## Fdi spillovers in slovakia – focus on the automobile industry



1. Introduction Slovakia has outgrown the image of "no-name" countries.

It is no longer known as a chunk of former Czechoslovakia but the biggest world car producer per capita by 2008. It's growth rate in the third quarter of 2007 is a record 9, 4% without overheating the economy (domestic and foreign demand growth are balanced). Net export growth rate is 5, 5% dominated by the car industry with more than 30% share. Is this growth rate sustainable on the long run? What is the role of the car industry in this "economic miracle" besides accounting for more than 25% of the country's industrial output? Would Slovakia make a good example of FDI efficiency that contributes to the country's further development? These are the questions I am willing to find answers for in this research paper.

I begin with an overview of economic conditions and other prerequisites that determined FDI coming to the car industry in Slovakia. I will introduce the three major players. Based on the theoretical background I would then demonstrate with graphs and data collected from domestic and foreign sources how these spillovers are presented in reality. I will finish with the conclusions and risk evaluation.

My attempt is to prove the existence of spillover effects based on an industry-level study and define which of the above mentioned spillover types to what measures took place in the Slovak automotive industry. Particularly, I will focus on the gains from FDI through vertical linkages, as they are more common than spillover effects within the same sector. 1. Sluggish start, big finish? 2.

1. The eighties After gaining independence from the USSR Slovakia had to face the transformation process alone hence a political decision was made on the separation of Czechoslovakia since January 1st 1993. It became clear that industrial restructuring was not possible without FDI. However the existing political conditions slowed down the process, so Slovakia was through the nineties just an outside player among the Visegrad group countries, who were more successful in attracting foreign investors. Foreign investors were excluded from the privatization process, the political and economic environment was unstable and there was a considerable lack of trust on the part of investors associated with these factors (Bellas, Carl J.

Jermakowicz, Walter W., (1997). 2. 2. The nighties Among the few companies taking the risks was German car-producer Volkswagen. It bought 80 percent stake in the BAZ (Bratislavske automobilove zavody) plant in Bratislava signing a joint venture agreement with the partner stake holder, the Slovak state in 1991.

After the buy-out in 1994 Volkswagen became a full owner. 2. 3. The Millenium The slow and insufficient growth of FDI continued till 2000, when mainly due to the privatization, FDI started to grow fast. The new government introduced new business-friendly policies, labor market liberalization to attract foreign investors, incentives of all kinds, shortening business registering procedure and reforms in the tax system. Also the country's coming EU membership made Slovakia an attractive place to invest (Oblozinsky, M.

, 2005). In 2003 PSA Peguet Citroen selected Trnava (45 km from Bratislava) for its new European assembly plant. It was followed by Hyundai Kia Motors in 2004. The Korean car producer picked the western Slovak town of Zilina as the site of its first plant in Europe. Besides the generous incentives negotiated with the Slovak government, available production capacities, skilled and cheap labor, manufacturing tradition, good adaptation ability and geographical advantages all turned the balance towards Slovakia. They also expected an easy integration of Slovak factories into European supply chains (Hunya, G.

, 2004). The investments have increased more than 6 times since 1999. Cumulatively till 2007, in automotive industry 6 711 000 000 EUR was invested. The significant increase almost by half was between years 2005 and 2006. In 2006 the investments of HYUNDAI KIA MOTORS and PSA Peugeot Citroen did finish and Volkswagen Slovakia invested in designing new AUDI Q7, which production started in 2006.

In these two years, 2 970 000 EUR was invested. This amount represents almost 40% of all the investment inflows into industry (Etrend, published 10. 07. 2007). Further details are shown in following table: Source: Association of Slovak Automobile Industry 2. 4.

The three musketeers FirmInvestment in EURNumber of employeesCars produced in 2006Production Volkswagen 1 300 000 9. 00 250 000Polo, Touareg, Audi Q7, Porsche Cayenne PSA Peguet Citroen 730 000 3. 500 180 000207 Hyundai Kia Motors 1 200 000 2. 400 150 000Cee'd, Sportage Table

by author, source: Autobrief, Automotive portal of East and Southeast Europe 2.

A closer look at the theory 3. 1. The four spillover channels The inflow of foreign direct investment has both positive and negative effects on the host economy. By spillovers is meant positive economical externalities emanating from FDI, which are generated involuntarily and have no cost for those profiting from them.

Spillovers from FDI take place when due to the presence of foreign company, productivity of domestic firms in the same sector or even in other sectors of the host economy increases and the corporation does not fully internalize the value of those benefits. Spillovers arise because multinational corporations in general introduce technological advancement - a firm specific asset, like superior marketing, management or production techniques, which enables them to compete successfully abroad. The theoretical literature identifies four channels through which the host country can boost its productivity via spillovers (Blomstrom and Kokko, 1997). Driver Sources of Productivity Gain Imitation • Adoption of new production methods • Adoption of new management practices Competition • Reduction in Xinefficiency • Faster adoption of new technology Human Capital • Increased productivity of complementary labour • Tacit knowledge Exports • Scale economies • Exposure to technology frontier The scope of imitation clearly depends on the product/process complexity, hence simple manufactures and production processes are easier to be imitated than the more complex ones. Competition as another transmission mechanism of spillovers is debatable. The multinational producing in direct competition with domestic firms puts

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industry/

pressures on them, that can result in productivity gain (for those, who survive) but not as a result of technology or knowledge dissipation from the foreign company.

Multinationals demand usually relatively skilled labour in the host country and invest in this labour through training. It is not possible to fully protect such investment in human capital, because of the movement of labour to other firms. So the generation of productivity spillovers occurs in two ways. Firstly, a direct spillover to complementary workers, as skilled labour working alongside unskilled labour tends to raise the productivity of the latter. Secondly, workers that move carry with them knowledge of new technology, new management techniques and consequently can become direct agents of technology transfer (Gorg and Greenaway, 2001).

An indirect source of spillovers can be also via market access, or export knowledge, which basically means the possibility for domestic companies to learn from multinationals how to export. If they learn how to penetrate export markets, they can increase their productivity exploiting scale economies. 3. 2. The two spillover types Multinational enterprises may have spillover effects on local competitors within the industry (horizontal spillovers) as well as on upstream and downstream domestic firms that serve as suppliers or purchasers of their products (vertical spillovers).

Vertical spillovers take place in two ways – via backward and forward linkages. Backward linkage is directed from foreign customer to domestic supplier through direct knowledge transfer, higher requirements regarding products and services, or increased demand enabling domestic firms to

exploit the economies of scale. Spillovers through forward linkage occur when the domestic firms become productive due to access to new, better, or cheaper inputs produced by a multinational. While horizontal spillovers are involuntary and unwanted, leaking to domestic competitors, while the vertical are voluntary and wanted, usually being passed to domestic suppliers (Ferencikova S. Fifekova M, 2006). 3.

Let the numbers talk... 4. 1. Competition Foreign investors in the automotive industry have a strong ability to pull a number of foreign suppliers with them, which then compete in the domestic market with domestic suppliers and create an environment for horizontal spillovers. The competitive pressure, defined as the pressure to use the existing technology more effectively, is according to all the companies very high. The same applies for the pressure to innovate and improve the products and services offered.

The competition pressure is the highest in case of Kia, as the Asian company is trying to establish on European markets (Ferencikova S., Fifekova M, 2006). 4. 2. Influence on local suppliers Source: Association of Slovak Automobile Industry There are around 134 suppliers and subcontractors represented in the Slovak market. Foreign firms take the lead, like Bosch, Continental, Dana, Delphi, Faurecia, Johnson Controls, Lear Corporation, Magna, SAS Automotive, Toyota, Boshoku, Valeo, YAZAKI, ZF Friedrichshafen (Ernst&Young: The Central and Eastern European Automotive Market, 2007).

From the list it is obvious, that Slovak companies are underrepresented (the biggest engineering Slovak company is Matador), although they play an important role in the Slovak automotive industry. The investors introduced

advanced and innovative management techniques. Volkswagen's system of "balanced scorecard" is unique among VW plants around the world. In order to successfully maintain and increase the efficiency of the communication between the major car producers and their suppliers since 2003 a forum is taking place (AutoSlovakia) attracting more than 200 automotive executives from the region.

The Innovation Relay Center Slovakia organizes technology transfer forums, that resulted in the signing of agreements on export of technologies and know-how. The study of the National Bank of Slovakia (Hoskova, A. , 2001) evaluates the transfer of technologies positively. It claims, that without modern technologies brought by foreign investors the existing domestic firms would not have been able to reach increasing production parameters. A good example of technology transfer is Volkswagen's most complex automobile – Touareg, production of which requires top-quality technology. Measuring spillovers through backward linkages is not an easy task, however they have significant effect on the entire economy.

We have found the index of turnover for the domestic market in the sector (manufacture of transport equipment – NACE 34) the most relevant indicator of the growth of local suppliers' market. The following graph is from Eurostat database. Source: Eurostat The figure shows a sharp increase in the index of turnover in the period between 2000 and 2006. The immense growth can be explained by start of the production of VW Touareg in 2003 and preparation of PSA and KIA investments and start of manufacturing in these plants in 2006. Temporary decrease in growth in 2005 was most likely caused by

decrease in output of the VW factory due to technology upgrading for the production of Audi Q7 model. 4.

3. Transfer of Knowledge Interestingly, in Slovakia rapid economic growth in GDP per capita was for a years associated with a drop in R&D expenditure. In order to secure the car industry's future this situation was no longer desirable. Recently a number of joint projects have been launched between the car industry and universities including STU Bratislava, Kosice Technical University, the University of Zilina and the University of Trencin.

This strategy is aimed at making national laboratories competitive in specified fields of research and giving them the tools to provide effective support to small businesses focusing on research innovation and services in the automotive field. This will lead to higher added value and consequently an increase of the chances f sustained growth once Slovakia's advantage in terms of labour costs disappears (European Automobile Manufacturers' Association). 4. 4. Inlfuence on labour force and employment The following graph represents the growth of number of employees employed in automotive industry since 1993.

The number has tripled since 1993. In 2006 the automotive sector employed 67 000 people, what makes more than 10% of the whole manufacturing workforce. It was 12 000 more than in 2005. The predictions for the year 2010 assume employment of more than 100 000 people in automotive sector (Jakubiak M., Kolesar B., 2007).

Wages in the industry are growing, but the companies are not concerned.

They expect a cost cutting through productivity improvements. Source: https://assignbuster.com/fdi-spillovers-in-slovakia-focus-on-the-automobile-industry/

Association of Slovak Automobile Industry 4. 5. Added value and productivity

At the beginning car components were imported and in Slovakia only the

assembly of cars took place, added value was not so high. The automobile

sector represented about 10% of value added in manufacturing.

However, the big car companies were followed recently by suppliers to reduce transport costs, so added value is of increasing, as the center of value added creation shifted to suppliers. ON Semiconductor Bratislava Development Center, Dynabrade Training and Development Center Levoca prove that (each investment worth 1 000 000 USD), Slovakia was able to attract high added- value activities. Source: Eurostat Source: Jakubiak M., Kolesar B.: Car industry in Slovakia We can see from the graph above that productivity of labour in the automotive sector has been growing far above the manufacturing average.

The fast pace at the beginning corresponds to the big growth of production in Volkswagen, the temporary decrease in 2005 was caused by technology upgrading. Source: Jakubiak M., Kolesar B.: Car industry in Slovakia, Productivity in the sector outpaced the growth of wage.

Comparing the growth of the two parameters shows the improbability of wage growth to fuel inflation. Moreover, it suggests the possibility of the creations of conditions for sustainable growth in the whole Slovak economy. According to the predictions in the following years, both productivity as well as added value per worker will grow even faster. 4.

6.. Export growth Majority of Slovak car production is exported. The export increases as the production of cars does.

In 2006 the car export represents one third of total Slovak export. The car export in year 2006 increased by 40% in comparison to 2005. The reason for that is that all 3 key players started with their full production and they managed to produce 295 390 cars (Association of Slovak Automobile Industry). The assumption for 2007 is more than 570 000 cars produced. Thanks to the car export Slovakia already achieved in January 2007 again current account surplus after 3 years of constant deficit.

According to national statistic office the provisional current account is balanced so far in 2007 (see references). Source: Association of Slovak Automobile Industry 4. 7. Infrastructure The Slovak government committed itself to construct motorway section connecting Bratislava with Zilina for the needs of Hyundai/Kia. The project should be finished in 2009. In an indirect way, automotive industry thus gives boost to the building industry – an excellent example of vertical spillovers.

The building of production halls or subcontractor factories also contributes to the rise of building industry. 5. The beginning of the end? – Risk evaluation There is no perfect success story, and Slovakia's miracle can also easily end up as a failure. We would mention some of the threats, that might undermine the countries growth and challenges it will be faced in the future.

The car industry provides the main source of growth, however being dependent on one single industry might put the country to danger. Once the demand for cars decreases (considering environment and energy shortage problems) the industry's decline would have devastating effects on the whole economy. If car production will increase with the expected speed, the

companies might face a shortage of skilled labour. This can be only dealt with by importing labour and improvement of education.

Here we have to mention the need to create conditions for private investment in R&D, because that is the only way towards Slovakia's integration among the world's developed economies. There are concerns of political character considering the current government. Mr. Fico, the prime minister was the biggest critic of previous government's reforms, his coalition partners and rhetoric just worsened the countries international reputation.

Moreover, because of the government's expansionary fiscal policy, even the adoption of Euro in 2009 could be at risk ( PriceWaterHouseCoopers: Global Automotive Risk Outlook, 2006 ). . Conclusion When it comes to evaluating our findings certain facts must be taken into account : the success of the investment project is mainly determined by the host industry's characteristics. Spillovers do not occur automatically, their existence depends on the ability and willingness of domestic firms to engage in investments and absorb foreign knowledge and skills. FDI invested companies especially in the automotive industry play an important role in the Slovak industry while determining the country's development. The overall economic parameters of the country suggest the existence of positive spillovers.

Current account surplus, growth rate records, decreasing unemployment are all proof for that assumption. We find that vertical spillovers are of a much higher significance and easier to measure than horizontal spillovers.

Considering the competition among the three big car producers, Volkswagen still has a dominant position in the sector, due to the company's longer history, but the diversity brought by the newer investments is already noticeable. Communication among car companies and their suppliers is good, although developing slowly and in most cases hrough mediators – indirectly.

This communication is taking place not just within Slovakia, but on a higher level – Central Europe. The technology transfer can be proved indirectly by production of cars of higher technology requirements (Touareg, Audi Q7). From the other vertical spillovers, the two most important are R&D projects and labour productivity, because they are prerequisites of sustainable development. Despite viewing Slovakia for long by many as the cost seekers' paradise, eventually knowledge seekers arrived as well. Without further investments into R&D the country would be stuck on a level of an "assembly shop" lasting for 8-10 years till the companies move further east.

Therefore the country should invest more and reform its education system and provide more incentives for R&D. Joint projects of universities and companies are a vital form of this effort. Productivity growth is much higher than on average, exceeding even wage growth. To ensure a further increase of productivity a skilled labour force is needed, which again depends on the efficiency of the educational system. The personnel employed in car industry is already more skilled, than average workers in the Slovak manufacturing sector. Once they move to take on another job or start their own business, the transfer of managerial knowledge and technical skills can lead to further spillovers.

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