



# V4

## TRADE AND FDI OBSERVER

Panorama of the Automotive Industry

October 2012

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## FOREWORD

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The objective of the regular publication „V4 Trade and FDI Observer“, launched in May 2012 is to provide a quarterly overview of the main processes of external trade, foreign direct investment (FDI) and outward foreign direct investment (OFDI) in the Visegrad countries. The publications of the series offer compact and comparable information on these topics for a broad public including officials, professionals, academia, businesses, students and interested citizens. The authors and the editors hope that reading the „V4 Trade and FDI Observer“ will be useful not only for V4 readers but also for readers from elsewhere interested in the development of the V4 economies.

The present – second – issue of the „V4 Trade and FDI Observer“ has been prepared in the framework of the “V4 Trade and FDI Observer “ project, supported by the “Small Grant” Programme of the International Visegrad Fund (Small Grant No. 11140172). The research institutes participating in the project are ICEG European Center, Budapest (coordinator of the project); EUROPEUM Institute for European Policy, Prague; Institute of Economic Research of the Slovak Academy of Sciences, Bratislava; Polish Institute of International Affairs, Warsaw (project partners). They belong to the leading research centres in the Visegrad countries in the field of economic analysis.

In the first issue of the „V4 Trade and FDI Observer“ we concentrated on the general developments of the period 2008–2011 and presented four country analyses of both short- and mid-term changes in the field of trade and FDI/OFDI. In the present, second issue, we analyse the development of trade and FDI/OFDI in a specific sector: the automotive industry. It is clear that this branch is of high importance for all the V4 countries. However, beyond this general picture, there are also significant differences. These differences are revealed by the analyses of the present issue of the „V4 Trade and FDI Observer“.

# THE AUTOMOTIVE SECTOR IN THE CZECH REPUBLIC

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## History

The automotive industry in Czechia has a long tradition; the most famous company Škoda Auto has its origins in 1895. Another company named Tatra was founded in 1850 although their first car was made in 1897. Czech countries have always been an industry heart of Austro-Hungarian Empire. During the first republic (1918-1938) the tradition went on as Czechoslovakia was concerned as an industry leader of the region. The production was composed of many types of vehicles, from trucks, motorcycles, cars to tanks. Many of these vehicles and facilities were used afterwards by German military forces during the Second World War. With the arrival of the communism came also the slow decay of quality and competitiveness. At the end of the communist regime companies in automotive industry were hardly able to produce up-to-date products and to succeed on the free market. For example, differences between cars produced by Škoda in 1989 and cars produced in the United States, Japan or Germany were more than 20 years of development.

The privatisation of state-owned companies showed how important and essential it was to find a foreign partner with capital and experiences in the sector. While Škoda was sold to Volkswagen Group in 1991 and became immediately a part of a holding, other companies such as Tatra, Praga or Liaz were left in domestic hands. The lack of capital and experiences led to very serious problems in these companies. Tatra is the only one that survived until nowadays, but that was mostly because of state contracts for army trucks in the crisis years. However, in this case the management and the owner had enough time to realize that they need a strong foreign investor<sup>1</sup> and even though they had problems with finding a good, reliable partner; the company is still on the market. The price they paid for the transformation is the lack of passenger cars in their production, so the oldest producer of cars in Czechia produces trucks only.

In the middle of the 1990s it was evident that Škoda Auto plays the main role in the sector. They succeeded in implementation of new technologies, Volkswagen Group massively invested into the new machinery and, last but not least, there were two new competitive designs of Škoda Fabia and Škoda Octavia which presented the capabilities of producing cars that can successfully compete on the market. Further transformation led to focus on exports of cars.

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<sup>1</sup> In 2011 19 % of the company was owned by DAF, the rest by Czech businessmen.

Another important stimulating factor for the automotive industry was the state subsidy for investments which led to two big investment actions. The first was the joint venture of Toyota and PSA Peugeot Citroën, known as TPCA, which was built near Kolín<sup>2</sup> between 2002 and 2005. The second was the investment of Hyundai in Nošovice<sup>3</sup>, which was built between 2006 and 2008. Each of these factories is producing approximately 300,000 cars per year and employs over 3,000 people.

Škoda Auto is expanding abroad not just by production but also by new facilities. There are currently three main facilities in the Czech Republic (Mladá Boleslav, Vrchlabí, Kvasiny<sup>4</sup>) and one in Bosnia and Herzegovina, Ukraine, Kazakhstan, India, Russia and China. This massive production focused mainly on exports led Škoda Auto to produce its 10,000,000th car in 2006, currently producing almost 900,000 cars per year.

Automotive industry is the key sector of the whole export economy. Not only the production of GDP is driven by 80 % by exports, but the composition of exports suggests that the automotive sector plays also the main part in total domestic production and together with sub-suppliers creates over 20 % of the Czech GDP.

## **Trade in automotive industry**

Due to the extensively open Czech economy based mainly on exports and due to the reasons mentioned in the previous part, trade in automotive industry is highly dependent on the economic cycle but not in the Czech Republic only but basically on the conditions of the European and world economies.

The beginning of the reported period was a very bad time for automotive industry in the USA or Europe. The recession burst forth and the result was quite immediately noticed in the automotive industry. In economic theory, a new car is a luxury commodity which means that its elasticity towards price is very high. In another words it means that the first thing that the households will let go in the case of decreased salaries is the intention to buy a new car.

People in the Czech Republic were not affected by this crisis of purchasing power very much, but they bought only 15.6 % of the domestic car production in 2008. The rest of these new cars (84.4 %) went abroad, mostly to Germany and other foreign markets. The impact of the

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<sup>2</sup> Central Bohemian Region, 70 km far from Prague

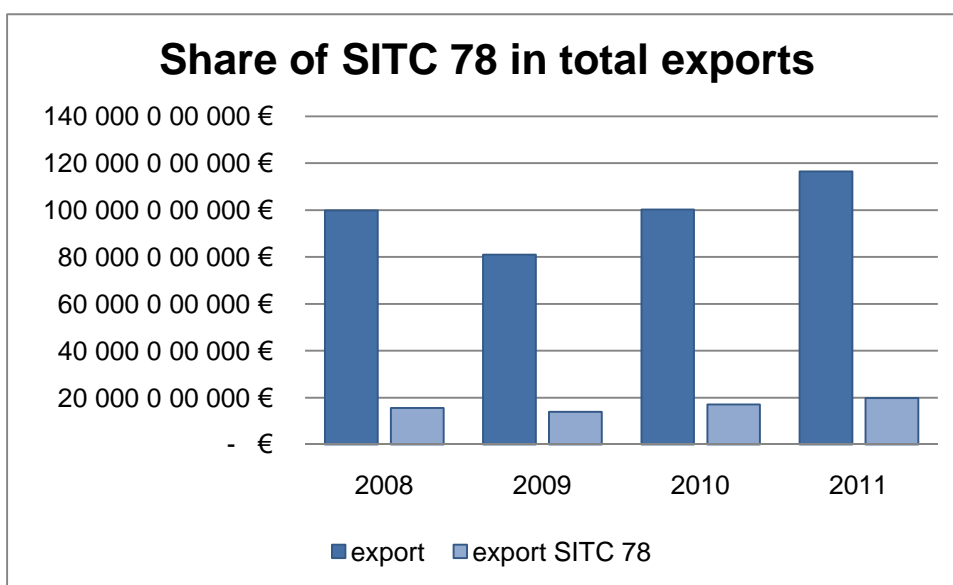
<sup>3</sup> Moravian-Silesian Region, 30 km far from Ostrava

<sup>4</sup> Mladá Boleslav is situated in Central Bohemian Region, 40 km far from Prague, the other two localities in Hradec Kralove region.

recession on the production of new cars was quite serious, even though there were two factors that ensured that the amount of totally produced cars remained with the positive-slope effect.

The first important factor was introducing of scrappage programs in many European countries in 2009. Nevertheless the Czech Republic did not induce this program<sup>5</sup>, the benefit from programs abroad led to better export numbers. The most important program from the Czech point of view was the one in Germany. One of the significant signs of this program was also the fact that customers changed their requirements more towards cheaper cars. Volkswagen Group was the biggest beneficiary of all producers in Germany which included also Škoda Auto.

The second factor was the presence of two relatively new producers in the Czech Republic. These two producers focused on the production of small passenger cars which helped them in dealing with the changed demands of customers. Both factories were also at the beginning of their production which means that they needed to get a market share so they started and held the production plan with much less adjustments than Škoda Auto.

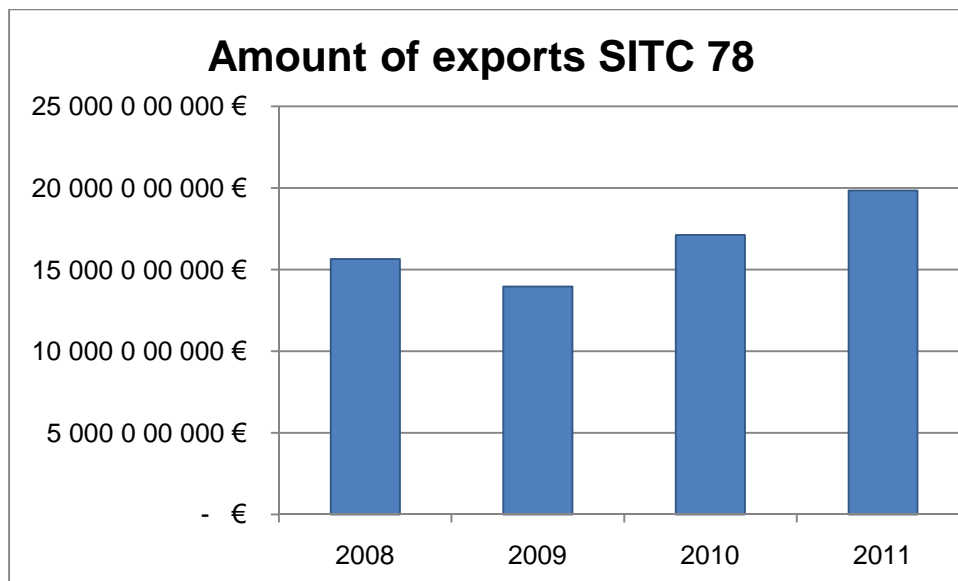


Source: Eurostat

The effect of the afore-mentioned scrappage program can be very well good seen on the data of Czech exports. The total volume of exports has suffered a very serious decline between the years 2008 and 2009 but the share of automotive exports rose from 15.7 % in 2008 to 17.2 % in 2009. The next data – for 2010 and 2011 – suggest that the share is quite stable around 17 %. As a conclusion, we can say that the Czech Republic used scrappage programs of surrounding countries to damp its own economic cycle but without even paying, just as a free-rider. It is

<sup>5</sup> The scrappage program was discussed and finally approved by both chambers of the Czech Parliament but the president (Václav Klaus) used his veto and legislators have never outvoted it.

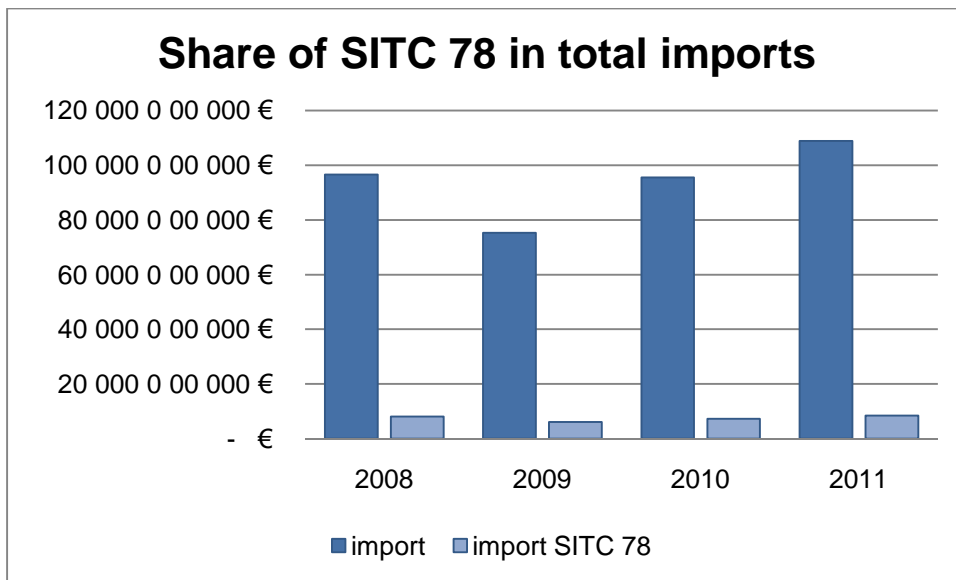
important to realize that without these state subsidies the recession would have been much more serious because all the car industry and sub-suppliers employ more than 100 000 people. On the other hand it is very doubtful whether the introduction of a Czech scrappage program would have had any serious effect on the domestic economy. Even though the production of cars is about 1.1 million per year, Czechia is a small player at the car market which means that Czech producers do not decide their market prices; they are not price leaders but only price followers.



Source: Eurostat

The decrease of exports was driven mostly by the adjustment of prices. Total numbers of produced cars rose from 940 000 in 2008 to 980 000 in 2009, 1.07 million in 2010 and almost 1.2 million in 2011 (annual increase by 11.4 %). Although Škoda Auto lowered its production in 2008 by 80 000 cars the start of Hyundai in Nošovice completely replaced this decrease, so the total production has still increased.



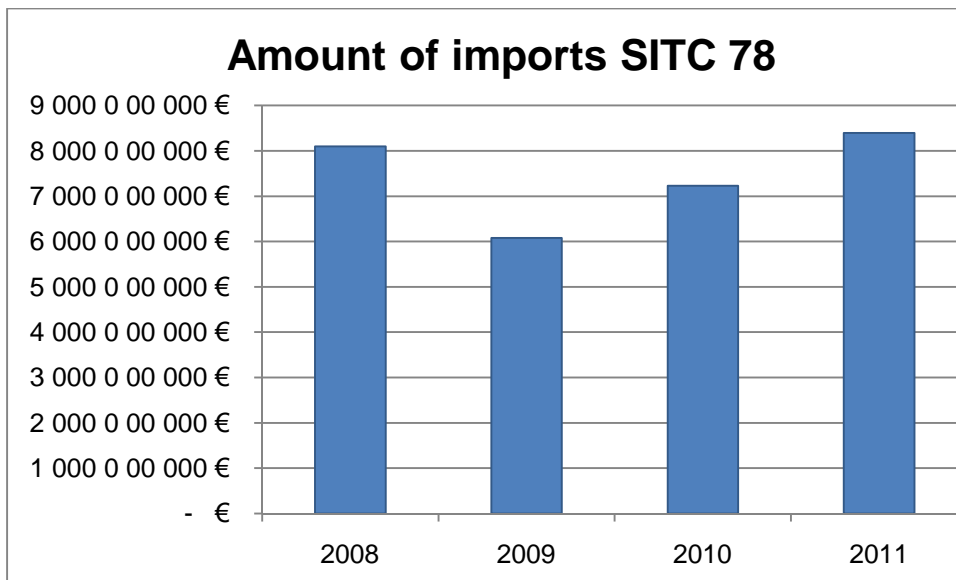


*Source: Eurostat*

Imports of cars developed in a very interesting way. The shares of domestic and imported new vehicles in the country were quite stable (50:50) during all 90s. The breakpoint occurred in 2002 when the share of domestic cars started to fall down to 30 % only in 2008. Then the share started to improve slowly which means that in 2011 the share of domestically produced new cars rose to almost 36 %.

This is a very important trend that explains why the share of SITC 78 in total imports is still around 17-18 % even though the volume of total imports rose quite much. This might be an answer why the car market is not following the rest of the economy.

There are several explanations for this change in consumer behavior, but the main reason is simply competition. Economic recession just speeded up the process of adopting extensive marketing and smaller prices of products. Czech consumers realized that the difference between buying an old car and buying a new one had become the smallest in history and together with the increase in average wages and the start of Hyundai this led to the substantial shift on the market towards buying a new car from domestic producers.



*Source: Eurostat*

Although the total amount of imported cars has increased between 2009 and 2011, the automotive market in Czechia is growing faster so the share of imported vehicles is slowly decreasing. Another important thing is that the volume of imported cars in 2011 was about € 8.4 bn in comparison with € 19.8 bn in exports. The 25 % decrease between 2008 and 2009 was much sharper than in the case of exports (11 %) and it is just the logical conclusion of not having a scrappage program. This gap can be used as a gross approximate measurement of the effectiveness of foreign scrappage programs.<sup>6</sup>

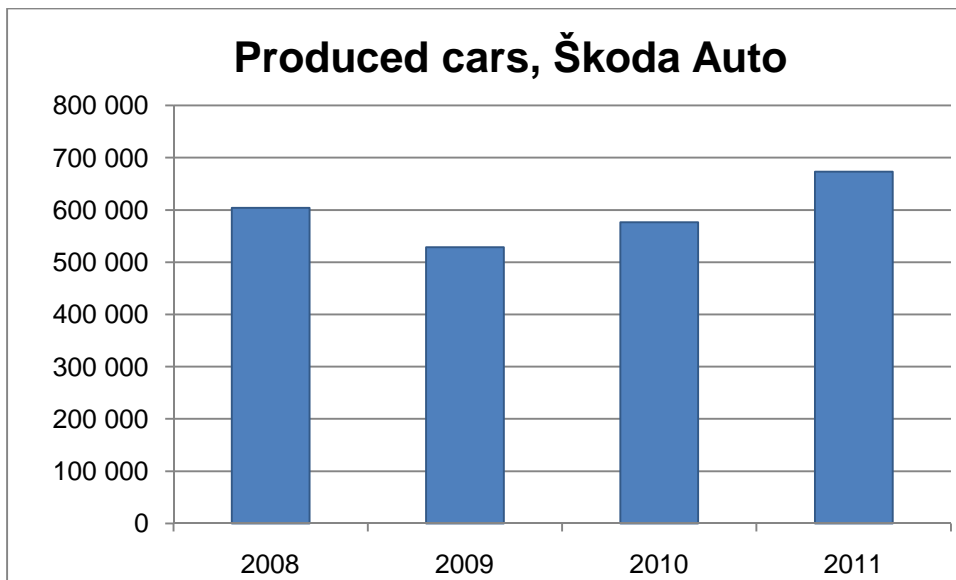
The main export and import partner is traditionally Germany, followed by France on the second place, Italy on the third and the UK on the fourth.

## **Main actors, FDI, OFDI**

As it was mentioned above the main investments into automotive industry occurred before the reported period. The main investment actions have finished in 2006 and until then there are several minor investments mostly into the connected sectors.

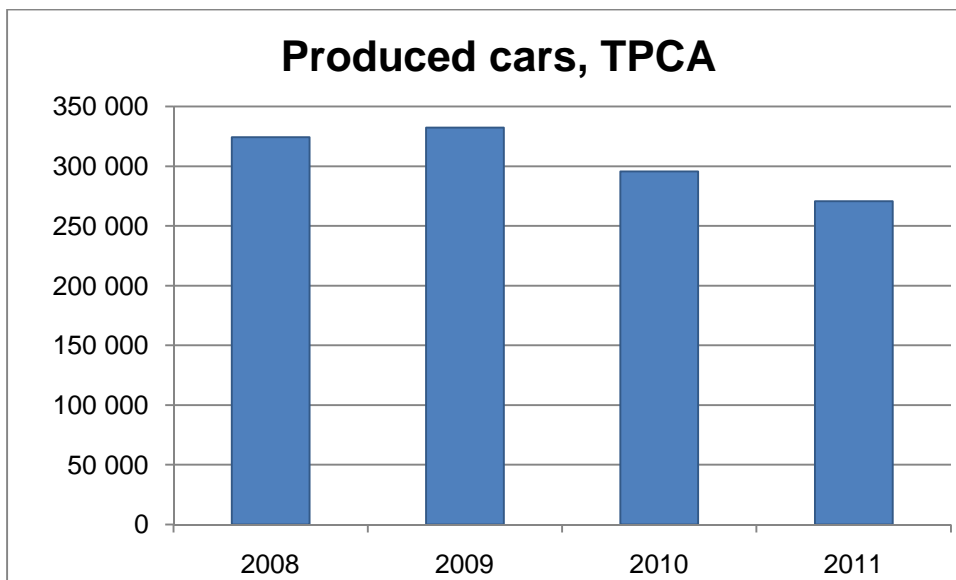
Škoda Auto has not made major investments into the extension of domestic production capacity. There is still space for further increase without a need for a new facility. As the next graph suggests Škoda Auto has successfully went through the recession and increases the output. Currently Škoda Auto produces a wide range of cars from low-end (Citigo), via MPV (Roomster), SUV (Yeti), to upper middle class (Superb).

<sup>6</sup> It is based on the assumption that the fall in total exports and imports was almost the same – 20 %.



*Source: Association of Automotive Industry*

The TPCA project has not managed to fully recover from the fall of the market. Although during the decrease in 2009 output was at historical maximum and helped to improve the total output of cars, production has slightly fallen so there is no need for further investment in the near future. The production is focused on cheap city cars sold as three different designs and marks, but with identical technical parameters (Peugeot 107, Toyota Aygo, Citroën C1).

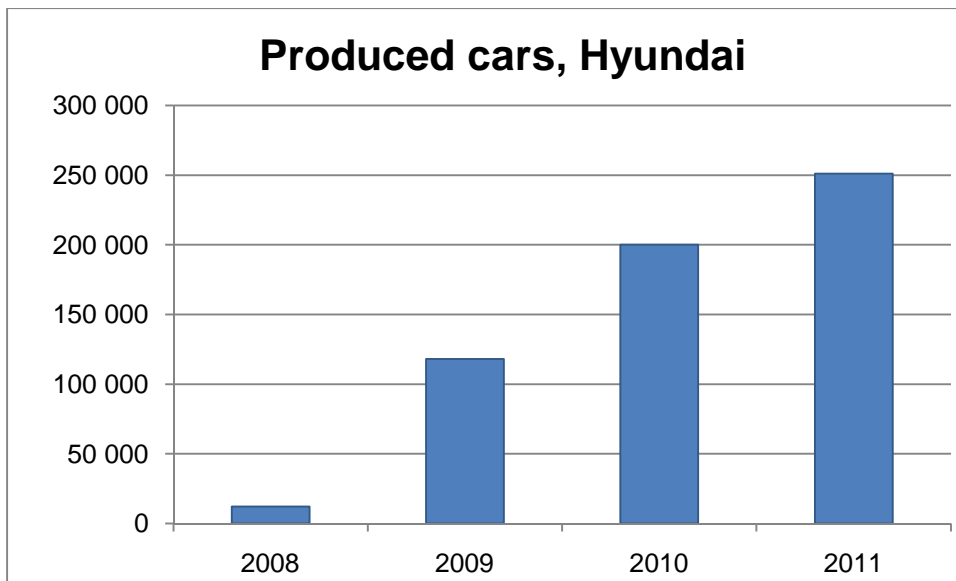


*Source: Association of Automotive Industry*

Hyundai started its production basically in 2009<sup>7</sup> and is still following an increasing trend in the output. Due to the fact that the production facility is one of the most advanced automotive factories in Europe there is no further investment expected. Hyundai in the Czech Republic is

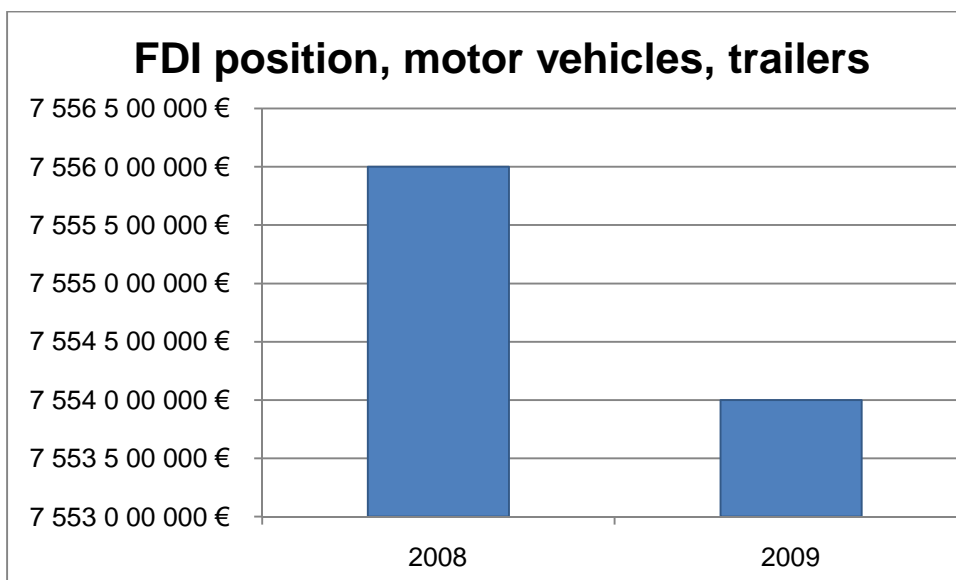
<sup>7</sup> In 2008 it produced only 12 050 cars because the facility was finished by late 2008.

currently producing Hyundai ix20, Hyundai ix35 and Hyundai i30 hatchback. The production of Kia Venga moved to Slovakia in 2011.



Source: Association of Automotive Industry

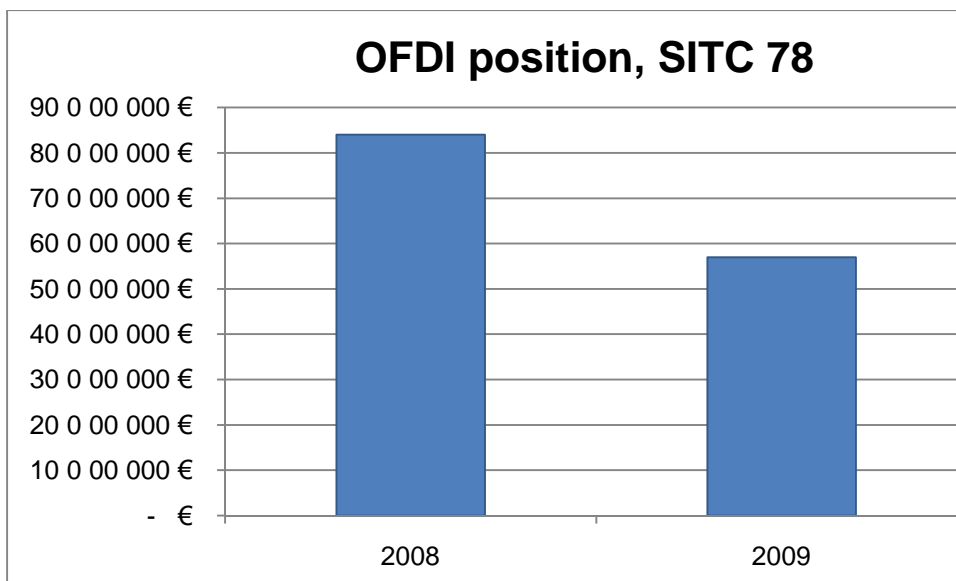
Recent FDI data available from Eurostat support the fact that there were virtually no big investment actions in the production of cars. The total level of investments is quite high.



Source: Eurostat

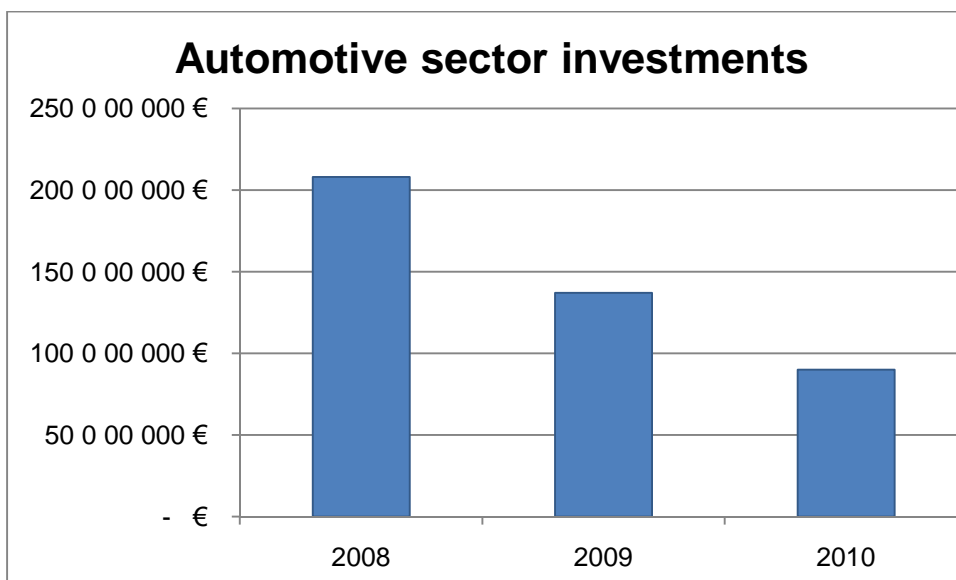
The OFDI data suggest that even though Škoda Auto is starting to produce cars in new foreign countries, facilities are invested by Volkswagen Group or another member of the holding so factories are not producing Škoda's cars only, but also other similar products of the partners

(Seat, Volkswagen). The decrease in 2009 is most likely connected with the lower production of Škoda Auto, although the total amount is low and therefore very volatile.



Source: Eurostat

There are different statistics from Czechinvest<sup>8</sup>; despite the fact that it covers only the projects supported by the Czechinvest, a general downward trend can be seen.

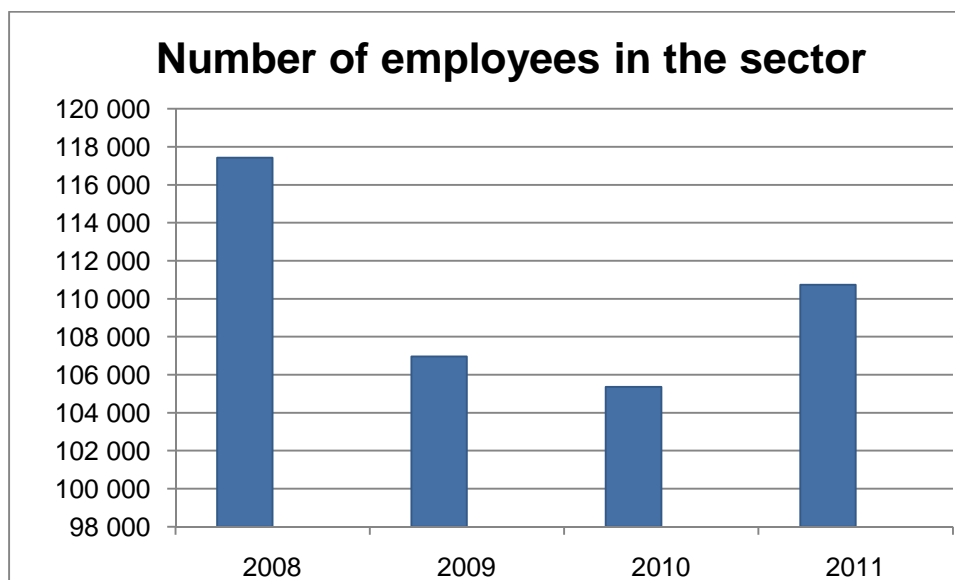


Source: Czechinvest

<sup>8</sup> State organisation for supporting entrepreneurship and investment in Czechia

## Conclusion

Automotive industry plays a key part in the Czech economy. However, this article does not cover the importance of other sub-suppliers connected with the car production. The whole sector has gone through a decrease in the number of employees in 2008, 2009 and 2010, but in 2011 the total number has risen to 110 735 people.



*Source: Association of Automotive Industry*

As the methodology of measurement of cars is concerned, according to the Association of Automotive Industry the share of passenger cars (including category N1) is in average more than 99 % of all vehicles produced for the reporting period. Due to the fact that the three biggest producers are focused on passenger cars only, the availability of the figures of produced cars is better than for other sectors (trucks, motorcycles). This is the reason why the number of cars is sometimes used instead of the number of all vehicles produced. For example in 2011 there were produced 3 562 buses, 1 155 motorcycles, 1 080 trailers and 1 302 trucks in comparison with 1 194 981 cars.

The situation in the automotive industry does not suggest big investments into new producing facilities in the near future. The changed position on the market is pushing companies to optimize their current production and to focus on added value. The Czech Republic is not a source of cheap labor force anymore as it used to be 10 years ago, so the development of new factories can be more expected in emerging countries. However, the great opportunities are in research and development centers for whole automotive holdings and in the production of parts

and spare parts of cars. In this case the vital advantage is the close location to Germany<sup>9</sup> and the good infrastructure connection – a very important condition for the transport of parts needed even in regime just-in-time<sup>10</sup>.

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<sup>9</sup> Germany is the biggest producer of cars in Europe.

<sup>10</sup> It is a way how to control inventory management. In this case there are almost no parts left in storage. This improves company costs but it is very requiring of precise supply management.

## THE AUTOMOTIVE SECTOR IN HUNGARY

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### Introduction

In the CMEA distribution of labour, Hungary was “responsible” for bus production; there were no car production capacities in the country. Ikarus buses were present in all CMEA countries, and there were some local suppliers to bus production and also to car production in other CMEA countries. The appearance of the automotive industry in the country started at the beginning of the nineties with investments of three important OEMs (Original Equipment Manufacturer): Suzuki, Opel and Audi. The Japanese Suzuki established its Hungarian plant in Esztergom in 1991, they built the first Suzuki in Hungary in 1992. Opel is present in Hungary, in Szentgotthárd also since 1991, it dealt with assembling cars only in the first years of operation (the “historical” first passenger car (an Opel Astra) manufactured in Hungary after decades was produced by Opel), later it turned to producing parts of strategic importance: engines. Audi operates in Hungary in Győr since 1993, it is also more specialised on engine production, it assembles cars, but the production of engines is its main activity. Later, other OEMs preferred the other three countries of the region, however, in 2008 Mercedes chose Hungary as the location of its first production unit in Central and Eastern Europe. This affiliate at Kecskemét has started its production in 2012.

While in terms of the number of cars assembled in the country, Hungary is far behind in per capita terms compared to the other three Visegrad countries, it is an important host for well-known first tier suppliers, which followed the three OEMs. Of these the most important ones, with large production capacities and large R&D centres are: Robert Bosch, Knorr-Bremse and Continental (all of German origin). There are a few Hungarian owned companies, which became automotive suppliers, a few of them originate back to the pre-1990 period, supplying bus or car production at that time (e.g. Bakony, Hajdú). Videoton also has its origins in the pre-1990 period, and is also connected to the automotive sector by supplying electronic auto parts and components.

This industrial structure in principle provides opportunities for domestic companies to become suppliers. The three OEMs followed different strategies. Suzuki was interested in local developments and in the increase of local supplies (in order to reach local content level required for tariff-free exports to the European Union), while Opel and Audi acted differently. Suzuki is basically the only one in the region, which is a greenfield company with high local content. On the other hand, Opel and Audi, although the mode of entry of which is also greenfield, are much less embedded because in their case the share of local supplies does not exceed five per cent



(in the case of Audi, the local content is around 10 %; for Opel, it is similarly low). In the case of the fourth player, Mercedes, we cannot expect a high number of local suppliers, because they bring to Hungary the production of a ready model, and in this phase it is very difficult to become a supplier.

While it is difficult to determine statistically the sector, OECD (2009) makes an attempt to analyse the role of the automotive sector and its suppliers in the member countries. According to that, Hungary was among those OECD countries, in which the automotive sector played a significant role. For example in value added Hungary was third, following Germany and the Czech Republic with the automotive sector representing 14 % of manufacturing and 3 % of total value added. Hungary was also third, following Japan and Slovakia in terms of the share of the automotive sector in exports, representing 16 % of total exports (one fifth of manufacturing exports).

The importance of that sector can be indicated by the fact that there are several automotive OEMs and first-tier suppliers, which are among the top companies (according to sales, exports or employment) in Hungary. For example, in certain years Audi is the No. 1 exporter. Altogether, in 2010, the automotive sector (CL) represented 6.3 % of total output, 16.3 % of total manufacturing output, 3.1 % of total value added and 14 % of manufacturing value added, according to the data of the National Accounts published by the Central Statistical Office. The sector is dominated by foreign owned companies; they represented 94.2 % of total sales of the companies in the sector in 2009.

**Table 1**  
**Vehicle Products Industry TOP 10 Firms (by net sales revenue)**

<b>Rank</b>	<b>2008</b>	<b>Rank</b>	<b>2010</b>
1.	Audi Hungaria Motor Kft	1.	Audi Hungaria Motor Kft
2.	Magyar Suzuki Zrt	2.	Magyar Suzuki Zrt
3.	Lear Corporation Hungary Kft	3.	Bosch Group
4.	Denso Magyarország Kft	4.	Lear Corporation Hungary Kft
5.	Luk Savaria Kuplunggyártó Kft	5.	Denso Magyarország Kft
6.	Visteon Hungary Kft	6.	Luk Savaria Kuplunggyártó Kft
7.	BorgWarner Turbo System Kft	7.	Temic Telefunken Hungary Kft
8.	BPW-Hungária Kft	8.	BorgWarner Turbo System Kft
9.	Rába Járműipari Holding Nyrt	9.	Visteon Hungary Kft
10.	Hammerstein Bt	10.	Continental Teves Magyarország Kft

*Source: Figyelő TOP 200 (2009, 2011)*

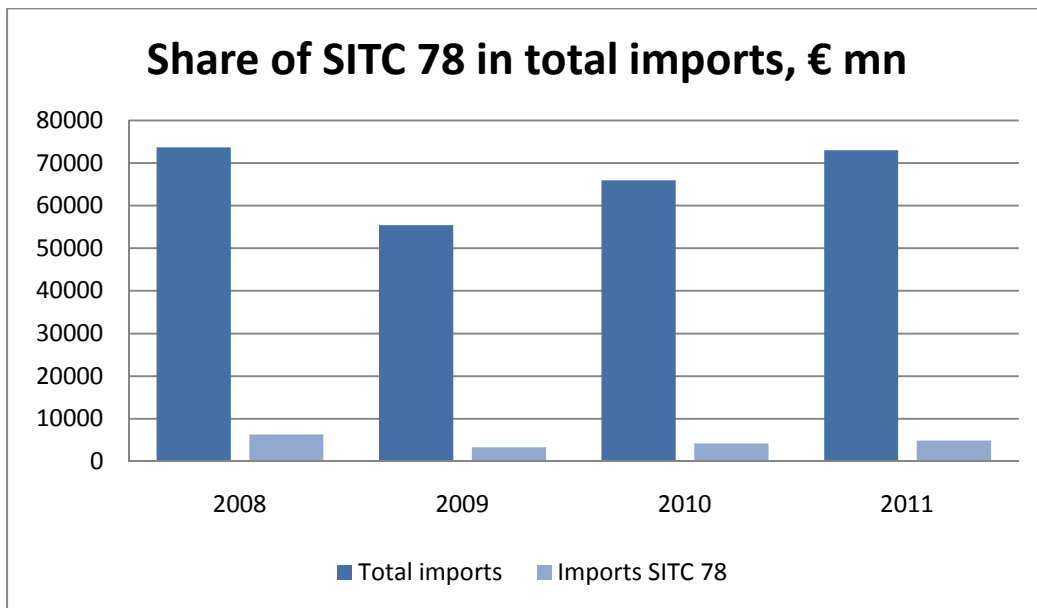
## Trade in automotive industry

Hungary is part of the international production chains, multinational companies give approximately 80% of its exports, and 70% of its imports. Hungarian automotive industry is part of these chains. It is difficult to determine statistically the sector in foreign trade, too. In addition to SITC 78 (Road vehicles, including air-cushion vehicles), vehicle industry in the Hungarian foreign trade is also connected to SITC 71 (Power generating machinery and equipment – mainly: Internal Combustion Piston Engines and Parts), SITC 87 (Professional scientific and controlling instruments and apparatus- mainly car electronic articles) and partly to SITC 62 (Rubber – mainly: Tyres, pneumatic, new, of a kind used on motor cars).

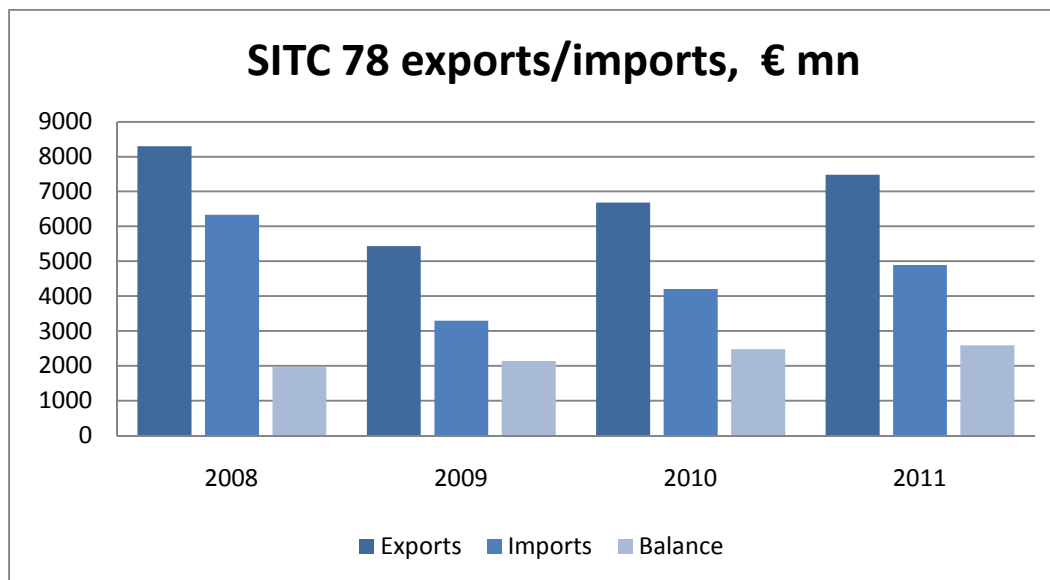
Vehicle industry is highly dependent on the economic cycle, so crisis hit hard the sector's foreign trade. While total exports declined only by 20%, the drop was 35% by the SITC 78 goods. In 2010, as a result of the general economic growth, exports of SITC 78 goods rose by 23%, and in 2011 by 12%. But even with this development it was below the export volume of 2008 level. The share of these products in total Hungarian exports declined from 11.3 % (before the crisis) to 9.4 %. In 2009, imports of SITC78 goods decreased by 48 %, in 2010 by 28 %, and in 2011 increased by 16 %. Their share from the total import in 2008 decreased from 8.8 % to 6.7% in 2011. During and after the crisis the volume of these goods constantly increased, from € 2 bn (2008) to € 2.6 bn (2011).



Source: Eurostat Comext

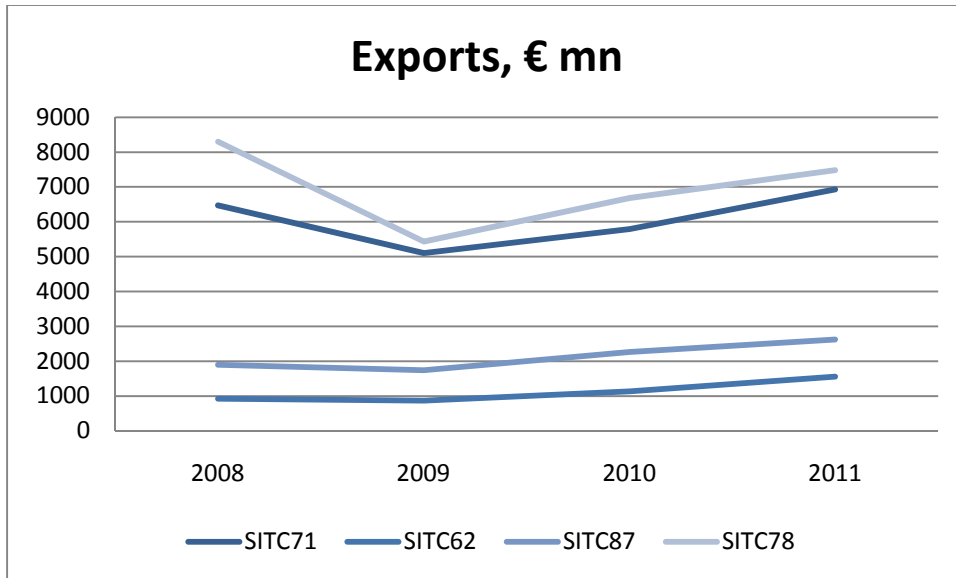


*Source: Eurostat Comext*



*Source: Eurostat Comext*

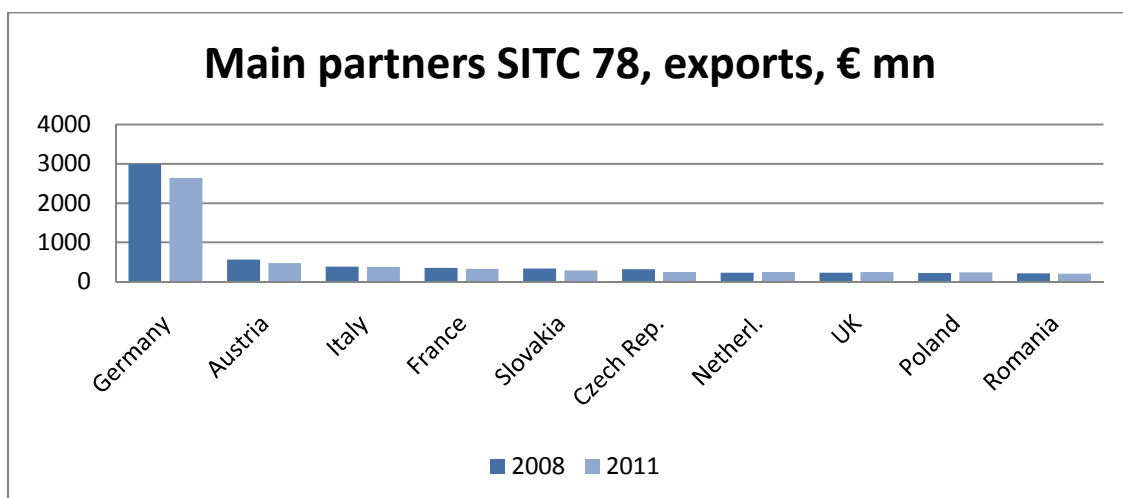
The crisis affected also the exports of vehicle industrial goods in categories other than SITC 78. The exports of SITC 71 products decreased by 20 % in 2009 and of SITC 87 and 62 products by 10 %. In 2010 – as a result of increasing foreign demand – the exports of all three groups of goods started to increase, and in 2011 their exports were above the level of 2008. So the structure of Hungarian vehicle exports has deeply changed: the share of SITC 78 decreased from 50 % to 40 %, the share of SITC 62 increased from 5 % to 8.5 %, and the share of SITC 71 remained 37 %. The reason for the restructuring was the fact that investments of many big suppliers of vehicle industry (Hankook, Bridgestone, Robert Bosch etc.) had started to produce just before the crisis broke out.



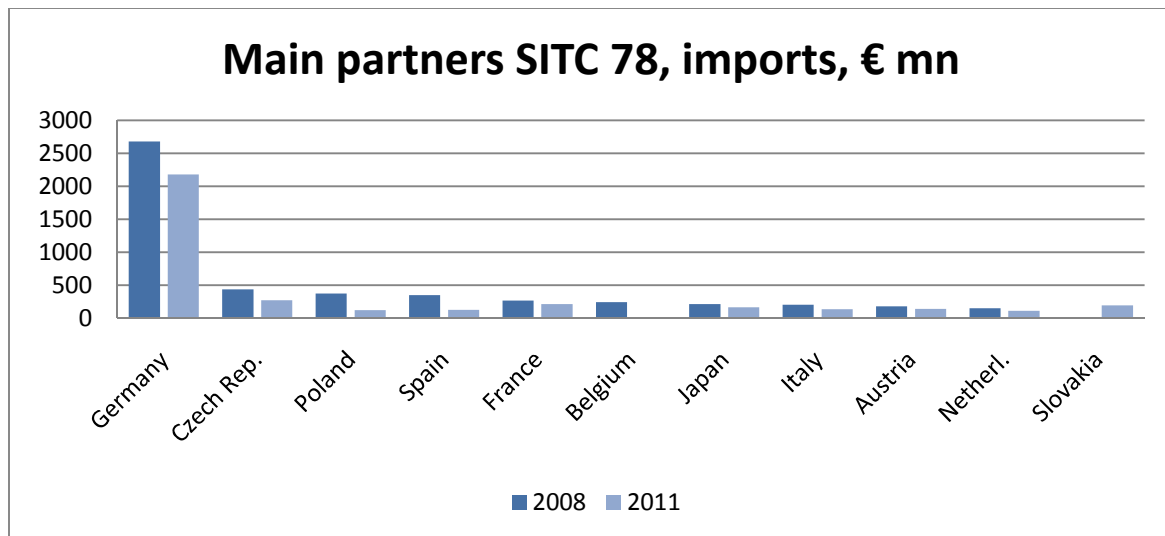
Source: Hungarian Statistical Office

The geographical structure of Hungarian automotive foreign trade is determined by the intra-firm trade and the supply chain. The main export market is the European Union, especially Germany. The crisis had no real impact on this fruitful relation, nor has it changed the list of the country's first ten export markets. The only change was the forging ahead of the Czech Republic (from the 10<sup>th</sup> position. to the 6<sup>th</sup>) and Slovakia (from the 9<sup>th</sup> position to the 5<sup>th</sup>).

The main import partner is the European Union (mainly Germany), and as the only Asian country, Japan (because of Suzuki). The crisis and the growth afterwards did not really affected this. But there were changes in the further ranking. Belgium fell out of the first ten import markets and Slovakia got in. Poland and Spain lost a bit of their importance. Beyond Slovakia, Japan, Austria and France also have an increasing importance in this sector.



Source: Eurostat Comext



Source: Eurostat Comext, own calculations

## FDI/OFDI in the automotive industry

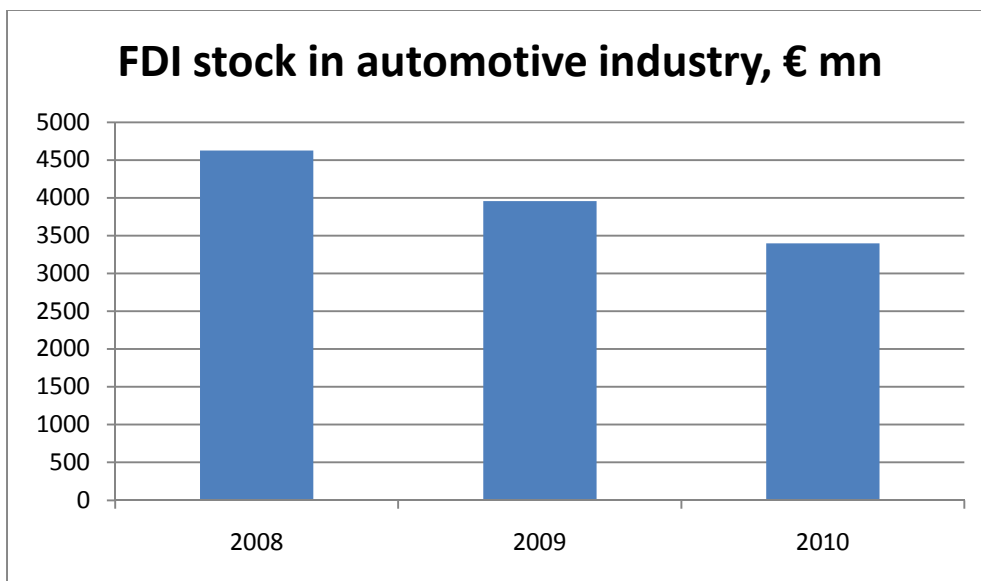
As it was already shown, the Hungarian automotive sector (CL) is highly dominated by foreign-owned affiliates of well-known multinational companies. Basically we can distinguish three groups of actors in the industry: the first are composed of big OEMs (Suzuki, Opel/GM, Audi/VW and more recently Mercedes), in the second there are well-known global suppliers (“follow source”) of the automotive companies, also these are all foreign-owned, and they supply not only the large OEMs present in Hungary, but also others abroad. For example, Knorr-Bremse, Robert Bosch, Lear, Luc Savaria, Continental or Denso belong to this group. In the third group, there are larger, mainly second- and further tier suppliers, these are also predominantly foreign-owned, however, some Hungarian-owned companies were able and to join this group. These are also supplying Hungary-based and foreign automotive producers. We can mention here the larger Hungarian-owned automotive suppliers, as for example Hajdú, Karsai (plastic components) or Videoton (electronic components). In the last, fourth group, we can find mainly Hungarian-owned, but also some foreign-owned smaller companies, who are less export-intensive and supply mainly automotive companies operating in Hungary. Many of the Hungarian-owned first-tier Suzuki suppliers belong to this latter group.

The period 2008–2011 has been an important one in the development of the automotive sector in Hungary. First, it was in June 2008 that Mercedes Benz made public its choice of the location of its new factory, Kecskemét in Hungary. The company signed the contract with the Hungarian government in October 2008. The building of the factory started in July 2009. The value of the investment is € 800 mn, there will be altogether 2500 jobs created and the plant will produce

150 thousand cars per year. Production has started in March 2012. Second, Audi, which continuously expanded its capacities and activities in Hungary, announced a large capacity extension (basically of building a second plant) in 2010. At the time of the announcement, the value of the new project was said to amount to € 900 mn. In the meantime it turned out, that the company would extend its capacities even more, thus exceeding a further investment value of € 1 bn, with which 2100 new jobs will be created. Audi unifies various activities in its Győr location: besides mass production of cars and engines, there is a tool shop and an R&D centre, as well. The annual capacity of car production will be 160 thousand. Third, also in 2010, Opel/GM announced a capacity extension with the value of € 500 mn, creating 800 new jobs at the Szentgotthárd plant. Thus the plant will produce 500 thousand engines annually. Furthermore, various “follow source” and important further tier foreign-owned companies also extended their capacities in Hungary, partly through relocations (for example Robert Bosch from Wales, Continental from Spain and Germany), partly through establishing new capacities (for example Knorr-Bremse). A part of these capacity extensions is clearly connected to the appearance of Mercedes and to the increased presence of Audi and Opel/GM.

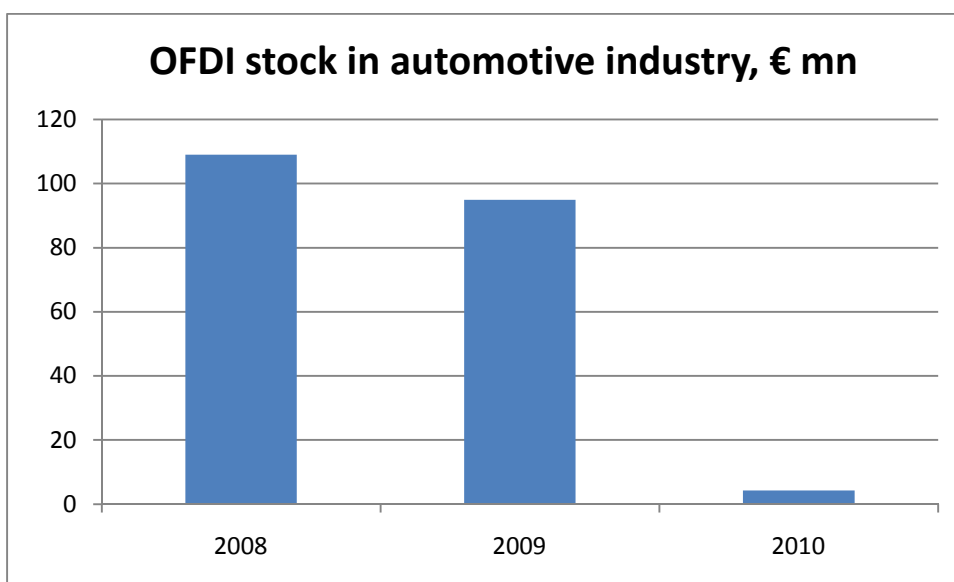
Not only production, but also automotive research capacities were increased in the analysed period: Bosch opened an R&D centre in Budapest in 2008, Audi gradually extended its R&D centre, Borg Warner even relocated development activities from Germany to Hungary in 2011. Interestingly enough, relocations in the automotive sector from Hungary, for which we could find cases before 2008, were not effectuated in the analysed period, which may indicate the importance of being close to customers and to the regional organisation of the sector.

While on the basis of the above mentioned large projects we expect an increase in the stock of automotive FDI and in the share of automotive FDI in total, we could not find traces of this effect in the official FDI data published by the Hungarian National Bank. Having a look at the annual inflows, we could not find any impact of these large projects (all of them are expected to affect more than one year's inflow as the process of building up the new factories expands for several years), either. Instead, capital inflows in the automotive sector were negative in 2009 and 2010, which resulted in a decreasing stock and share of automotive FDI. It is mainly the “other capital” part of FDI that turned negative already in 2008 and continued to be so throughout the following years, reaching a record negative value of almost € 1 bn euros in 2009. Equity investments and reinvested earnings, which had positive values (or only slightly negative ones) could not counterbalance the large negative value of “other capital”. The “other capital” part contains intra-company credit transactions. This may indicate that automotive multinational companies suffered large losses due to the crisis, which they tried to compensate among others through taking credits from their affiliates in Hungary.



*Source: Hungarian National Bank*

In outward FDI, the automotive sector plays a much smaller role than in inward FDI. Its share in the total OFDI stock remained below 1 % for the whole analysed period. Even here there is a continuous decrease in the value of the stock, reaching a negligible amount in 2010. The annual outflow was slightly negative already in 2008, negligibly positive in 2009, and substantially negative (almost € -90 mn) in 2010. For this last year, data indicate a highly negative equity part, which may be due to a closing down of a foreign plant by the Hungarian (or at least with residence in Hungary) owner.



*Source: Hungarian National Bank*

## **Concluding remarks, outlook**

Automotive industry plays a very important role in the Hungarian economy and foreign trade since 1991. Nowadays there are four big OEMs operating in the country; Hungary is an important host for well-known first tier suppliers, which followed the OEMs. The sector's production and foreign trade structure is determined by multinational company chains. The structure changed a bit during and after the crisis. The share of SITC 78 decreased, but the share of SITC 62 and SITC 87 increased. The most important export and import market is Germany, but in the past few years the importance of Slovakia and the Czech Republic has grown.

In the near future the importance of the sector – because of the new big investments (Mercedes, Audi, GM) – will increase. But this increase will depend on the economic developments on the main export markets of the Hungarian automotive industry.



## THE AUTOMOTIVE SECTOR IN POLAND

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### Introduction

Although generally the automotive industry has become the main driving force in Visegrad countries, it is only partly the case in Poland. The establishment of assembly plants that had attracted additional foreign direct investment by auto parts suppliers in the recent decade and thus contributed to increasing industry regional specialisation took place in Poland a relatively moderate scale. It is a consequence of several factors. The most important one is the size of the Polish economy, which allowed much more diversification of production and thus automotive industry was an important sector, but only one of branches. It is the second biggest industry, with 10% of total production and one-sixth of total exports<sup>11</sup>. Despite its magnitude, Poland was the second biggest car producer (after Czech Republic) in 2009 in Central and Eastern Europe with an output of 819 000 passenger vehicles a year<sup>12</sup>, which points at a relatively lesser specialisation than in the other V4 countries. KPMG forecasts basing on Business Monitor International that the production of cars in 2015 may reach even 981 000 passenger cars.<sup>13</sup>

Despite a long automotive tradition (the presence of Fiat since the 1920s, the production of models 125 and 126, that were even exported during the communism period, the Opel car plant since 1998 in Gliwice, the Volkswagen plant in Poznan since 1993, MAN factories in Starachowice and Poznan, Volvo buses in Wrocław since 1995, Scania buses in Słupsk since 1993), a significant expansion in this industry took place since the 2004 EU enlargement. Compared to 2002, when vehicle production reached 300 000 a year, an accelerating increase of the output is clearly visible<sup>14</sup> not mentioning the expansion of production of parts and accessories. This branch expanded rapidly thanks to the FDI inflows in the recent decade.

The most well known brands made in Poland are: Opel (Astra), Fiat (Panda and 500), Lancia (Ypsilon), Ford (Ka), Chevrolet (Aveo). Apart from complete cars Poland also specializes in engines (for Toyota, Peugeot, Citroën, Fiat, Ford, Opel, Volkswagen, Audi, Seat and Škoda), seats (BMW, Mitsubishi, Audi, VW, Opel, Volvo, Suzuki, Mercedes and Porsche), tires (Goodyear, Dunlop, Fulda, Michelin, Kormoran, Kleber, Bridgestone) and other vehicles parts<sup>15</sup>.

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<sup>11</sup> Polski Związek Przemysłu Samochodowego and KPMG and Baker&McKenzie (2011), *Raport Branży samochodowej*, pp. 10-11.

<sup>12</sup> Bulinski J., (2010), *Przemysł samochodowy w Polsce*, PAIZ, Warsaw, p. 1.

<sup>13</sup> Polski Związek Przemysłu Samochodowego and KPMG and Baker&McKenzie (2011), *Raport ...*, p. 89.

<sup>14</sup> Ibidem, pp. 4-5.

<sup>15</sup> Ibidem, pp. 2-3.

Almost the entire car production is exported abroad, mainly to Western Europe, particularly to Germany and Italy that are also the biggest investors in Poland's automotive industry. This exposure to foreign markets made an impact on the industry during the deepening of the downturn.

The economic crisis in the first phase hit this branch painfully, as foreign consumers sought savings in minimising expenses among others on new cars. However, the governments of several European countries launched stimulus programs (e.g.. in Germany – *Umweltprämie*; in Austria – *Ökoprämie*, in Italy - *Incentivi alla rottamazione*) to replace old and with high CO<sub>2</sub> emissions vehicles with newer versions. According to single market and state aid EU regulations the country of origin of bought new cars had no importance, hence carmakers also in Poland benefitted from these programs since 2009, yet not fully saved the output in the industry. However, the funds' leakage outside the countries that launched stimulus programs to e.g. Poland, and increasing debt problems halted the governments' intervention plans in the next years.

What still makes Poland an important player in this industry is a competitive advantage of low labour costs (however, new competitors in this field – like Romania – have emerged in the recent years) and an excellent formation of intellectual capital. The monthly salary in the branch was at the level of PLN 3325 (around € 813)<sup>16</sup> in 2009, compared to the average monthly salary of PLN 3288 (around € 802) in Poland in 2009. Also a low risk of running business and limitless access to the single market are significant factors. Another advantage is the existence of 14 Special Economic Zones, where investors may obtain tax exemptions (including VAT and real estate tax reliefs). The prospects of the huge Polish market are also an advantage to locate plants there. One should note that Opel and Fiat plants in Poland are perceived as the most efficient ones within the corporate groups. That is why nowadays, out of 40 complete car and engines plants in Central and Eastern Europe, 16 of them are located in Poland. In 2010 Business Monitor International ranked Poland at the 5<sup>th</sup> position in Europe in terms of good conditions for automotive industry<sup>17</sup>

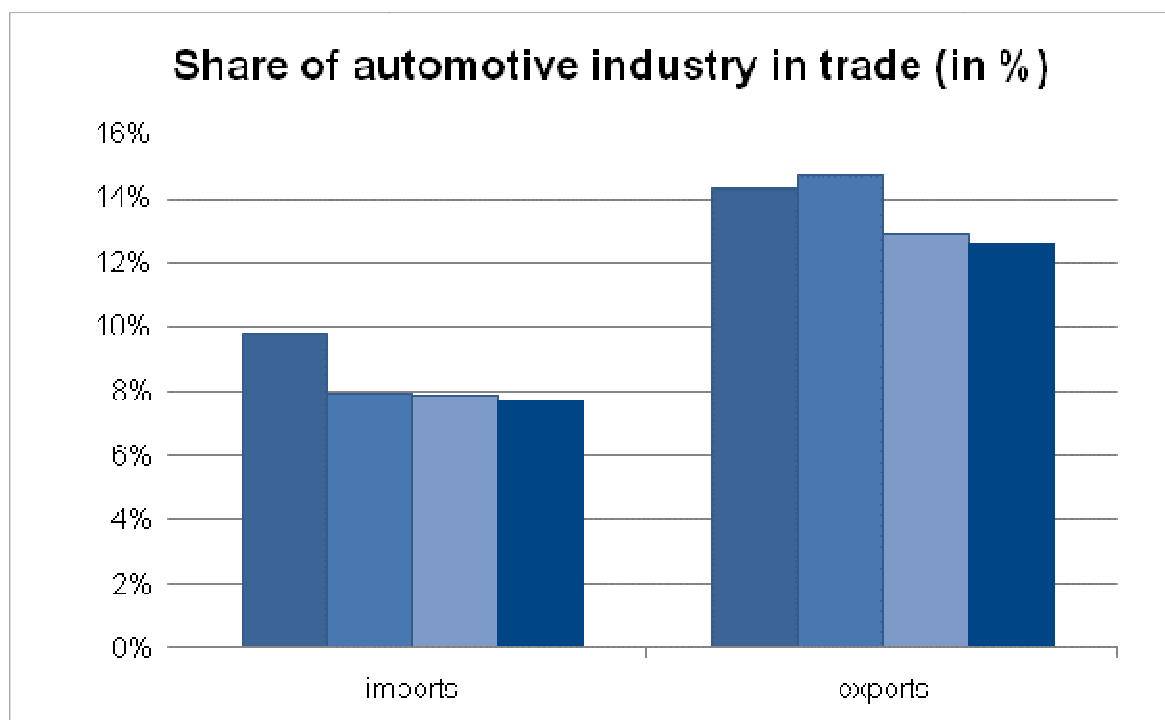
## Trade

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<sup>16</sup> The exchange rate is taken from 31 December of 2009.

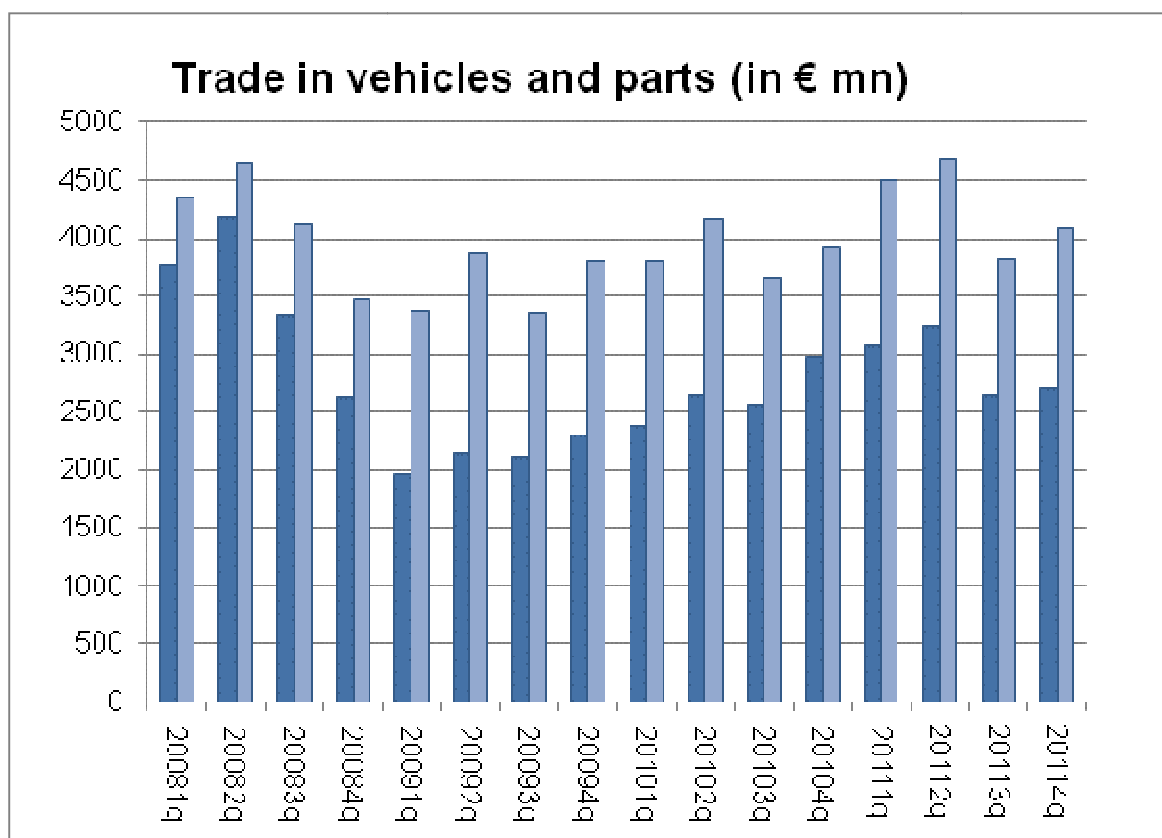
<sup>17</sup> Ibidem, p. 1; Polski Związek Przemysłu Samochodowego and KPMG and Baker&McKenzie (2011), *Raport...*, p. 11.

At the end of 2008, when the economic and financial crisis hit the global, but in particular the European economy, the overall trade has declined. It took one year to recover the losses in Poland's imports and consequently two years in Poland's exports. The economic crisis still overshadows Poland's trade with the EU, where the crisis has been transformed into a sovereign debt crisis in the eurozone countries.



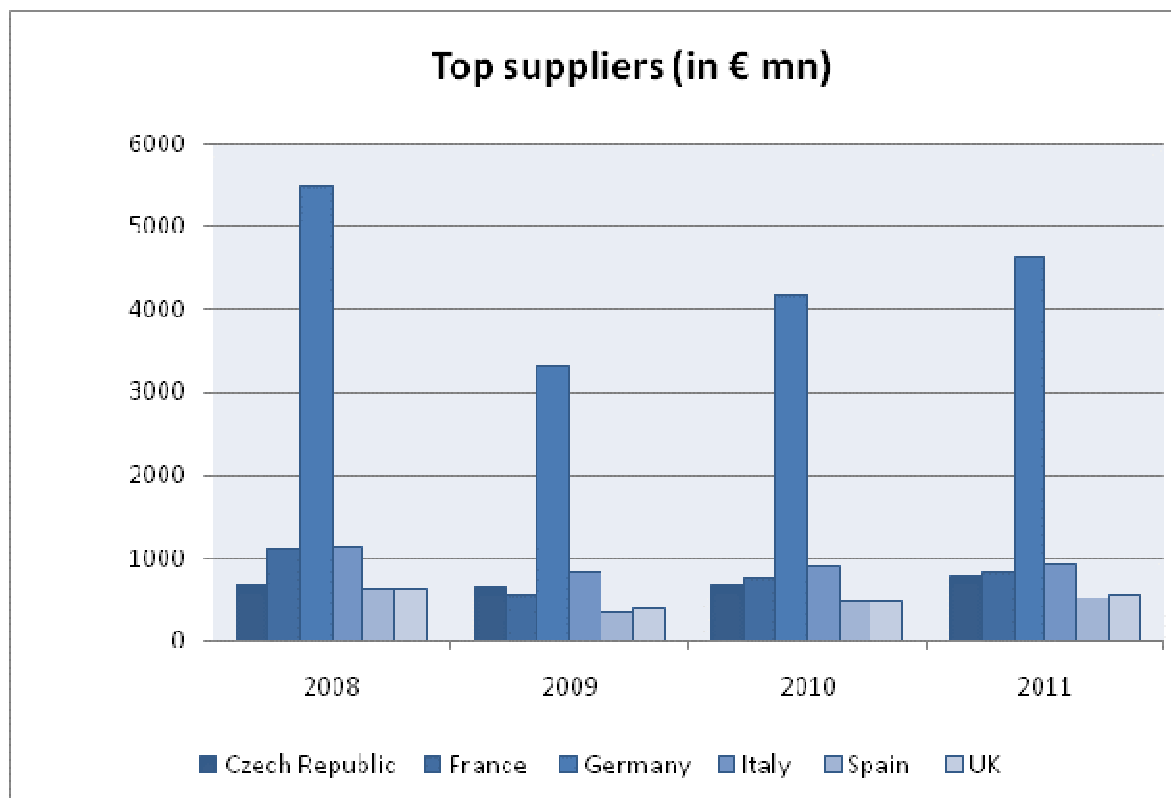
Source: Eurostat Comext

Poland's goods exchange is rather diversified, and thus the share of automotive industry products in total exports and imports is less than 15 %. During the period 2008-2011 the share in trade was generally decreasing over time. For instance vehicles and parts of them constituted 9.8 % of total imports in 2008, whereas in 2011 about 7.7 % of total foreign expenditures were made in the automotive branch. Similarly, 14.3 % of total Polish exports in 2008 stood for cars and parts and in 2011 this share decreased to 12.6 %. But in 2009 a slight increase up to 14.7 % was a consequence of national stimuli packages in the EU.



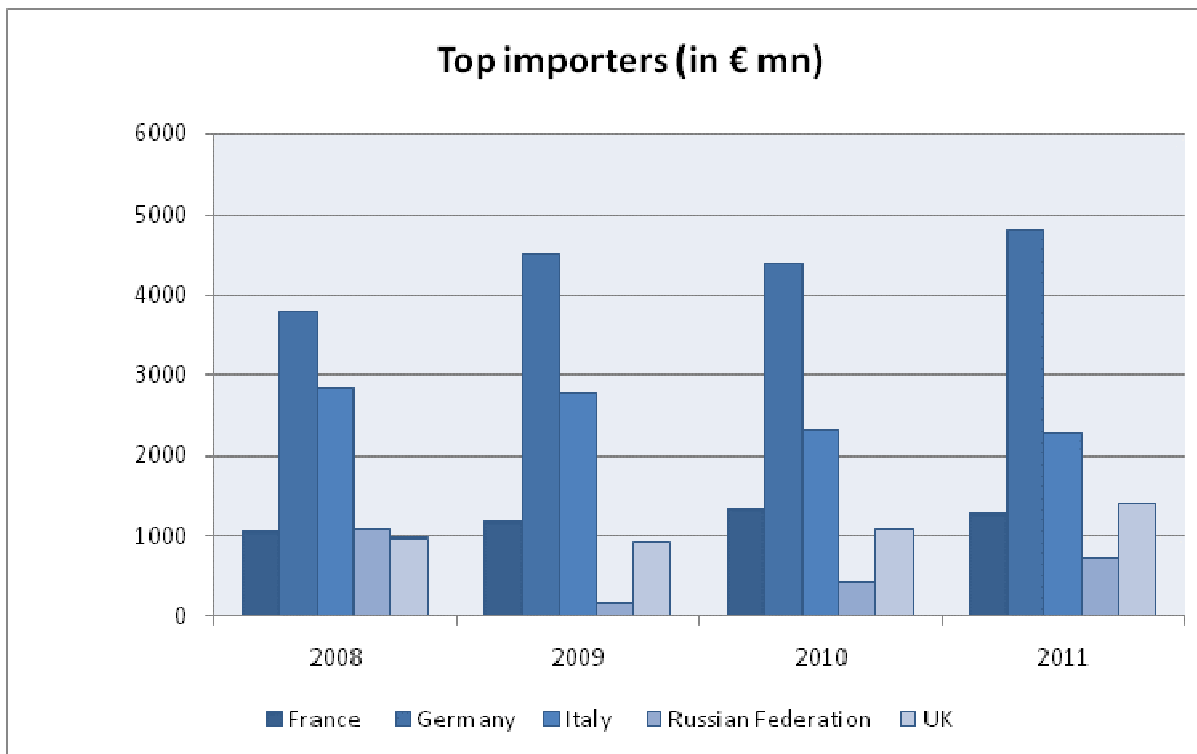
*Source: Eurostat Comext*

What is interesting, that contrary to the general characteristics of Polish trade, in this branch there is a visible surplus of exports over the imports that reaches on average €1.1 bn quarterly in 2008-2011. The crisis revealed Polish consumers' limited pocket size, as imports have fallen significantly in 2009 and even in 2011, the foreign expenses on cars and car parts have not yet fully recovered. This is a consequence of the fact that cars produced in Poland are attractive to domestic consumers in financial terms. Contrary to it, the exports, that have fallen in 2009 (but not as much as general exportations due to the lack of stimuli programs in the other branches), exceeded the value of 2008 in 2011. The best selling quarters during this period were the 2<sup>nd</sup> ones each year.



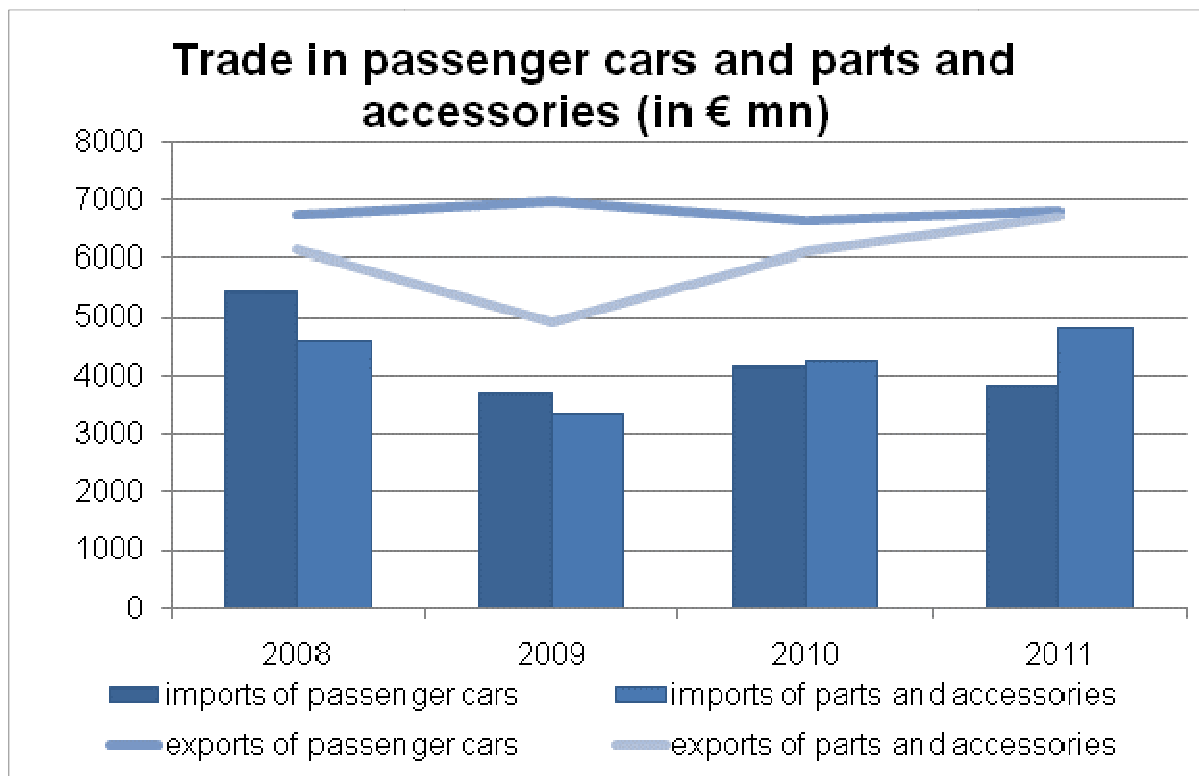
*Source: Eurostat Comext*

The times of crisis did not cause significant changes in the structure of the biggest import sources to Poland. The unquestionably biggest car and car parts supplier is Germany, which sold items for about € 5.5 bn in 2008. But, as a consequence of the crisis, the performance of German exports to Poland has been deteriorated to € 3.3 bn in 2009 and slowly recovered in 2010. Even 2011 did not bring the value of exports the same as before the crisis. The next biggest supplier during the downturn remained Italy, which sold to Poland € 1.1 bn in 2008, and after a significant downfall in the beginning of the crisis slightly recovered, but not enough to achieve pre-crisis levels. The third biggest car and car parts seller is France, whose exports also suffered during the crisis and not fully recovered. The fourth, and interesting case is Czech Republic that sold to Poland € 0,7 bn in 2008, but in 2011 this value was exceeded: it increased to almost € 0.8 bn. At the end of top 5 there occurred a change: Spain was slightly outpaced by the United Kingdom with sales of nearly € 0.6 bn in 2011.



*Source: Eurostat Comext*

An interesting shift took place in the structure of Polish exports, where the Russian Federation switched its 3<sup>rd</sup> position with the 5<sup>th</sup> stand of United Kingdom. It was the effect of a six-fold shrink in Russian orders in 2009 compared to 2008, that only slightly recovered over time (in 2011 up to 70% of the 2008 value). It took place due to the aggravating economic situation in that country in the beginning of the crisis, that affected oil and natural gas prices, which has a crucial importance for the Russian economy. At the same time British purchases increased since 2010. The biggest buyer of cars and car parts remained Germany, which even increased the purchases during the crisis, thanks to the stimuli programs, but also thanks to the generally relatively stable economic performance of the country. What is interesting is that during the crisis Poland's negative balance with Germany in the automotive branch was reversed and in 2011 it was nearly neutral. The next biggest consumer of Polish cars is Italy. However, as a consequence of serious internal economic problems, that even resulted in the change of the government, its passenger car purchases in Poland were strongly limited since 2010, but the country still maintained its second position. The 4<sup>th</sup> top buyer remained France (with growing vehicle procurement), that on the one hand outperformed the Russian Federation, but on the other hand it was outpaced by the United Kingdom.



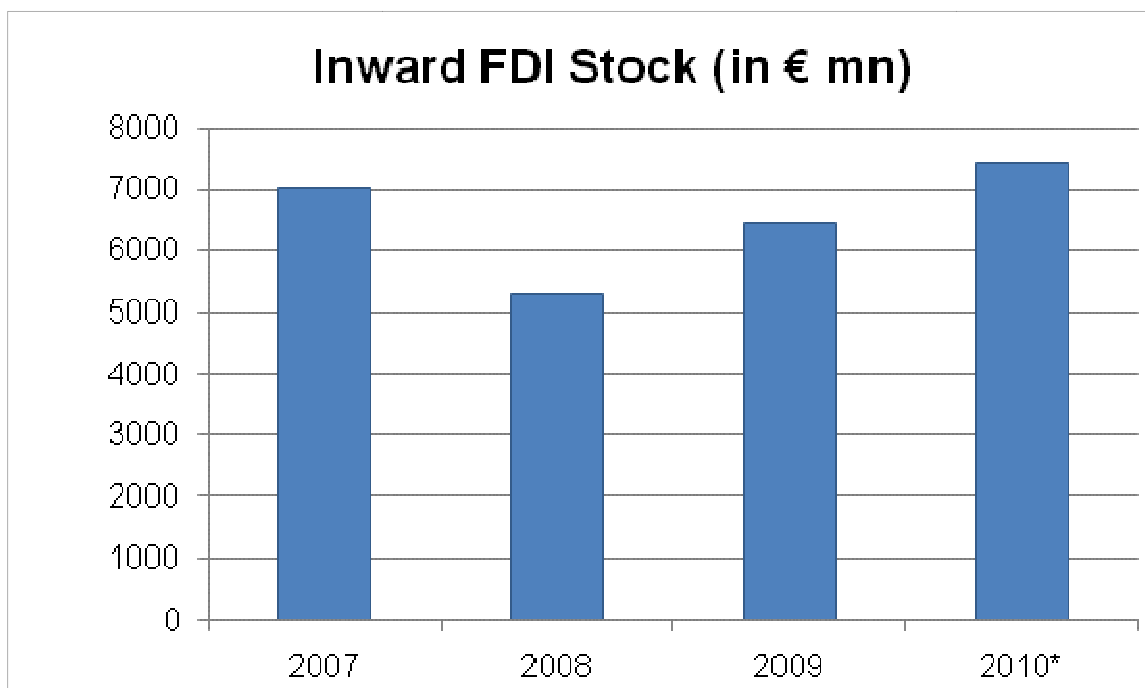
Source: Eurostat Comext

In 2008 Polish purchases abroad of passenger cars destined for transport of not more than ten persons (€ 5.4 bn) were higher than the realised orders for parts and car accessories (€ 4.6 bn). However, as crisis emerged the difference in imports narrowed and in 2010 the imports of parts and accessories (€ 4.24 bn) exceeded the imports of complete vehicles (€ 4.16 bn). In 2011 the reversal was even deepened. During the 2008-2011 exports of complete passenger cars remained higher than foreign sales of parts and accessories, however, in 2011 the difference narrowed. This might point at the fact, that although Poland still produces complete passenger cars, it also becomes an important manufacturer of semi-products for automotive industry. The most important sold parts of passenger vehicles are parts of bodies that as a consequence of the crisis diminished the foreign sales (€ 1.8 bn in 2008 and € 1.6 bn in 2011). Also chassis and engines play an important role (with exports of € 1.2 bn in 2008 and € 1 bn in 2011). However, the other parts and accessories stand for majority of foreign sales (€ 3 bn in 2008 and € 3.6 bn in 2011) and their role in total parts exports is strengthening.

## Foreign direct investments

The biggest investor in Polish automotive industry is Fiat Auto Poland, which spent € 1.8 bn up to 2011, and possesses more than 50 % of market share. The next important players are Toyota and Volkswagen Poznań Sp. z o.o. that invested € 740 mn and € 726 mn,

respectively.<sup>18</sup> However, the next leading producers are Volkswagen that has a 21.44% share in the market and GM-Opel with a 21.08 % market share. It is worth to note that many investments in this industry in Poland took place to produce rather parts and accessories than assembly lines to complete cars.<sup>19</sup> The automotive industry is concentrated mainly in 3 regions in Poland: śląskie, dolnośląskie and wielkopolskie, and a considerable share of new investments is located there.



Source: National Bank of Poland, \*own estimations

Remark: Inward FDI stock refers to equity capital, reinvested earnings, loans. Including Special Purpose Entities.

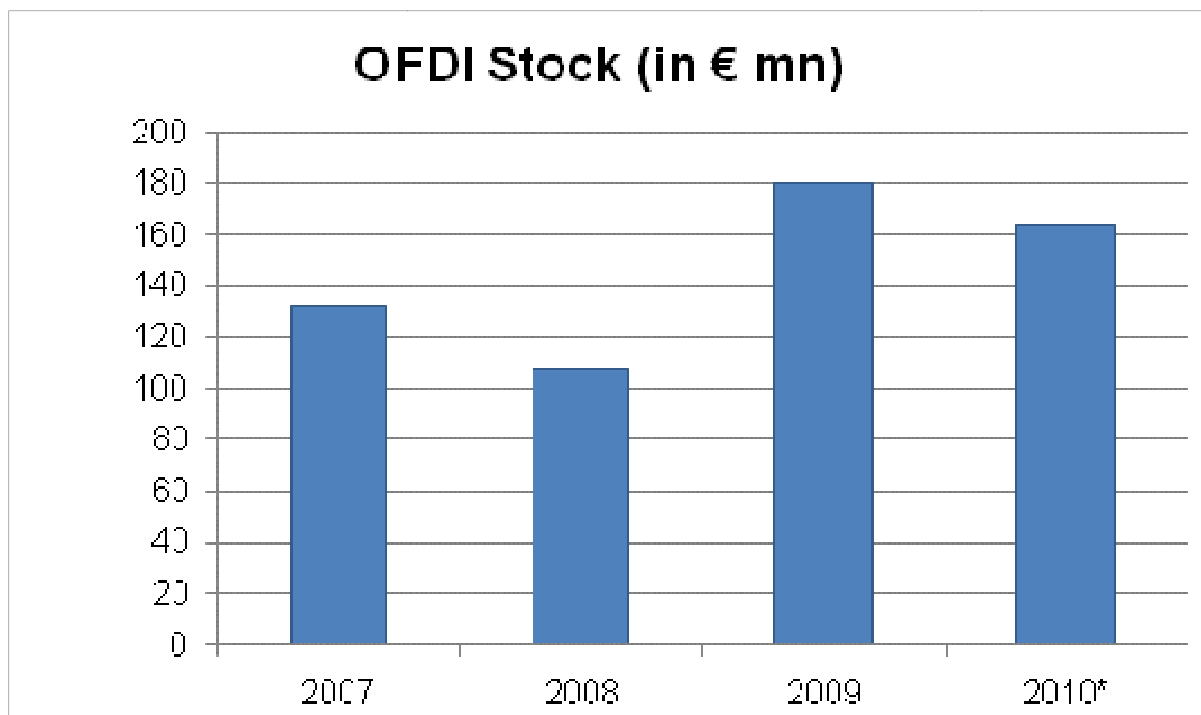
<sup>18</sup> Opolskie Centrum Rozwoju Gospodarki (2012), *Analiza w zakresie przyciągania bezpośrednich inwestycji zagranicznych do Województwa Opolskiego z branży motoryzacyjnej*, Opole

<sup>19</sup> The most important investors of parts and accessories up to 2011 are: Polytec Interior from Austria, Fomar Borg Automotive from Denmark; Faurecia Investments and Peugeot from France; BOS Automotive Products; Dürr GmbH, Elektra-Schalkau GmbH, Federal Mogul Gotec Gorshlueter GmbH, Hoerbiger Automotive Komfortsysteme GmbH, HUF Hulsbeck & Furst GmbH & Co. KG, Jost Werke GmbH, Keiper GmbH, Kirchhoff Automotive GmbH & Co. KG, Lisa Draexlmaier GmbH, Magna Automotive GmbH, MAHLE, Prettl, RH ALURAD Höffken GmbH, Robert Bosch GmbH, Tower Automotive Auslandsbeteiligungen GmbH, Volkswagen AG from Germany; ADR System, Brembo SpA, Fiat Group Automobiles SpA, Proma SSA SRL, Saturno SpA, Sila Holding Industriale SHI SpA, Tecno Morando from Italy; Daicel Chemical Industry Ltd, Denso, Nifco Inc., Sanden, Takata Parts, Toyota Boshoku from Japan; Bitron International SA from Luxembourg; Mecaplast from Monaco; Affinia Netherlands Holding BV, Autocam Europe BV, Ispol-IMG Holdings BV, Valeo, Visscher Caravelle, Wabco Standard Trane BV from Netherlands; Simoldes Plasticos from Portugal; Koram Plastics Co, UNWHA Industrial Co., Ltd. from South Korea; Cropu S. A. from Spain; Autoliv AB, Klippan Safety AB, Volvo AB from Sweden; Rieter Automotive International, Ronal AG from Switzerland; AvtoZAZ from Ukraine; Gardner Group Ltd, GKN Industries Limited, Summit Motors Investment, TI Automotive Holding Ltd from UK; ArvinMeritor, BorgWarner Inc, Cooper-Standard Automotive Inc, Delphi Automotive Systems, Eaton, General Motors, Illinois Tool Works Inc, Lear Corporation, Tenneco Global Holding Inc, TRW Auto Holdings Inc, Visteon Automotive Systems, from USA. (PAiZ (2011), *List Of Major Foreign Investors In Poland*, Warsaw).



The crisis did not help to develop the production base in Poland and during the entire period (2008-2011), inward FDI stock remained stable. As a result of the crisis, the automotive sector was outpaced in terms of FDI stock value in Polish manufacturing industry by food and tobacco and metal industries.<sup>20</sup> Despite the fact that the inflows in 2009 dropped by € 324 mn due to new credits, the inward stock increased from € 4.8 bn to € 5.8 bn. However, the incumbent firms re-invested the profits even during the crisis.<sup>21</sup>

The outward FDI stock is rather negligible: with values lower than € 200 mn during the entire period. This is a clear proof that Poland, similarly to the other V4 countries is rather a host country to investments in this industry than a country of origin. However, in the recent years, one might see that also Polish entrepreneurs in the automotive industry make the attempts to go global. An example is Boryszew S.A., which before the crisis was not involved in that branch. But in 2010 it overtook Maflow Group, which produced parts for BMW passenger cars, and started running business in the automotive industry. It also attempted to purchase several other automotive groups with liquidity problems, however the attempts were unsuccessful.



Source: National Bank of Poland, \*own estimations

Remark: OFDI stock refers to equity capital, reinvested earnings, loans. Including Special Purpose Entities.

<sup>20</sup> Polski Związek Przemysłu Samochodowego and KPMG nd Baker&McKenzie (2010), *Raport Branży samochodowej*, p. 68.

<sup>21</sup> Polski Związek Przemysłu Samochodowego and KPMG and Baker&McKenzie (2011), *Raport...*, p. 87.

The geographic composition of FDI favours Germany as the biggest neighbour that profits from relocating some of automotive businesses in Poland, but pretty close to the border, which minimizes running business costs. In 2011, about 24 main investors in this branch come from Germany. Also, an important player is USA, with 16 firms producing vehicle parts.

## Outlook

The sales of passenger cars are highly linked with the global overall economic performance. Hence, a huge part of exports depends strongly on the mood in Europe, which is the biggest market for Polish passenger cars. In terms of imports, the most probable scenario is that Polish consumers would buy slightly more year-on-year, but much would depend on the general economic developments. The trends in purchases of parts and accessories would be rather linked with planned production and thus exports, and stocks would be minimized.

In terms of FDI the prospects for the coming years for this branch in Poland are quite stable, but rather not significantly ameliorating. The Polish Information and Foreign Investment Agency in January 2012 negotiated on 29 projects linked with automotive industry in the total value of € 1.1 bn (€ 0.5 bn was finally invested in the 1<sup>st</sup> quarter), and it was the branch with the biggest investment plans, which would be a positive harbinger for the entire year. It is probably an effect of expressive stability of the Polish economy and of the financial incentives to invest in Special Economic Zones. Also Deloitte is optimistic on FDI in this branch within the next 5-10 years.<sup>22</sup> However, the competitive advantage of relatively low wages and highly skilled labour and human capital is fading and new serious competitors have emerged (like Romania, that also benefits from being part of the European Union) and it is probable that some of investments would be located there, rather than in V4 countries. OFDI is expected to remain as small as in current period.

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## THE AUTOMOTIVE SECTOR IN SLOVAKIA

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### Introduction

Since the beginning of the economic transition of Slovakia to present, the automotive industry has been gaining an important place in the Slovak economy. At present the automotive industry is one of the main contributors to economic growth, employment and plays an important role in the foreign trade of Slovakia. A similar development can be observed also in other neighbouring countries in the Central European region (Czech Republic, Hungary and Poland). The most important car manufacturers are Volkswagen with headquarters in Bratislava, PSA Peugeot Citroën in Trnava and Kia Motors in Žilina. The presence of these companies attracted a large number of other companies which are manufacturing car components and established an important network of enterprises. The companies are exporting approximately 99 % of their production. According to the statistics provided by the International Organization of Motor Vehicle Manufacturers the total production reached 561 933 vehicles in 2010. Compared with 2009 the production went up by 21.8 % in 2010. A further increase in production is expected to be achieved in 2011 and 2012.

### Automotive industry in Slovakia – some facts

In the last two decades Slovakia became one of the leading car producing countries in Central Europe. The rapid growth of automotive industries has been started by the investment of Volkswagen in Bratislava in 1991. Since the founding of the company it manufactured more than 3 million cars, 5 million transmissions and 200 million pieces of car components. At present the company has plants in three Slovak cities. The main assembly line is located in Bratislava, the manufacturing of components is located in Martin, while in the city of Košice the company is preparing the cars for export to the Russian Federation. The company is directly employing 7 000 employees and has a capacity of 400 000 cars per year. Since 1991 to 2010 the company invested approximately € 1.9 billion. The company is producing 5 car models.

In 2003 PSA Peugeot Citroën started to produce cars in the city of Trnava. The factory is directly employing approximately 3000 employees and has a production capacity of 300 000 cars per year. The company is manufacturing two car models: Peugeot 207 and Citroën C3 Picasso. In 2010 the company manufactured 207 128 cars.

In 2004 KIA Motors started to operate in Slovakia. It was the first manufacturing plant of this company in Europe. KIA Motors Slovakia is employing 3 500 workers and producing five car models: Kia Cee'd, Kia Cee'd \_sw, Kia Venga, Kia Sportage, Kia pro\_cee'd. Besides cars the company is also producing engines. In 2011 the company manufactured more than 252 000 cars and 359 000 engines.

The localisation of these companies in Slovakia has significant spill-over effects on R&D, education and networking of relevant institutions and enterprises. The companies are in close cooperation with several high schools and universities.

**Table 1**  
**Suppliers structure of the automotive industry in Slovakia**

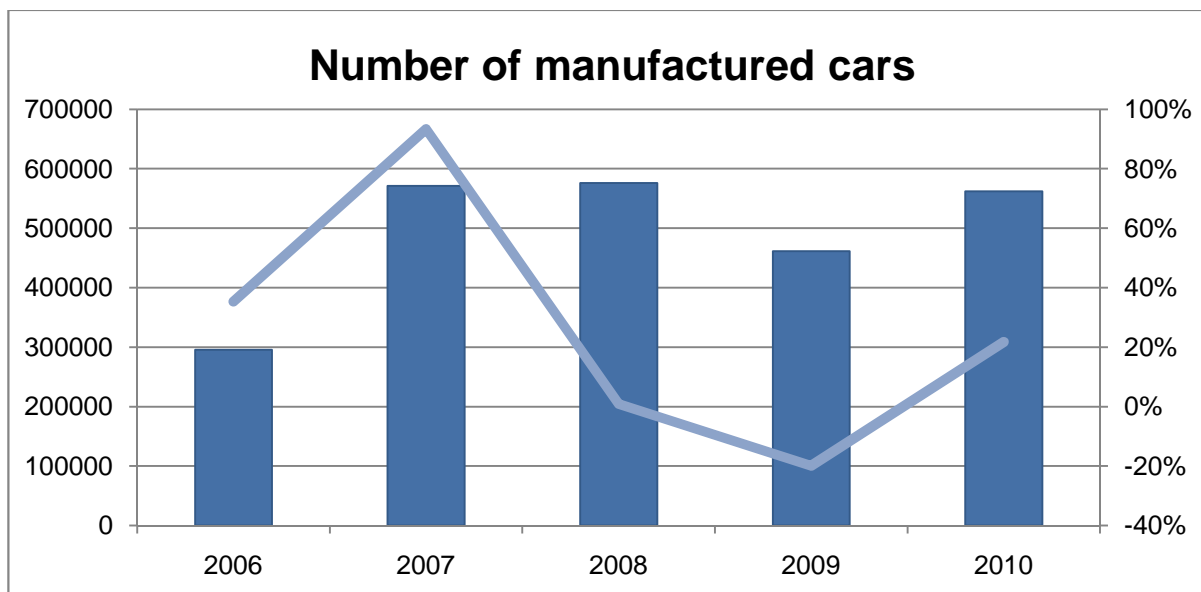
<b>Car producers</b>		
Tier 1 Systemic suppliers with own manufacturing or assembly with own Just-in-time capacity (seats, interiors, transmissions) and local engineering and development centres (e.g. Johnson Controls)		
Tier 2 Suppliers with own local manufacturing or assembly and just-in-time capacity. Suppliers of modules and components with own development capacities	Tier 3 Suppliers of raw materials (metal parts, plastics, aluminium parts)	
Integrated suppliers of engineering services (EDAG, Car Technology)	Small engineering companies, research departments of universities and institutes of Slovak Academy of Sciences	Consulting services (project management, TQM, optimisation)
Suppliers of software products and services	Clusters (Automobile Cluster West Slovakia, Plastic cluster)	Suppliers of technology (automatisation, robotics)
Local R&D institutions		

*Source: SARIO<sup>23</sup>*

The Automobile Cluster – West Slovakia is focused on cooperation support among the automobile organisations in Europe, elaboration of strategies, recommendations and relevant policies. In the framework of the cluster, the projects AUTOCLUSTERS is being implemented. With the cooperation of E.On Company the project VIBRATE is being implemented. The

<sup>23</sup> [http://www.sario.sk/userfiles/file/sario/pzi/sektorove/auto/automobilovy\\_priemysel.pdf](http://www.sario.sk/userfiles/file/sario/pzi/sektorove/auto/automobilovy_priemysel.pdf)

objective of the project is to support the electromobility (eMobility) in the Twin City region Bratislava – Vienna by building charging stations between Bratislava and Vienna.



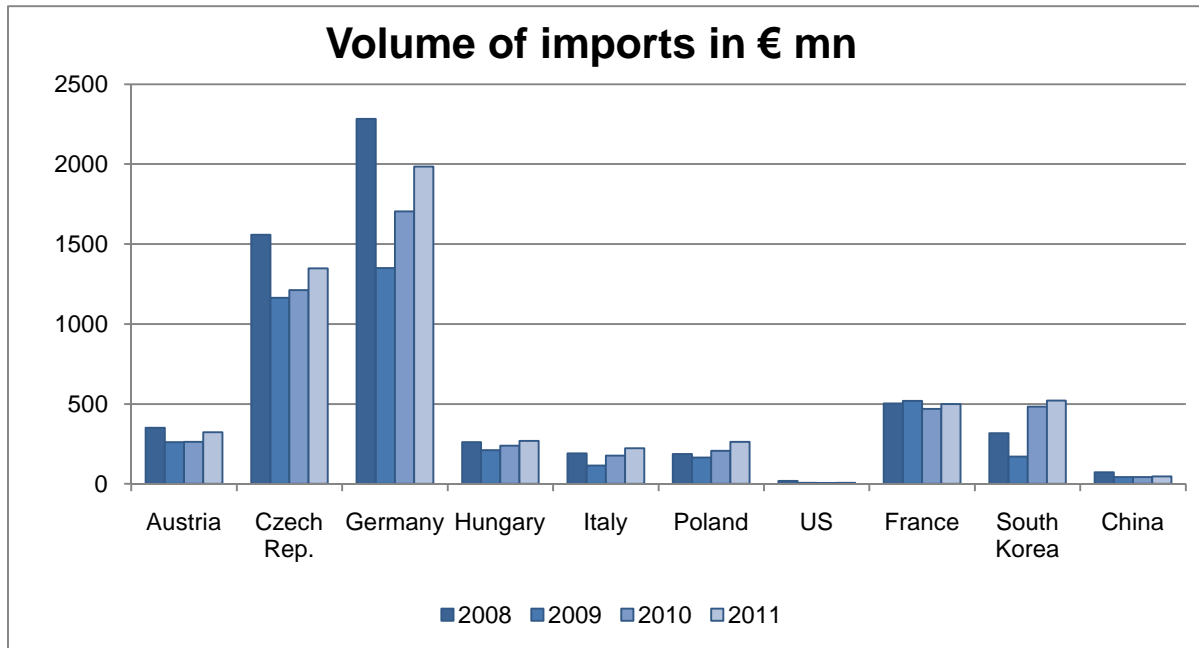
Source: [www.oinca.net](http://www.oinca.net). Note: right axis – annual change of number of manufactured cars.

Due to the start of new production capacities Slovakia experienced a strong increase of the number of manufactured cars especially in 2007. In that year, the number of cars grew by 93.3% from 295 391 to 571 071 cars. In the following year the car production remained on the level of the previous. However, the first signs of economic recession started to influence the production already at the end of 2008. The full effect of the financial and economic crisis hit the automotive industry in Slovakia in 2009. The number of manufactured cars dropped by 19.8 % to 461 340 due to low demand from the main trading partners.

In 2009, similar to other countries, the government implemented two rounds of state subsidised car scrappage schemes. The total amount of allocated resources amounted to € 49.8 million. The total amount of decommissioned cars reached 44 200 and the average age of the cars was 21 years.

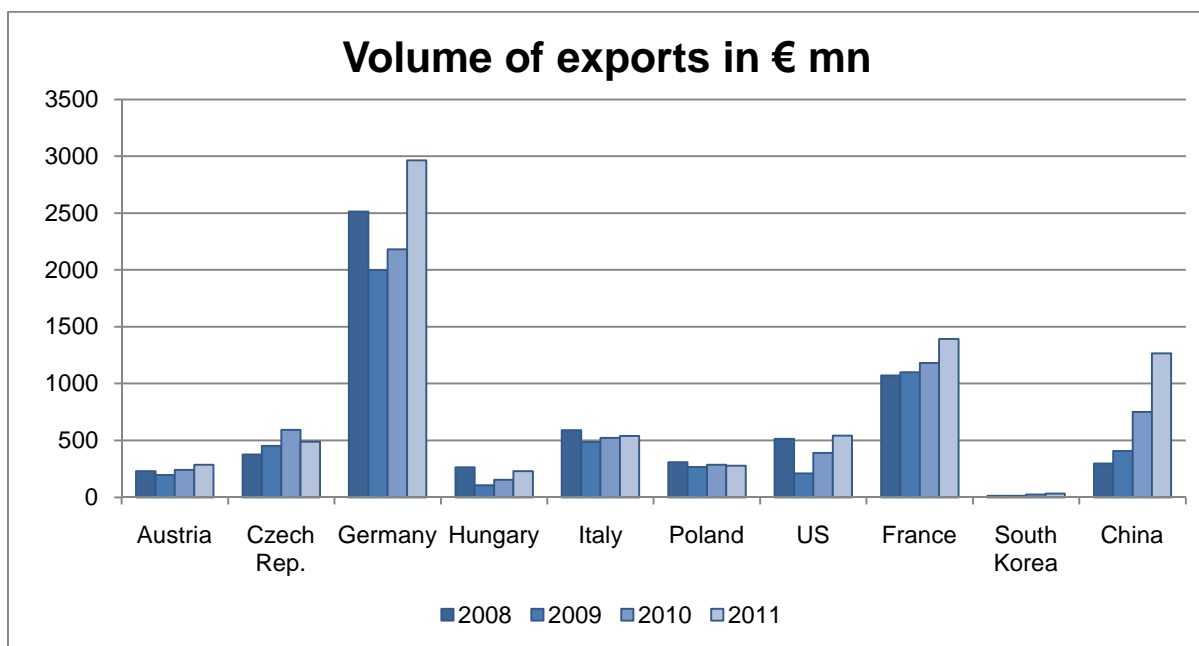
## Trade in automotive industry

The volume of imports in the category of road vehicle is showing a somewhat mixed picture. In 2009, due to the economic crisis the volume of imports declined in most of the major trading partners, due to the decline of production and demand. However, already in 2010 the imports recovered due to the increase of production and increased demand from the main trading partners.



Source: Eurostat Comext. SITC 78 – Road vehicles (including air-cushion vehicles).

The development of exports is showing a different development in the main trading partners in road vehicles category. The impact of the economic crisis was especially visible in the trade with Germany, United States, Hungary and Italy. On the other hand, exports to France, China and the Czech Republic grew also in the crisis years. Especially the exports to China recorded an impressive increase in 2010, which partially offset the negative development in exports to Germany.



Source: Eurostat Comext. SITC 78 – Road vehicles (including air-cushion vehicles).

Since 2010 the volume of exports is constantly growing and the expectations for 2012 are remaining mostly positive. Most of the automotive companies are expanding production and it is expected that in 2012 the volume of exports as well as number of manufactured vehicles will be near the maximum production capacity.

According to the SITC78, exports of road vehicles to the ten most important trading partners amounted to 14.2 % of total exports in 2011 compared to 12.5 % in 2008. The increase of production of road vehicles with higher added value resulted in an increase of net exports (table 1). In 2011 the highest volume of net exports has been recorded with China, Germany, France, the United States and Italy. On the other hand, a negative trade balance has been recorded with the Czech Republic, South Korea, Hungary and Austria.

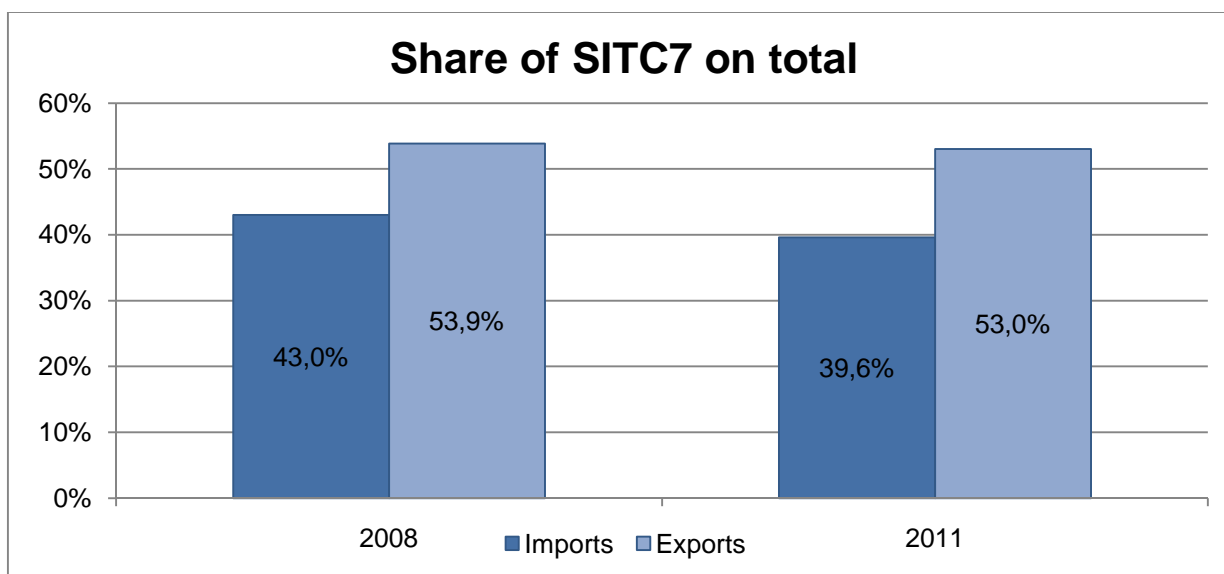
**Table 2**  
**Development of net exports to the ten most important trading partners**  
**in SITC 78 (€ mn)**

	Austria	Czech Rep.	Germany	Hungary	Italy	Poland	US	France	South Korea	China	Total
2008	-120,4	-1183,5	229,3	3,6	401,0	122,3	495,7	568,8	-303,8	223,9	436,8
2009	-63,6	-712,8	648,2	-104,6	372,3	101,4	203,6	581,5	-158,8	362,9	1230,0
2010	-21,7	-618,6	476,4	-85,0	347,2	79,2	385,4	712,4	-458,8	707,4	1523,9
2011	-38,2	-858,9	980,7	-41,4	315,2	14,5	535,8	893,2	-488,2	1217,1	2529,6

*Source: Eurostat Comext, own calculations*

A more comprehensive look (according to SITC classification) at the structure of exports and imports shows that during the last four years, the structure of exports remained relatively stable with only minor changes in trade categories. The highest share on total exports is recorded in the category SITC 7 (Machinery and transport equipment (mainly road vehicles))<sup>24</sup>. In 2011 the share of exports in total exports in this category amounted to 53% followed by manufactured goods classified by material (mainly iron and steel production) with an 18.6% share in total exports. From 2008 to 2011 the share of imports has fallen especially in Machinery and transport equipment (3.4 percentage points), which leads to the conclusion that this sector is gradually shifting towards the production of products with higher added value.

<sup>24</sup> This broad category is divided into the following subcategories: Power-generating machinery and equipment, Machinery specialized for particular industries, Metalworking machinery, General industrial machinery and equipment, and machine parts, Office machines and automatic data-processing machines, Telecommunications and sound-recording and reproducing apparatus and equipment, Electrical machinery, apparatus and appliances, and electrical parts, Road vehicles (including air-cushion vehicles) and Other transport equipment.

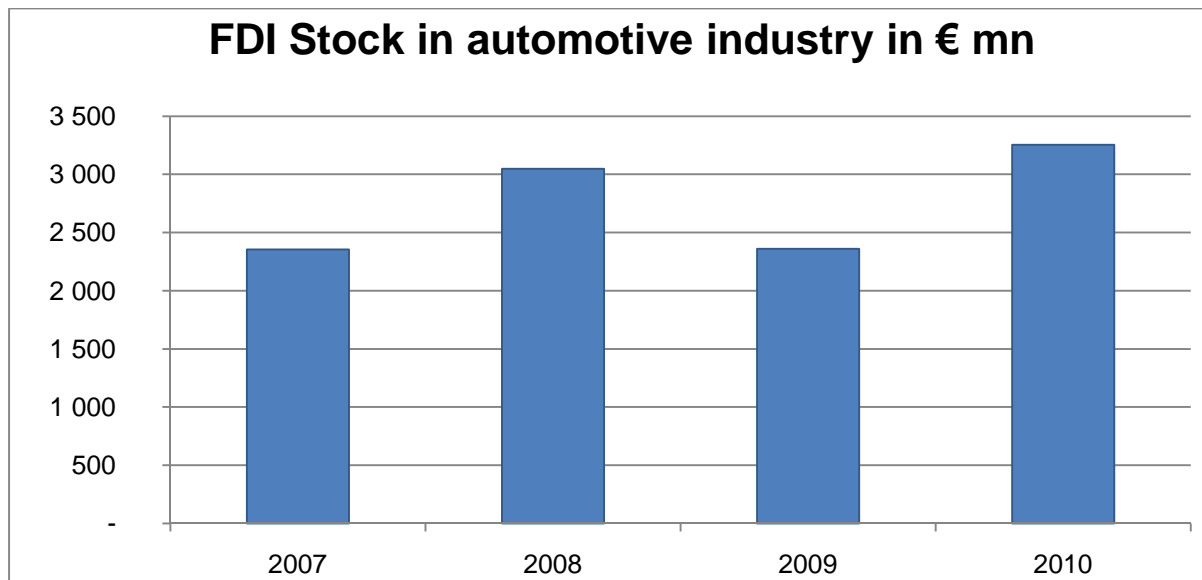


Source: Statistical Office of Slovakia

## Foreign direct investments in the automotive industry

Foreign direct investments have been playing important role in the restructuring of the Slovak economy. During the last decade, the inflow of FDI was influenced by large scale privatisation of state owned companies as well as green field and brown field investments in various sectors of the Slovak economy. Since 1998 Slovakia experienced a constant increase of FDI stock. From a sectoral perspective (according to broad NACE rev. 2 classification), the highest share of FDI stock was recorded in manufacturing (35.4%), financial and insurance activities (21.8%) and water supply, sewerage, waste management and remediation activities (15%). In a more detailed look the stock of FDI in manufacturing is allocated in motor vehicles, trailers and semitrailers with 8.64% share of total FDI Stock in 2010. These represent the investments in the automotive industry, which creates together with other manufacturing industries one of the most important sectors of the Slovak economy.





*Source: National Bank of Slovakia*

The FDI stock in the automotive industry reached € 3.2 billion in 2010<sup>25</sup>. The inflow of FDI to this sector amounted to € 36.9 million in 2011 and the share on total inflow of FDI was 4.4%. It can be concluded that despite some existing volatility in the stock of FDI in this sector, the volume shows a distinct growth. This is the result of investments of existing car producers to new models. In 2010 the automotive sector employed 69 800 employees and it is expected that the introduction of new production capacities will further increase the demand for skilled labour force, thus increasing the importance of this sector in the economy. Besides the three main car producers several other companies are operating as suppliers. The most important companies are Johnson Controls International, ZF, ArvinMeritor, Visteon, Hyundai Mobis, Continental, Hanil E-Hwa Automotive, Valeo, Bosch, Arcelor Mittal, USS, Osram, Honeywell, Pilkington, Delphi, Saint Gobain, HEFRA, Inergy Faurecia, Lear, Magneti Marelli, GetragFord, Tower Automotive and other companies.

In 2011 Volkswagen invested € 225.5 million in the manufacturing of small family cars (Volkswagen up!) in Bratislava. In the next five years the company is expected to invest a total of € 1.5 billion in the area of car and components production. In 2013 the company is planning to start the production of the Volkswagen E-up! (a small electric engine car) in Bratislava. Further investments have been made by KIA Motors, whereby the company increased the production of engines and adjusted the assembly lines for the production of the new model of the Kia Cee'd model.

<sup>25</sup> The data for FDI Stock for 2011 are not available for this sector.

## Concluding remarks

The automotive industry has been constantly growing and gaining importance since the establishment of first automotive company in 1991. At present the whole sector represents one of the key manufacturing sectors in Slovakia and is employing a large share of domestic workforce in various types of jobs. Although this sector is highly susceptible to economic cycles, the rapid recovery after the impact of the economic and financial crisis shows, that it is also a sector capable of swift recovery. The future development of the automotive sector in Slovakia will be dependent on two major factors: the economic development on the main export markets of automotive companies and the success of the new car models which the companies are gradually starting to produce in Slovakia. Taking into account all relevant factors, the development of automotive industry can be seen as very beneficial for the Slovak economy. However, it is necessary to further support the cooperation of domestic SMEs with the automotive industry as well as to intensify the cooperation of domestic R&D and innovation capacities with the industry.