS IN POLISH EXPORTS AND IMPORTS OF AUTOMOTIVE INDUSTRY PRODUCTS (USD MILLION)

Product	Exports				Imports			
	2002	2003	2004	2005	2002	2003	2004	2005
Passenger and passenger-cargo cars	1,393.7	2,246.3	4,228.4	5,379.8	2,532.7	3,356.0	3,440.2	3,031.1
Parts and accessories for motor vehicles	1,400.5	2,156.9	3,053.1	3,714.9	1,071.0	1,615.1	2,611.4	2,903.6
Self-ignition piston engines	1,494.8	2,076.3	3,380.9	3,028.0	115.4	118.0	1,875.2	2,150.1
Trucks	512.2	230.1	856.2	1,052.2	602.8	697.5	768.9	818.0
Trailers and semi-trailers	129.9	660.2	265.8	362.3	179.9	288.7	404.5	347.8
Buses	130.1	209.9	445.0	511.9	61.8	41.4	57.9	87.8
Special purpose vehicles	4.7	9.2	n.a.	n.a.	24.8	39.3	42.9	n.a.
Chassis	24.5	5.7	n.a.	n.a.	7.5	18.0	n.a.	124.9
Total	5,090.4	7,594.6	12,229.4	14,049.1	4,595.9	6,174	9,201.0	9,463.3

Source: GUS

25. The largest foreign investors in the Polish automotive industry

- Close to 240 foreign companies have made investments in the Polish automotive industry and the production of goods required by the industry.
- As of the end of 2004, the largest foreign investors in the Polish automotive sector were Fiat, General Motors Corporation, Fiat-GM Powertrain B.V., Volkswagen AG – producers of cars and delivery vans, as well as components for these vehicles; and Delphi Automotive Systems, Ispol-IMG Holdings B.V. (owner of Isuzu Motors Polska), Toyota, and Faurecia – producers of components for cars manufactured in Poland and other countries. Many of these investors have more than 2 production facilities in Poland. For example, Faurecia, Delphi, Valeo and Volkswagen AG (service firms included) have from 4 to 9 establishments in Poland, whereas Fiat operates 14 enterprises (service firms included).
- Foreign companies also invest in sectors indirectly connected with the production of motor vehicles. For example, Pilkington IH has invested USD 235.8 million in the Polish glass-making industry and the production of car windows. Michelin (USD 473 million), Bridgestone Corporation (USD 221 million), Goodyear Luxembourg S.A. (USD 200 million) and Tokai Rubber Industries Ltd. (USD 12.2 million), have made investments in the production of car tires.
- Besides large corporations, the Polish automotive sector also attracts smaller investors who open production facilities that mostly supply components for the automotive industry.

FOREIGN DIRECT INVESTMENT IN THE POLISH AUTOMOTIVE INDUSTRY AS OF THE END OF 2004 (USD MILLION)

Investor	Capital invested (USD millions)	Country of registration	Country of origin
Fiat	1,800.6	Italy	Italy
General Motors Corporation	1,010.0	USA	USA
Volkswagen AG	873.1	Germany	Germany
Toyota	507.1	Belgium	Japan
Fiat-GM Powertrain B.V.	450.0	Netherlands	Italy/USA
Delphi Automotive Systems	380.0	USA	USA
Faurecia Investments	204.3	France	France
Ispol-IMG Holdings B.V.	192.7	Netherlands	Netherlands
Eaton Corporation	125.0	USA	USA
Lear Corporation	89.5	USA	USA
Volvo AB	80.0	Sweden	Sweden
Trelleborg AB	62.9	Sweden	Sweden
Tenneco Global Holding Inc	36.0	USA	USA
Federal Mogul Holding Deutschland GmbH	33.7	Germany	Germany
WABCO Europe B.V.	32.6	Netherlands	USA
M. Kutsch Projectgesellschaft GmbH	25.8	Germany	Germany
Autoliv AB	16.8	Sweden	Sweden
Dana Corporation	14.0	USA	USA
Lisa Draexlmaier GmbH	8.5	Germany	Germany
Scania CV AB	3.1	Sweden	Sweden
Caterpillar Inc.	3.0	USA	USA
Bitron International SA	2.6	Luxembourg	Luxembourg
Was Wietmarscher	2.3	Germany	Germany
Pilkington	235.8	Netherlands	United Kingdom
Michelin	473.0	Switzerland	France
Bridgestone Corp.	221.0	Japan	Japan
Goodyear Luxembourg S.A.	200.0	Luxembourg	USA
Tokai Rubber Industries Ltd. (TRI)	12.2	Japan	Japan
Mitsui & Co. Deutschland	2.7	Germany	Japan
Metzeler Italy	2.6	Italy	Italy
Aligator Ventil	1.1	Germany	Germany

Source: PAIiZ

26. Future of the Polish automotive industry

- A number of companies are increasing their investments or launching their first investment projects in Poland in 2006 – 2008. According to preliminary estimates, in that period foreign companies will invest about USD 2,177.6 mln in the automotive sector in Poland (see page 9).

27. State policy towards the automotive sector

- To provide indirect support to producers from the domestic automotive sector, in early 2003 the Polish government adopted a package of systemic solutions entitled "The Automotive Industry – Directions of Activity." The solutions have a technical, fiscal and administrative character.
- The implementation of the programme calls for:
 - assistance offered to domestic automotive firms that is designed to increase their competitiveness and envisages preservation of tariff quotas for the automotive sector, popularisation of purchases of domestic-made automotive products, financed from public funds, and the creation of new incentives for investors and pro-export policies;
 - creation of a Central Register of Vehicles and Drivers, which allows turnover in motor vehicles to be monitored during all years of use and restricts such negative phenomena as car theft, forgery of documents, customs fraud and insurance fraud; the system for registering vehicles was introduced on 1 October 2004;
 - elimination of fraudulent practices in the settlement of vehicle insurance claims after insurance companies introduced a system of paying claims in cash in 1999;
 - the Polish state finalizing its work on a draft bill transposing the EU directive concerning cars withdrawn from use; the draft envisages creating of a system for collection and dismantling of old passenger cars.

28. Characteristics of automotive parts suppliers

- Polish factories are characterized by the highest quality and efficiency combined with very low costs. Poland's location in the heart of Europe creates possibilities for cooperation with other automotive plants in neighbouring countries.
- There is rapid growth in the base of Polish subcontractors, thanks to the flow of FDI into vehicle manufacturing.
- Poland is a leading manufacturer of components, such as tires, car seats and upholstery, automotive electronics, electric cables and braking systems.
- Components manufactured in Poland are installed in cars of many brands, such as Mercedes, Nissan, Opel, Porsche, Toyota, Volkswagen, Isuzu, Fiat, Citroen, Honda, Peugeot, Volvo, BMW, Rolls-Royce, Lamborghini and Ferrari.
- Automotive sector production centres are concentrated around the urban areas of Katowice, Wrocław, Poznań and Warsaw.

EXAMPLES OF PLANNED FOREIGN INVESTMENTS IN THE POLISH AUTOMOTIVE SECTOR

Company	Location	Planned employment	Value of investment in USD mln
American Axle Manufacturing	Stanowice	at least 250	50.0
Autocam Poland	Kamienna Góra	200	20.0
Bridgestone	Stargard Szczeciński	700-800	249.1
Dr. Schneider Automotive Poland	Radmierz	450	4.6
Eaton Automotive Systems	Bielsko-Biała	375	71.0
Faurecia	Jelcz-Laskowice	350	21.7
Fiat	Tychy		1,000.0
Ficomirrors	Dąbrowa Górnicza	350	9.3
Goodyear	Dębica		38.4
Kirchhoff Assembly	Gliwice	200	11.5
Interplast	Tychy	100	4.2
Hutchinson Poland	Żywiec	520	12.4
Mahle	Krotoszyn	300	49.8
Metalis Polska	Dzierżonów	60	1.2
Magneti Marelli Suspension Systems	Bielsko-Biała	at least 400	1.9
MAN	Poznań	500	n.a.
MAN	Niepołomice	650	112.1
Michelin	Olsztyn	520	315.1
Moneva Polska	Świebodzice	100	n.a.
Nifco Poland	Świdnica	100	5.0
Nord	Nowa Sól	200	10.0
Sanden	Polkowice	310	93.0
Sor Iberica Polska	Legnica	35	4.1
TRW	Częstochowa	250	6.0
Ulmer Polska	Pole Golkowice	at least 42	n.a.
UWE Polska	Olawa	at least 95	5.9
Valeo	Chrzanów	500-600	62.3
Volvo	Wrocław	500	8.1
Wirthwein	Łódź	110	n.a.
Wabco	Wrocław	150	11.0

Source: press

TOP PLAYERS IN THE AUTOMOTIVE PARTS SUPPLIER SECTOR

Company	Parts supplied	Market share in 2005 in terms of revenues
Volkswagen Motor Polska Sp. z o.o.	Engines	18.99%
Delphi Poland	Cables, heat exchanges, car seats, brakes and springs for cars, electric bundles, exhaust system for cars, driving axles	11.33%
Isuzu Motors Polska Sp. z o.o.	Engines	11.30%
TRW Polska Sp. z o.o.	Plastic trim systems	8.64%
Valeo Autosystemy Sp. z o.o.	Coolers, starters, breaks, oil, fuel and air filters for cars	5.92%
Faurecia	Mechanisms, frames, car seat accessories	5.17%
Lear Automotive (EEDS) Poland Sp. z o.o.	Seats	3.65%
Sitech Sp. z o.o.	Seats	3.57%
Ronal Polska Sp. z o.o.	Wheels	3.14%

Source: Autoforum, company web pages, own estimates

- Producers of auto components were the main driver of the automotive sector last year. They hired 63,600 new employees and there are a number of further investments planned for 2006–2008.

29. Attractiveness of the Polish automotive sector

- For different countries, Eastern Europe has evolved into the most important region for investments. Sectors such as the automotive industry and industrial goods are increasingly focusing on Eastern Europe and are either setting up or expanding production sites here. Service companies, too, are focusing their investments, relocating and shifting, for example, IT support and call centres to these countries.
- Poland is seen as the top potential destination for new investment and expansion projects in Europe. According to the European Attractiveness Survey of 2005 conducted by Ernst & Young, the advantages offered in terms of productivity and flexible employment conditions placed Poland in the leading position in Europe.
- Poland has a huge investment potential. Its GDP growth is twice that of Western Europe. Poland is ranked 1st in planned investments in Europe, 2nd in Europe in the FDI Confidence Index, and 5th among the top 10 global investment destinations.
- European executives highly value Poland's potential productivity gains. According to Ernst & Young report, in this respect Poland is ranked second in Europe.
- Poland has the largest working population in Central Europe as well as the youngest population in Europe. 50% of the population is under age 35, and 35% under age 25. The young generation of Poles is one of the best educated in Europe. Close to 50% of citizens aged 20–24 attend an institution of higher education. Poland has a nationwide network of 427 such institutions. There are 126 state higher education institutions, including 17 universities and 18 universities of technology, as well as 301 private schools of tertiary education.
- Foreign investors highly rate the skills and commitment of Polish employees. In many cases the Polish subsidiaries of foreign companies were judged to be the most effective units worldwide according to their management. In the 2005 Ernst & Young report, Poland is placed fifth after Germany, the UK, France and Scandinavian countries regarding labour skills level.
- According to the Ernst & Young report, Poland achieved first place in Europe in terms of availability of industrial sites, cost of land and regulations. In terms of flexibility of employment regulations, Poland is placed second after the UK, and third in terms of corporate taxation.
- Key reasons for investors to enter Poland are costs and the chance to reduce costs. Costs of conducting business in Poland are significantly lower than in Western Europe. Also, the time required to start up a company is shorter than in other countries. According to World Bank data (2005) the time required to start a business in Poland is 31 days, in Hungary 38 days, and in the Czech Republic 40 days.

- In 2004 Poland placed among the top three countries offering the best localisation conditions for companies producing components for the automotive industry.
- Foreign investors are invariably attracted to Poland by low labour costs, high qualifications of the labour force, as well as a network of 650 subcontractors, with 200 of them holding the highest certificate of quality, ISO/TS 16949. This is confirmed by the report prepared by Ernst & Young based on managers' views on the choice of the best location for new establishments.
- The flow of foreign direct investment into the automotive manufacturing sector has resulted in dynamic growth of the base of Polish subcontractors. Automotive giants such as Toyota, Isuzu, Volkswagen, MAN, Volvo, and General Motors (Opel, Fiat) encourage companies cooperating with them to shift production to Poland.
- A snowball effect following automotive investments (or re-investments) is stimulation of development for more companies and creation of new jobs. Currently there are many companies which are suppliers to the automotive sector, with both Polish and foreign capital.
- Companies from the automotive sector which have already shifted their production to Poland include MAN, Fiat, Opel, Michelin, Volkswagen, Valeo and others.
- It has been estimated by the Boston Consulting Group that transferring production from other countries into Poland may bring savings of 20–30%, especially in labour costs and materials.
- Hourly wages for production workers and gross salaries for engineers in Poland will grow rela-

tively slowly in comparison with other Eastern European countries, what will allow Poland to remain very attractive in that respect.

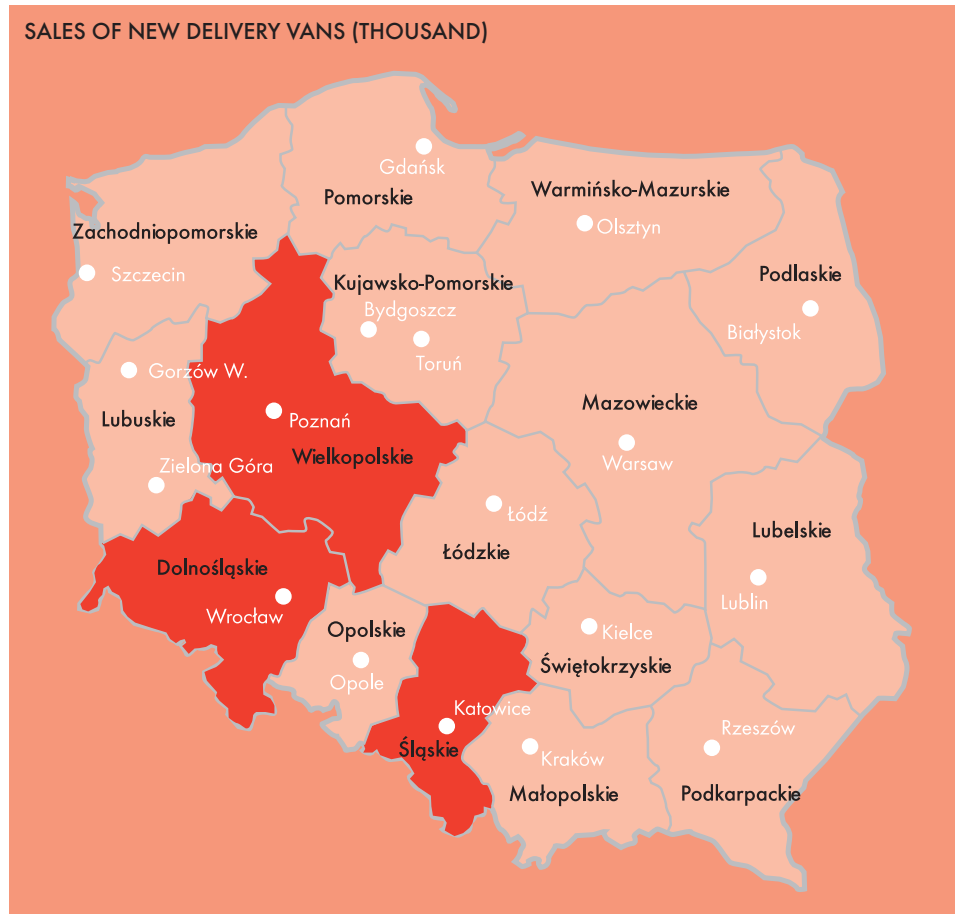
- It has been found by BCG that manufacturing of vehicles and components in Poland is more profitable than in China.

30. The most attractive investment locations for the automotive sector in Poland

- There are three key locations in Poland attracting companies from the automotive sector: Lower Silesia, Silesia, and Wielkopolska provinces.

Lower Silesia (Dolnośląskie):

- There is a large supply of highly qualified labour: skilled engineering staff are available, and there are 33 universities in the province.
- Wrocław Technical University, one of the best polytechnics in Poland, is located in Lower Silesia province.
- There are a large number of parts suppliers in the province.
- Large investments in the automotive sector have been or are being made in the province by Toyota, Volvo, Volkswagen, Bosch, GKN, Wabco, Ronal, Autoliv, Faurecia, and Jelcz.
- Companies which are planning investments or have concluded the construction of their plants include TBMeca, Sanden, Daicel, NSK Steering System, Voss Automotive, Industrie Maurizio Peruzzo Comfort.
- Bombardier Transportation and Wagony Świdnica S.A. (Greenbrier Company S.A.) have made large investments from the transport sector.



- There are low labour costs, as the average monthly gross wage is PLN 2,358.55 (the national average is PLN 2,748.11).

Silesia (Śląskie):

- There is rapid growth of this sector in Silesia. The automotive sector had a 30% share in the total output of the processing industry of the region in 2004, and employment in the sector stands at 10% of average employment in the processing industry of the region. Numerous renowned enterprises are present, and a developed network of suppliers: Fiat in Tychy, Opel in Gliwice, Isuzu Motors, Delphi Automotive Systems, Tenneco Automotive, Lear, Er.Si. Plastal Group, Eaton, Cable Elettra, Hutchinson, Fiat-GM Powertrain, Valeo, Manuli Rubber Industries, CF Gomma, Toyo Seal Industries.
- There is favourable transport infrastructure, thanks to the intersection of two main transit routes, the A1 and A4 motorways; the Katowice International Airport in Pyrzowice (MPL); rail transport, with the wide-gauge track of the Szerokotorowa steelworks line (LHS); and the proximity of Czech and Slovak borders.
- Qualified labour is available. There is a developed network of secondary vocational schools, 37 universities (including 11 state-owned), such as Silesian Technical University, Częstochowa Technical University, and a branch of the Polish-Japanese Institute of Information Technology. There are over 200,000 students, 31% of whom study in technical fields.
- The development strategy of the region envisages cooperation between universities and industry in order to create strong scientific-technical centres.
- Katowice Special Economic Zone offers many investment incentives, such as income-tax exemption and plots ready for automotive investments.

Wielkopolska:

- Many large sector investors are present in Wielkopolska, such as Volkswagen (Germany), MAN (Germany), Solaris Coach and Bus (Poland), Inter Groclin Auto (Poland), Bridge-

stone/Firestone (Japan), and Delphi Automotive Systems (USA).

- The province takes an active part in many undertakings. The regional authorities maintain a database of suppliers and receive support from Volkswagen.
- There are favourable transport connections, including the main transit corridor from Western Europe to Russia, good railway connections, domestic and international airports, and the Oder River route.
- Wielkopolska has a high concentration of manufacturing enterprises. Among the 500 largest enterprises in Poland 47, originate from Wielkopolska. The region manufactures 7.3% of the domestic car output, 40% of the domestic output of public utility vehicles, and 80% of the domestic output of trucks.
- Wielkopolska has a high share of foreign capital, ranking 3rd among Polish provinces, after Mazovia and Silesia.
- There are relatively low labour costs. The average wage in the region is 91% of the national average.

31. Research and development centres for the automotive sector

- International corporations are very interested in Poland as a location for their R&D centres. Setting up an R&D centre in Poland makes it possible to increase efficiency, lower costs, and improve product quality.
- Investors choose Poland mainly for the availability of a highly qualified labour force, the presence of many universities and the support of the authorities.
- According to an AT Kearney report, European investors placed Poland fourth globally in terms of attractiveness for R&D investments.
- It is estimated that foreign companies invested roughly USD 100 million in R&D centres in Poland in 2005.
- At present, there are around 30 R&D centres in Poland, and the number increases each year. Polish R&D centres of foreign enterprises

achieve very good results, and thus foreign investors are expanding the centres. Currently, they employ 1,800 people. According to estimates, R&D centres will employ an additional 3,000 people by the end of 2006.

- R&D centres in the automotive sector are a new trend. For a few years there was only the R&D centre of Delphi in Cracow (employing 600 engineers). At the beginning of 2005 two foreign concerns, TRW Automotive and Remy Automotive, decided to establish centres in Poland, TRW in Częstochowa and Remy in Wrocław. In the coming years, thanks to these two investments, there will be 300 new jobs for engineers.

32. R&D centres in the automotive sector in Poland (see table below).

33. Technical universities educating managers for the automotive industry

- Engineers educated in Poland have a high reputation in other European countries and are sought after by employers both in Poland and abroad.
- The top 5 polytechnics, according to the Newsweek ranking in 2005, were Warsaw University of Technology, Kielce University of Technology, Silesian University of Technology, AGH University of Science and Technology, and Cracow University of Technology.
- The faculties of most relevance for the automotive sector are Mechanics and machine building, and Transport.
- All polytechnics have a Mechanics and machine building faculty, while Transport is offered only at the Cracow, Poznań, Silesian, Warsaw and Wrocław polytechnics.
- The highest number of total graduated engineers in 2003-2004 was at Silesian University of Technology (1,706).
- In 2005 a large group of polytechnic alumni was employed by the American TRW. They work in its centre for developing car safety systems in Częstochowa. In 2006 TRW

Centre	Location	Province	Investor	Country of origin	Activities
Technology Centre Remy Automotive Poland Sp. z o.o.	Wrocław	Lower Silesia	Remy International	USA	Designing and modifying generators and transistors
Delphi	Cracow	Małopolska	Delphi Automotive System	USA	Cracow Technical Centre (TCK). Global Damper Engineering Centre (passive and active dampers), exhaust systems engineering, electrical/electric distribution systems and other
TRW Polska Engineering Centre	Kielce	Świętokrzyskie	TRW Automotive	Japan	R&D services and technical analysis for 10 branches of TRW located in Europe, Asia and America
TRW Polska Engineering Centre	Częstochowa	Silesia	TRW Automotive	USA	Preparation and implementation of new solutions for automotive safety systems for clients worldwide
Valeo Engine Cooling	Skawina	Małopolska	Valeo	France	R&D of engine cooling parts
Volkswagen ElektroSystems	Gorzów Wielkopolski	Lubuskie	Volkswagen	Germany	Design of car electrical installations
Volkswagen Poznań	Poznań	Wielkopolska	Volkswagen	Germany	Creation of new product: Caddy Tramper
Wabco	Wrocław	Lower Silesia	Wabco	USA	Engineering centre for automotive sector

Source: PAIHZ

announced a further increase in employment. Alumni of Polish technical universities are also very desired by world automotive leaders such as Volkswagen and Volvo.

34. Polish technical universities with faculties educating management for the automotive sector

35. Trends in the automotive sector

- Since 1990, the growth of production and export in the automotive industry is easily observed. The automotive industry is a leader in the production sector as a whole in Poland, and is driving economic growth.
- The Polish Automotive Chamber predicts that employment in 2006 will increase by 10,000-12,000 people. This will be possible thanks to further investments (such as starting up production of the Astra III model at the Opel factory in Gliwice), increasing production by other auto producers, but most of all, because of new investments in the sub-supplier sector (where until 2003 employment was decreasing).
- Huge changes have taken place in the geography of the automotive industry in Poland, as a cluster of firms has emerged in the south-western part of Poland. The decisions to locate more than 100 new mid-sized and large factories there were influenced by the proximity of different auto factories, but also accessibility (via the A4 highway) to recipients in Germany and many more European countries.
- Poland's importance in European car production is growing not only thanks to competitive prices of car components but also because of the high quality of goods produced and the

flexibility of manufacturers in responding to the changing demands of end customers.

- More and more companies are shifting their production into Poland, or moving different functions here such as HR and IT (Business Process Offshoring & Outsourcing).
- A new trend in the Polish automotive industry is the appearance of research and development centres. It is predicted that soon other companies will follow Delphi, TRW, Valeo, Tenneco and other big auto-parts producers in setting up their R&D centres in Poland.
- As a result, the skills and accessibility of Polish engineers will gain in importance.

36. Prospects for the Polish automotive sector

- As the research shows, Poland is a suitable country for investment in the automotive industry.
- Its key advantages include distinctly lower labour costs than in the old EU 15, a highly qualified labour force, and more than 650 sub-suppliers, 200 of which have already implemented the highest quality standards (ISO/TS16949).
- The situation of the Polish automotive sector has improved in recent years. Positive macroeconomic conditions are being noticed by international investors, who have launched the construction of new facilities and expansion of existing ones (e.g. Toyota, Michelin, Faurecia, Valeo, Kirchhoff, Hutchinson, Segu and others).
- What is more, new investors are appearing on the Polish market, such as Grupo Antolin, Nord, Voss, NTK, Dacel, and NGK, which have not been present in Poland before. This situation may even improve, as MAN has decided to locate its new truck factory in Poland, which means more sub-suppliers for this producer.

37. Forecasts for the automotive market and industry in Poland

- The Polish automotive market has good prospects for the future, both in terms of the volume of sales of motor vehicles and opportunities for economic co-operation.
- The demand for passenger cars in Poland is far from being satisfied and various indicators relating to passenger cars (e.g. number of cars per 1,000 residents and profile of the age of cars) are worse than the EU averages.
- Experts note that the demand for trucks in Poland is likely to remain high for a long time yet. They predict further growth in the Polish carriers' share both in the transport of goods exported and imported by Poland and in the market for international road transport services.
- Poland's fleet of buses needs to be renewed. This relates in particular to buses used in municipal transit, since half of them are more than 10 years old.
- The demand for motor vehicles in Poland is correlated with the principal macroeconomic phenomena, the rate of growth of GDP, the level of unemployment and inflation included. All these indicators began to improve in 2003 and continued to improve faster in 2004, thanks in part to Poland's accession to the European Union.
- The investors already present in Poland will benefit this year owing to improvement in internal demand and other changes, such as reduction of corporate income tax rates from 2004.
- A wave of bankruptcies among Polish car dealers is expected as the domestic new-car market continues to struggle in the wake of sluggish demand and massive imports of used vehicles.

Polytechnic (English name)	City	Founded	Mechanics and machines building faculty	Transport faculty	Number of graduated engineers in 2003/2004
AGH University of Science and Technology	Cracow	1919	√	-	825
University of Bielsko-Biala	Bielsko-Biala	1969	√	-	496
Technical and Agricultural Academy	Bydgoszcz	1951	√	-	904
Białystok Technical University	Białystok	1949	√	-	481
Częstochowa University of Technology	Częstochowa	1949	√	-	1,022
Gdańsk University of Technology	Gdańsk	1904	√	-	651
Koszalin University of Technology	Koszalin	1968	√	-	319
Cracow University of Technology	Cracow	1946	√	√	711
Lublin University of Technology	Lublin	1953	√	-	359
Technical University of Łódź	Łódź	1945	√	-	552
Opole University of Technology	Opole	1966	√	-	624
Poznań University of Technology	Poznań	1919	√	√	967
Radom University of Technology	Radom	1950	√	-	481
Rzeszów University of Technology	Rzeszów	1951	√	-	283
Szczecin University of Technology	Szczecin	1946	√	-	798
Silesian University of Technology	Gliwice	1945	√	√	1,706
Kielce University of Technology	Kielce	1965	√	-	430
Warsaw University of Technology	Warsaw	1915	√	√	1,133
Wrocław University of Technology	Wrocław	1910	√	√	1,071

Source: GUS, StudentNews.pl, Wikipedia



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