Effects of foreign direct investment:

the case of the Czech economy

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Contents

1 Introduction

In the Czech Republic, enterprises which are controlled from abroad produced almost 80% of total manufacturing output and employed 64 % of the labor force in manufacturing industries. Financial institutions under foreign control created about 97% of value added of the whole financial sector and foreign banks controlled 97% the total banking assets in the Czech Republic as of 2009.[1] On one hand, attracting foreign capital is considered to be a success, a signal of development, and many countries provide special incentives programes for further influx of foreign capital. On the other hand, there might exist fears of excessive expansion of foreign capital, and thus government can impose restrictions and limitations on foreign investment, which then work as disincentives. Therefore, it is useful to discuss and analyze the effects of foreign enterprises on the economy during the transformation history along with the government policies towards foreign investors.

In theory, the influx of foreign direct investment (FDI) by multinational companies (MNC) to a country is expected to contribute to the economic growth thanks to the technology transfer. The presence of MNCs in the economy is expected to lead to a shift toward more high-tech and skill-intensive domestic production. It should help to establish world quality standards and to integrate the domestic economy with the world markets. However, it also means that the Czech economy depends on the economic situation in the home countries of the multinational companies and on the situation in the world economy.

Thanks to technology spillovers associated with foreign firm presence in an industry, FDI can contribute to the modernization and restructuring of the whole industries and the economy not only due to the fact that MNC have comparative advantage in production and dynamic efficiency but also due to the spillovers to domestic enterprises. In the economic literature, there is mixed evidence as for horizontal spillovers from foreign firms to local

1 CZSO (2012a): Vliv zahraničních firem v České republice

firms as for their productivity growth. Vertical spillovers, however, which are associated with forward and backward linkages to domestic firms, may improve the quality and productivity of firms operating on up-stream and down-stream markets.

The general welfare effects of foreign investment have been analyzed by MacDougall (1960). Another early contribution was provided Caves (1971), who examined effects of FDI on industrial patterns. MNCs not only change the internal structure and organization of acquired daughter companies in the host country but also are considered to be a catalyst or initiator of changes not only in trade structure and in the industrial structures. The importance of FDI is related to the positive externalities of MNCs not only thanks to transferring technological know-how, managerial and organizational skills, but also due to providing financial capital, creating jobs and enhancing competitiveness. (Adams 2009).

In practice however there also exist arguments against foreign investors' entry into domestic markets. There are cases when a foreign investor/ enterprise can harm the welfare and in the long-term build a barrier to the growth of the economy (Dunning, 1993). There exist attempts to allocate production and manufacturing of environmentally damaging products in less developed countries, using second-hand technology and machinery that are prohibited in developed countries. Soft environmental norms or insufficient consumer protection and their loose enforcement in less developed economies can allow foreign investors to produce with lower costs than in the developed world.

In a transitional economy the effects of foreign direct investment may not be therefore without controversy as they might be positive as well as negative (compare Blomstrom, Kokko, 1997). In transitional economies negative effects are potentially more probable as the domestic firms are often weak managerially as well as technologically backward. In addition

protection mechanisms are not as sophisticated as is the case of developed countries and the relevant institutions are not yet developed.

There are a number of empirical studies that attempt to assess the impact of FDI on an economy (on growth, productivity, restructuring, balance of payment, competition, job creation etc.). Although the economic literature is not unified as for the positive effects of FDI on the economy, the results indicate that the net FDI benefits prevail but the actual effects of FDI on the country depend on the level of human capital, education, trade liberalization and business environment and certain institutions which determine the absorptive capacity and the quality of FDI. While high income countries do benefit from FDI, in developing or transforming countries the relationship is not that straight forward.

The core contribution of this monograph is research on the FDI in the Czech transition economy during 1989 -2010 based on individual data sets provided by the Czech Statistical Office. The role and effects of FDI are analyzed from various aspects including the mode of entry. Foreign multinational companies entered the market not only via mergers and acquisitions (M&A) during the privatization but also via green-field investment and small businesses establishment. Part of this analysis focuses on small foreign enterprises and development of FDI, another part on the comparison of performance of foreign and domestic enterprises. The econometrical analysis continues with analyses of the spillovers of FDI, in particular impact of foreign investment enterprises on productivity growth and competition, distinguishing between Greenfield investment and M&A while focusing on manufacturing enterprises. The following subchapter continues with an empirical analysis of the impact of FDI on the restructuring of the Czech economy based on the statistical analysis of firm-level data. It shows the role of foreign enterprises in the Czech economy by sectors, and compares both the productivity of foreign and domestic firms across all sectors of the economy as well as allocation patterns of domestic and foreign

firms as by factor intensity. Firm data used for the analysis are discussed in more detail described at the beginning of chapter 5 and in Zemplinerova (2010).

The monograph however starts with a case study on early strategic investment of Volkswagen into Skoda car factory in 1991 that was concluded prior to the privatization program started in 1992. The following chapter describes government strategies towards foreign investors and their role during the privatization programme 1992-1995. The Czech privatization programme was specific not only due to restitution and due to the use of a non-standard method of privatization, so-called voucher privatization, but also due to the strategy to create "own bourgeoisie" – "national champions" owned by domestic investors like some other small economies as for instance Japan or Finland. Therefore foreign investors have been excluded from the major part of the privatization program and projects with foreign participation have been subject to particular scrutiny.

The level of FDI has been influenced by large deals during the privatization of the economy. Although the majority of the deals under the heading "privatization programme" (described in chapter 3) were closed in 1995, the state sustained its influence over a significant part of the Czech economy. By the end of 1995, the National Property Fund (NPF) had acquired equity positions in some 1,500 Czech companies. The most important companies were companies which play a key role in the economy, namely companies operating in the banking, petrochemical, metallurgy, mining, transport, telecommunications and energy. Most of these so called "strategic companies" were waiting for privatization till 1998. Chapter 4 describes foreign strategic investment of large banks along with their restructuring during 1998-2002. Contrary to the privatization program which was oriented toward domestic investors, in this residual privatization the government was targeting foreign investors.

As the Czech economy was opening to the world economy, Czech firms began to invest abroad. In the Czech Republic, outward foreign direct investment (OFDI) has been growing steadily despite the economic recession. The OFDI flows out of the Czech Republic accelerated in 2009 and 2010 as firms learn to use direct investment as a major strategy to access foreign markets. Chapter 6 is devoted to the role, position and geographical structure of OFDI based on balance of payment statistics. It closes with a case study of SKODA Auto Company and its investment abroad.

Due to expected positive effects of FDI, most of countries provide investment incentives that are designed to attract FDI - tax holidays, special tax rates or depreciation schemes, tax deductibles, social security relief, exemptions from tariff payments such as VAT relief for imports of modern technologies, cheap land for building of the plant, etc. Concluding, chapter 7 summarizes the previous results, describes the policy towards FDI and draws some policy implications.

2 Joint venture Volkswagen and Skoda, car factory

One of the first foreign investments in the Czech Republic was Volkswagen's investment in Skoda car factory in 1991. Volkswagen's decision was based primarily on growing demand for automobiles in the Czech Republic, as well as in Central and Eastern Europe as a whole, together with the cost and logistical advantages of the company's strategic location, well trained staff, long engineering traditions,[2] favorable socio-economic conditions, and the clearly defined role of Skoda in the multi-brand strategy of the Volkswagen Group. It has to be mentioned that Skoda car factory in Mlada Boleslav had been modernized before 1989. The automotive industry is the only of traditional industries in the Czech Republic that survived and thrived during the transition.

Volkswagen's investment came in 1991, when the political as well as economic situation in the Czech Republic was not stable. The decision to invest by such a respected company served as a sign of trust in the future development and prosperity of the country. Volkswagen's decision was based primarily on the prospective of growing demand for automobiles in the Czech Republic as well as in other Central and Eastern European (CEE) countries, the cost and logistic advantages of strategic location, relatively trained staff and a long tradition in engineering, and the favorable social-economic framework and conditions.

Volkswagen (VW) created a joint-venture with Skoda on April 16, 1991 in the form of a joint stock company. Skoda Mlada Boleslav contributed physical assets, for which the Czech government obtained 69 per cent of the enterprise equity. At the time of the contract's signature, Volkswagen acquired a total of 31 per cent of the enterprise equity for 620 million DM. According to the contract, VW acquired another 39 per cent of the equity in

2 The company Škoda Auto a. s. has operated on the Czech market for almost hundred years. It produced its first car in 1905 and in 1907 cars were successfully exported to the whole world. In 1925, Laurin & Klement merged with SKODA heavy-machinery company and in 1945 it was nationalized

two subsequent payments; in 1994 (390 million DM) and 1995 (390 million DM). After the final agreement with the government, Volkswagen bought the remaining 30 % of Škoda's shares in 2000 for CZK 13 billion and is presently the exclusive owner of SKODA AUTO a.s. In total Volkswagen paid USD 1.4 billion (CZK 27 billion).

The entry of SKODA into the Volkswagen group provided the company a link to the global Volkswagen network and, thanks to its well-designed strategy and quick development of a strong market position, it gradually became an important part of this network with special competences for Central and Eastern Europe. Volkswagen had been incorporated in global structures of car industry for a long time and the group as a whole strives to cover the broadest spectrum of car markets.

In 1991 SKODA received several important discretional investment incentives from the government, both financial and non-financial. On the other hand, Volkswagen made several promises and commitments.

At the request of Volkswagen at the time of closing the deal, the Czech Government stated that:

- The debt of 7 billion Crowns will be written off and the government will cope with the pretensions of former owners of physical assets of the Company, as well as with possible environmental damage, so that it will not have a negative influence on the Company.
- In spite of being the majority shareholder, from the very beginning of the creation of the joint-venture, the Czech government will not interfere in the price policy on domestic as well as foreign markets for all products and services. Control of the company will be fully and without any restrictions in the hands of VW and its German managers.

- The government will comply with the demand from VW for a change in the tax system, which placed 29 per cent turnover tax on each SKODA car while only 19 per cent custom duty on imported cars.
- The government grants SKODA a two year tax break and the future tax burden limited to a maximum of 40 per cent, SKODA will receive preferential treatment in depreciation.
- Covering of losses from future profit during the following 5 years will be possible without any limitation and further conditions.
- The company will receive an exemption from its duty to supply free convertible currency to the State Bank and thus be able to open a foreign currency account. The State Bank agreed to provide permission for acquiring credits from foreign banks.
- The state will cover the expenses for enlarging and improving the telecommunication system by enlarging the capacity of connections between the Company and the telephone exchange by the end of 1991.
- The government (the local labor office) will cover part of the cost of re-qualification of the Company's employees.

As follows from the conditions of the contract, Skoda Mlada Boleslav was extensively financially restructured before privatization. From the overview, it follows that VW not only requested protection of the market as for imports. Furthermore VW requested special treatment and conditions, which would, counterbalanced handicaps of the former planned economy in the field of banking and infrastructure. In fact, Volkswagen required the government to create conditions similar to ones in market economies in the field of management control, tax infrastructure, telecommunications, banking and corporate finance.

One of the Volkswagen‘s conditions for the investment in SKODA was to join a company which would not bear any burden from the past: no

old debts, no environmental damage, no restitution claims. The problems of environmental damage and restitution claims were minor; the problem of the debt was crucial. In 1989, SKODA car factory was highly indebted due to a large investment in new modern production line. In 1991 SKODA was nearly insolvent because the company had a debt of CZK 7 billion (approximately DM 320 million in the respective year's exchange rate). SKODA was unable to generate sufficient internal profits and cash-flow for investment in new technology, to increase capacity, or to acquire outside finance. The inadequate capitalization of the enterprise affected SKODA's suppliers, threatening them with bankruptcy. In 1991 the system of management and labor organization was poor. There were no financial analysts, controllers or marketing specialists in the old management. The process of change in the control of the company was rather profound. Marketing, personnel/product development, and efficient manufacturing started to be considered as the main components of reaching the competitiveness.

The Czech government considered cars to be "sensitive products". Import tariffs on cars during the 1990s were usually high above the average tariff rate (estimated at 3.8 % in middle of the 1990s). In 1996, an 11.4 % tariff was imposed on cars from the EU, and a tariff of 19 % was imposed on cars from other GATT countries. The protection by custom duties is decreasing year-to-year and, according to the GATT agreement, the import custom on cars should be abolished in 2001.

During the negotiations with the foreign partner of Skoda, the following conditions were stated by the Government and committed by VW in the time of the signing of the contract:

- VW-Skoda car factory will invest 8.2 billion DM between 1991 and 2000;
- output will increase by approximately 100 per cent to about
- 400,000 cars per year;

- supplies will rely on domestic producers and suppliers in expectation of a "multiplier effect" on these producers;
- the number of employees will increase;
- a hall for engine production will be constructed;
- a new model of engines will be developed;
- The Skoda trademark will be preserved.

As expected, particularly important to the Czech government were the inflow of capital resources, secure production and employment along with the transfer and implementation of new know-how. When the contract was signed in 1991, some very important elements of SKODA's performance—export performance, growth of productivity and increase in quality of the products—were neglected. None of these conditions was required from Volkswagen. Nevertheless, these have been fulfilled and are crucial elements in the success story of SKODA.

Volkswagen agreed to the above conditions because it prepared a similar scenario as SKODA to SEAT in Spain. At that time there were had not yet been any bad experience with high investment of VW in SEAT. The conditions did reflect the threat that VW would close the company or would create an assembly factory instead of high-tech development center which would stay with headquarters in Wolfsburg.

Table 1: Sales of cars SKODA 1990-1995

Year	1990	1991	1992	1993	1994	1995
Total production	186 000	172 209	199 682	219 158	174 000	211 042
O/w to CEECs	10 %	41 %	13 %	13 %	12 %	11 %
overseas and other	2 %	1 %	9 %	15 %	17 %	14 %
West Europe	22 %	30 %	30 %	28 %	35 %	37 %
CR+SR	66 %	28 %	48 %	44 %	36 %	38 %

Source: Skoda, automobilova a.s.

While the government did fulfill all the conditions of the contract, in case of VW during 1991-1995 none of the above conditions have not been fully kept. As illustrated by Table 1, the output of cars has been decreased between 1990 and 1994. During the first years of operation, also the number of domestic suppliers, as well as their share in the supply of parts and materials, has been continuously decreasing; investment was drastically reduced to 3.7 billion DM and the Skoda trademark had to be modified.

Skoda-VW had almost 17 000 employees as by 1991 but number of employees decreased to about 15,500 employees as by 1995, of which 13,900 were in the Mlada Boleslav plant, 900 in Vrchlabi and 1,200 in Kvasiny production facility. The number of employees has been decreasing since 1991 and was expected to be maintained at the existing level.

Table 2: Number and educational structure of employees

Number of employees	1991	1995
Basic education	5224	2410
Skilled workers	7401	7819
Secondary school	3652	4208
University education	706	1212
Total	16983	15649

Source: Annual report of SKODA Auto 1995

Skoda-VW spent 151 million CZK on employee training in 1994. The average salary for SKODA-VW was 11,400 CZK (not including the salaries of German managers), which was quite above the country's average. Due to expectations of high unemployment, the government provided relatively high subsidies from the state budget for re-qualification [3]and unemployment benefits. These funds have been distributed on a regional basis.

3 *Concise educational system at Skoda-VW consisted of*
- building a corporate culture and communication network;
- all employees are taking part in a training programme (5.8 days in average);
- about 1,000 apprentices are trained in 19 professions;
- 244 language courses, more than 2,000 participants.

As for protection of the car market, the number of former trading partners, especially Poland, Hungary and the Slovak Republic, introduced protective measures on the car markets. Export barriers then became a barrier to growth. While import duty on cars in Poland was 35 per cent, SKODA management decided to establish an assembly factory in Poznan in order to overcome high customs tariffs imposed on the personal cars in Poland, SKODA. A contract on the establishment has also been signed with Russia in Smolensk and similar projects are being prepared in India and China.

What is important is that the export performance grew along with growth of productivity and quality of the product. None of these conditions have been required from Volkswagen. Nevertheless, all have been fulfilled and are crucial elements in the success story of SKODA.

Volkswagen promised to produce a new model of middle-sized car and a complete production program wherein 8.2 billion DM would be invested over a period of 10 years. The highest investment commitments played the decisive role in the selection of Volkswagen as a foreign partner.[4]

In December 1993 Volkswagen decreased the pledged sum from 8.2 billion DM to 3.7 billion DEM. Volkswagen decided not to build a new plant for engine production. It appears that the investment commitment has not been guaranteed by penalties in the contract and thus could have been voluntarily fulfilled or not.

Because of the staging of the investment, Volkswagen was able to scale-down its investment. In 1995 investment has been covered by cash flows up to/of 50 per cent.

4 Second most serious potential strategic partner, Renault, offered investments of 3.9 billion DEM to produce a mini-car and a new Renault 19.

Table 3: Investment and Depreciation 1991-1995, million CZK

mil. CZK	1991	1992	1993	1994	1995	TOTAL
Investment	1114	3766	4796	7617	5613	22906
Depreciation	709	1022	3004	2713	3604	11052

Source: Annual report SKODA Auto 1995

Another 13.5 billion CZK was planned to be invested in 1996. Actual investment in production and products came in to effect in 1997.

During 1992-1995, Skoda-Volkswagen made phased upgrades in the capital equipment, beginning with the paint area and metal presses. The next stage included an expansion of production capacity. The strategic plan also involved the building of a new engine facility, which at that time was not realized, but rather engines were imported from Germany. Also, the plan to introduce new product lines has been turned down for the time being. Instead of large investment, VW decided to modernize the existing equipment and upgrade the production capacity from the current 200,000 to 340,000 vehicles per year, introducing at the same time a second, larger model series.

Skoda-Volkswagen has built its own distribution network and supported the development of private distributors. It also negotiated for the direct sale of Skoda cars abroad. The productivity has been increasing by 10 per cent yearly. The salaries of workers were in diapason from 3,900 CZK to 14,000 CZK according to the skills and salaries grew by 16 per cent in 1995 only. As by 2000, SKODA has been producing almost 14 cars per year per employee. (For comparison, in Wolfsburg 15 cars per year per employee are being produced.)

In 1991 only 25 per cent of production was sold domestically. After the fall in sales in 1991 - caused by changes in the business environment, a fall in domestic demand and the overall situation on the world car markets - production of SKODA Auto started to grow. SKODA is 2/3 oriented

towards export but is also attempting to win a larger share of the domestic market. There are 2600 SKODA car dealers in 60 countries, 215 in the Czech Republic and 70 in the Slovak Republic.

Skoda-VW has produced successful the Felicia model and prepared a new model of middle class car for production. The production structure is the same as that of VW, with quality, price and service being the main determinants of the strategy of the company.

Thanks to the expansion of the final producer, also the sector of suppliers expanded; by 2001, there were about 280 manufacturing companies operating in automotive industry, more than half of which are foreign owned. One-third of the Top 100 European Automotive Component manufacturers (as defined by Economic Intelligence Unit report, The European Automotive Components Sector, 1996) have production facilities in the Czech Republic. According to information of CzechInvest, there are in total, about 50 joint ventures[5] and 20 Greenfield foreign enterprises[6] either operating or currently in construction in the Czech Republic. Most of the firms were established to supply Skoda Auto.[7]

Automotive components sector is among the most expanding sectors of the Czech manufacturing and many MNCs are present in this sector.[8] Foreign component firms in the Czech Republic are now exporting components to Audi, SEAT and VW group. Supplies of parts include engines, drivetrain, chassis, steering components, interior and fitments, body parts and related components and electrical and electronics components.

5 The largest 100%acquisition was Ford ACD's take-over of Autopal, which makes lighting elements, switches, cooling and air-conditioning, parts (modules). Ford described Autopal's technical R&D as its strongest competitive advantage. Quality rated ISO 9000, 1700 workers

6 ITT, the world largest brake manufacturer has a plant in Jicin assembling brake boosters and master cylinders for other ITT plants in Germany.

7 Hayes Lemmerz System Service,Ltd. will built a new assembly plant for wheels and tires which will have a capacity 11600 assembly daily. The plant should open in August 1999. It is located in Mlada Boleslav. (7.1 million USD)

8 Avon Rubber, Gr.Bertrand Faure, bosal, Continental, Ford ACD, Grupo Irausa, Happich, Hella, Hutchinson, Johnson Controls, Kelsey-Hayes, Kiekert, Knorr-Bremse, Kolbenschnidt, Laird Group, Magna Interantional, Petri, Rieter, Rockwell International, T&N, Tenneco, TRW, Valeo, Varta.

Automotive industry is one of the most global productions. In order to be competitive, deep changes in the production, design of components and cars have to occur which include:

- use of modular units made by first tier suppliers for several vehicle platforms
- reduction of the number of car producers and suppliers for automotive industry what will increase market concentration
- shortening of innovation cycle requires closer co-operation between car manufacturers and first tier suppliers, what in turn requires sharing of R&D expenses, strategic planning and flexible production methods (improvement of logistic, product quality
- first tier suppliers attempt to control improvement in second and third tier suppliers in quality, flexibility and procurements well as management and service improvement (communication requirements)

VW developed a "supplier upgrade program" which had and important on the Czech car components sector. About 60 joint ventures and Greenfield sites have been established. Co-operation with suppliers is changing. The concept of supplier integration has been adopted also among the first in the VW conglomerate. Suppliers are being integrated with Skoda-VW. There existed six such integrated suppliers as by 1996. As by 1996 more than forty joint-ventures have been established in the Czech Republic, which are in some way connected with Skoda-VW. The investors are not only German but also Italian, French, American, and British.

By the end of 1994, Skoda had 279 suppliers, 174 of which were Czech, 19 Slovak and 86 foreign. In terms of the value of supplies, out of 19,600 billion CZK, 14 billion CZK came to Czech suppliers, 3.5 billion CZK to foreign, and 2.1 billion CZK to Slovak in 1994. In 1994 foreign suppliers were securing 17 per cent of the value of total supplies and in 1995 already

21 per cent (Slovak suppliers being considered as "domestic"). In 1995 416 out of 193 suppliers were foreign, 18 Slovak and 205 Czech. The situation in 1995 is depicted by the following Table 4.

Table 4: Value of purchased materials according to origin, 1995

Suppliers	In bn. CZK	In %
Czech	16.1	69.7
Slovak	2.1	9.1
Foreign	4.9	21.2
Total	23.1 bn. CZK	100.0 %

Source: Annual report SKODA Auto 1995

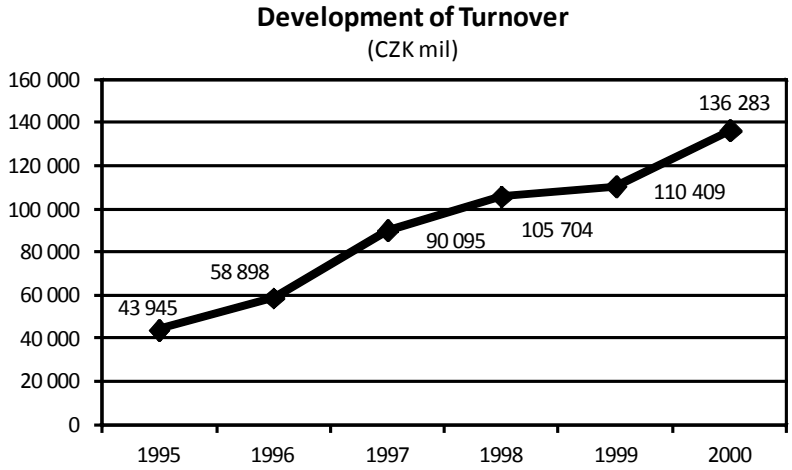
With a turnover of 44 billion CZK in 1995, SKODA Auto was the second largest Czech industrial company in the Czech Republic (CR). In 1995 Skoda-VW provided, directly and indirectly (in the supplier industry), employment to about 3 per cent of the labor force of the CR and its share in total Czech exports was 5 per cent; in 1996 it was almost 7 per cent. SKODA Auto radically increased the quality of their cars. Demand for the Felicia model is growing as customers appreciate good price-to-value ratio. Skoda Auto succeeded in opening up new markets world-wide. A new middle class model has been introduced and its production begins in 1996.

SKODA-VW can be evaluated as a successful deal from which both sides benefited: the Czech state and the VW Group, of which SKODA is the youngest of four autonomous brands.[9] SKODA Mlada Boleslav operates assembly seats in Poland, Russia and other countries (see more Chapter 6). Skoda exports 70% of cars (number of export markets grew from 23 % in 1991 to 66 % under VW. While for OCTAVIA about 60% of components have been imported, for FELICIA the mere 40% of component are foreign sources.

9 VW Group reached net profit 336 million DM in 1995 and sold 3568000 cars worldwide, what means growth by 0.3% (turnover 88.12 bn DM). SKODA increased its sales by 15% and output by 20%, thus producing about 6% from the number of cars produced by VW Group.

During the 1990s SKODA's operations underwent a massive change. The expansion that followed after the take-over of the company is illustrated in the following graph.

Figure 1: Development of turnover 1995-2000 (CZK million)



Source: SKODA AUTO a.s.

New company SKODA AUTO a.s. concentrated primarily on product quality, functionality, safety, and environmental protection while increasing productivity and improvement of its services. The entrepreneurial risks related to low market acceptance of Eastern European brands, quality below Western standards and a weak and inefficient sales network were gradually remedied or eliminated by the introduction of new methods of marketing, fast product research and development, and changes in internal as well as in external organization. The management of SKODA shaped the company into a consumer-orientated low-cost manufacturer. The dramatic measures were taken in order to achieve absolute competitive advantage including movement toward lean production and Just-In-Time deliveries.

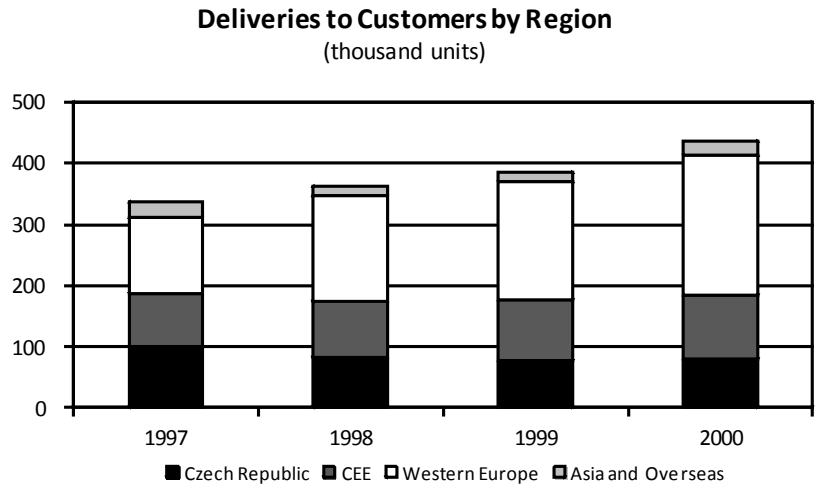
Total sales volume more than doubled. In 1991 172,000 SKODA cars were sold in approximately 30 countries, whereas in 2000 435,000 cars were delivered to customers in about 70 countries. Development and a basic structure of deliveries follow from the next Table 5 and Figure 2.

Table 5: Deliveries to Customers by Regions 1997-2000 (thousand units)

Year	Czech Republic	CEE	Western Europe	Asia and Overseas	Total
1997	100.5	85.5	125.4	25.0	336.4
1998	81.7	92.8	172.1	16.9	363.5
1999	76.0	101.0	192.2	16.2	385.4
2000	80.9	102.6	229.1	22.8	435.4

Source: SKODA AUTO a.s.

Figure 2: Deliveries to Customers by Regions 1997-2000 (thousand units)



Source: SKODA AUTO a.s.

SKODA AUTO a.s. is of the main significance for the Czech Republic because:

- With turnover of CZK 136 billion is the biggest Czech industrial company
- 24 % of all foreign investments went into the Czech car industry (14 % Volkswagen invested into SKODA and 10 % foreign car suppliers invested into Czech partner companies)
- 3 % of Czech work force is directly or indirectly employed by SKODA
- SKODA's exports are 9.6 % of the total Czech exports
- During 1991-1999 SKODA reinvested approx. 12 % of its annual turnover

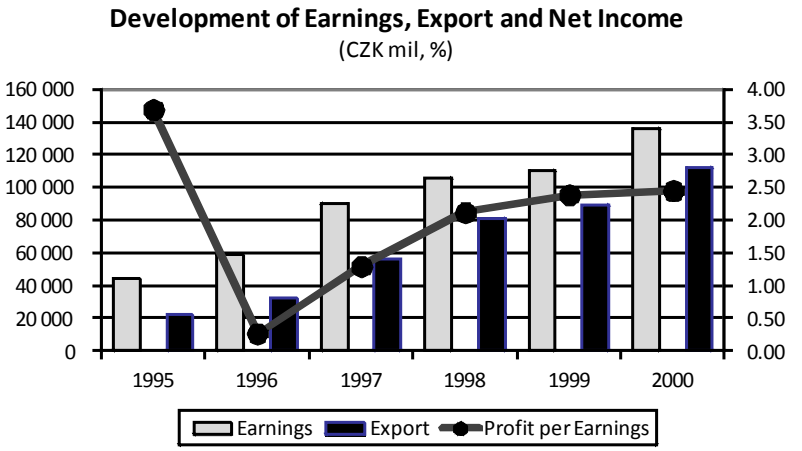
The following table and graph describes recent development in earnings, exports, and net profit.

Table 6: Development of Earning, Export and Net Income 1995-2000 (CZK mil, %)

Year	1995	1996	1997	1998	1999	2000
Earnings	43,945	58,898	90,096	105,704	110,409	136,283
Export	22,473	32,360	56,604	81,369	89,528	111,752
Net profit	1,621	163	1,168	2,239	2,637	3,336
Profit per Earnings %	3.69	0.28	1.30	2.12	2.39	2.45

Source: SKODA AUTO a.s.

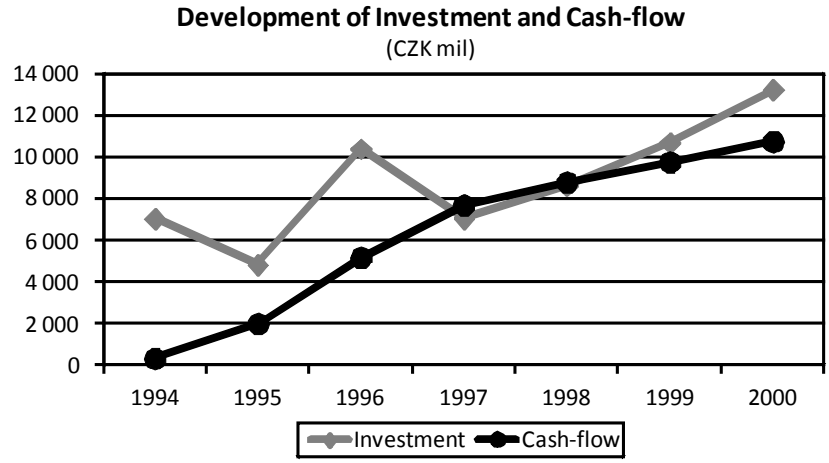
Figure 3: Development of Earning, Export and Net Income 1995-2000 (CZK mil, %)



Source: SKODA AUTO a.s.

Over time, SKODA improved its financial position. The company is now able to generate strong cash-flow and thus resources for investments. Significant increase in cash-flow allows the company to cover a greater part of its domestic and foreign investments from its own resources. Still, considerable resources are provided by parent company, especially in 1999-2000 when the new engine construction hall and the new paint shop were developed. Relative development of cash-flow and investments is depicted in the following graph.

Figure 4: Development of Investment and Cash-flow (CZK mil)



Source: SKODA AUTO a.s.

Recently, company shareholders approved a mid-term investment plan for 1999-2003 to provide total investment funds of DM 3.4 billion to be invested especially in the SKODA's new product development and technologies.

The following two tables provide some basic structural and analytical data about particular brands in the Volkswagen concern. If we make comparison according to number of cars produced per employee, SKODA is with 18.9 well behind SEAT (28.2) but ahead of VOLKSWAGEN (15.9) and AUDI (13). If we compare sales per employee or sales per vehicle we conclude that SKODA is with 334,142 DM per employee and 17,707 DM per vehicle on the last place in the concern.

Table 7: Basic Indicators by Brand (all data for year 2000)

Basic Data for 2000 by Brand	Workforce (Dec 31, thousands)	Investments in Tangible Assets (DM mil)	Cash flow (DM mil)	Pre-tax profit (DM mil)
Volkswagen Passenger Cars	52.7%	43.6%	59.7%	54.9%
Volkswagen Commercial Vehicles	7.5%	5.0%	6.1%	8.5%
Audi	21.0%	37.4%	24.9%	31.3%
Seat	7.7%	5.9%	6.1%	7.0%
Skoda	10.0%	7.3%	5.2%	3.7%
Rolls-Royce/Bentley	1.0%	0.8%	-2.1%	-5.3%
Total	100.0%	100.0%	100.0%	100.0%

Source: VOLKSWAGEN AG

Table 8: Basic Efficiency Measures (all data as by 2000)

Basic Data for 2000 by Brand	Production per Employee (units)	Cash flow per Employee	Sales per Employee (DM)	Sales per Vehicle (DM)	Return on Sales (%)
Volkswagen Passenger Cars	15.9	55.0	724,777	37,993	3.6
Volkswagen Commercial Vehicles	13.7	39.5	495,722	30,875	5.7
Audi	13.0	57.4	777,371	42,789	4.8
Seat	28.2	38.4	962,186	23,017	2.4
Skoda	18.9	25.1	334,142	17,707	2.7
Rolls-Royce/Bentley	0.8	-95.2	327,200	439,077	-38.4
Total	16.2	48.5	693,463	34,350	

Source: VOLKSWAGEN AG

The entry of Škoda into the Volkswagen group provided the company with a link to the global Volkswagen network and, thanks to its well-designed strategy and quick development of a strong market position, it gradually became an important part of this network with special competences for Central and Eastern Europe. Volkswagen had been incorporated in the global

structures of the car industry for a long time and the group as a whole strives to cover the broadest spectrum of car markets.

Using support from the VW group, Škoda has managed to establish a strong presence in many developed markets. Škoda is now fully involved in the whole European and some overseas car markets. Recently, Škoda Auto has been active on more than a hundred markets all over the world, with the EU being the most important one. The company employs more than twenty-four thousand people, of which about 900 people work in foreign countries. It is the most important exporter in the country. Its production technology as well as the way it markets its cars and organizes its suppliers is very similar to the producers of other brands within the VW group.

The automotive industry is one of the most globalized industries and the expansion of production led to the establishment of several foreign subsidiaries (see chapter 8). In order to be competitive not only deep changes in the production, design of components and cars have to occur which include the use of modular units made by first tier suppliers for several vehicle platforms, but also new markets have to be conquered while maintaining the traditional ones.

The strategic investment of Volkswagen into Skoda car factory was related to massive financial restructuring of Skoda car factory prior to privatization and received generous government support and protection of the market during first years of operation. VW not only requested protection of the market as for imports but also special treatment and conditions, which would, counterbalanced handicaps of the former planned economy in the field of banking and infrastructure and create conditions usual in market economies. The entry of SKODA into the Volkswagen group provided the company a link to the global Volkswagen network and, thanks to its well-designed strategy and quick development of a strong market position, it gradually became an important part of this network. VW investment had

impact on the development in car industry along the whole supplier's chain. On the case of VW investment into SKODA car factory it can be illustrated that FDI may serve as initiator of changes which allow for future growth, i.e. that FDI has extensive positive externalities and impact on the economy. It also illustrates that restructuring and state support if well and transparently managed and restricted as for time can support the competitiveness of a company.

On the case of VW investment into SKODA car factory it was be illustrated that FDI may assist to create an environment that allows for future growth and have extensive positive externalities and impact on the whole sector.

3 FDI and privatization programme

From the outset of transformation of the Czech economy, privatization has been considered the key to transformation of the economy. The privatization programme started in 1991 in with auctions of small and medium-size enterprises and with restitution payments to, for example, those who had lost assets as a result of Communism (so called small scale privatization). Standard methods and voucher privatization were applied mainly in the case of large enterprises (large scale privatization). The majority of the deals under this heading were closed in 1995, however as it is described in chapter 4, large part of the assets reminded in state hands.

The large scale privatization programme involved property valued in excess of CZK 930 billion (USD 35 billion) over 4-5 years, of which about 40% took place by means of vouchers, that is, exclusively to individual members of the public was done through voucher privatization. Voucher privatization made rapid privatization possible, but in the long run led to a lack of corporate governance and capital market distortions (Zemplinerova and Machacek, 2003). About 30% of the property has been either sold to domestic investors via direct sales or tenders or transferred to the municipalities. Foreign investors accounted for only 10% of the acquisitions if this value.[10] Out of the property list, 93% had been privatized by the end of 1995, and in fact, the Czech economy had the largest share of private ownership in all of Eastern Europe, between 60-80% depending on the source and methodology of data gathering.

Institutionally privatization has been handled primarily through the National Property Fund (NPF), the Ministry of Privatization, and a small amount through other economic branch ministries. The Ministry of Privatization was closed and the National Property Fund that later became the government's repository for state shares and the only institution responsible

10 The deal VW-SKODA is not included as it was concluded before the large scale privatisation programme started in 1991

for final stages of the privatization process. In some cases, the administration of state shares has been delegated to the Ministry of Economy and Trade or other appropriate ministry.

The large-scale privatization program involved around 5,000 enterprises. From the beginning of the large-scale privatization until the end of 1994, foreign investors were involved in the privatization process of more than 300 enterprises, primarily industrial. Finally the mere 144 were privatized partially or fully to foreign investors. Ventures with foreign participation have been subject to particular scrutiny as they often involve the best enterprises in the economy. The privatization of a company under the auspices of the National Property Fund was extremely bureaucratic.

The average purchase price was close to book value, but individual market-to-book value ratios ranged between 0.5 and 4.5. In many cases foreign partners lost interest due to the lengthy negotiation process. Projects with foreign participation were subject to particular scrutiny and could be highly controversial since they affected the best enterprises in the economy. In evaluating projects with foreign investment specific attention has been devoted to both the financial conditions of the transaction (debts versus equity, plans to increase equity, etc.), as well as employment and environmental issues. In 1994 a policy debate took place whether 'the Czech way' (preference for domestic ownership) or foreign privatization should be preferred. The latter opinion prevailed, and foreign investors could win the privatization tenders both in the case of the telecom and the national oil company in 1995.

The privatization program's goal was to privatize about 80% of the country's assets by the middle of 1996, with the goal of achieving a similar ratio of private to state-owned entities as exists in fully-developed market economies. The post and telecommunications services have been separated, with postal services remaining under government control, and other

telecommunications activities and services partially privatized. Of these, 27% were held by foreign investors by 1995. Public utilities are always attracting foreign interest, including to discussions of the privatization of the Prague water supply. About 30-45% of the shares in these financial institutions have been sold in the voucher privatization, and the rest retained by the National Property Fund. The general disillusionment with central planning, state ownership, and the role of the state bureaucracy has led to a refusal to accept any coordinating role for the state in guiding economic activity. This has lent support to an important faction of politicians and economists who advocate the extension of privatization to almost all types of economic activity, including some traditional public utilities such as electric power, transportation, education and health care, which would result in more far-reaching privatization programs than in some established market economies.

Despite the fact that foreign participation represents only 1.2 per cent of all projects submitted, foreign investors have been the source of more than half of all proceeds from large scale privatization. In all, the FNP received or will receive a total of USD 4.6 billion. With existing commitments extending over the next few years, foreign investment is expected to become an increasingly important factor in company restructuring. Foreign investor privatizations have been closely monitored by the FNP and other officials, and perhaps due to penalties for non-performance, most of the commitments have been fulfilled. The following Table 9 shows foreign investment commitments by size structure as by the end of 1995.

Table 9: Foreign investment during privatization, by size of investment

Value of privatization transaction	Percent of the total number of transaction
Less than USD 1 million	6.9
1 – 5 million	30.6
5 – 10 million	19.4
10 – 20 million	21.5
20 – 50 million	13.9
50 – 100 million	4.2
More than USD 100 million	3.5
Total	100 %

Source: Ministry of Privatization, 1996

A total of 315 privatization projects on more than 200 enterprises with proposed foreign participation were considered. As mentioned above of these 144, amounting to a transaction value of USD 4.2 billion, were approved. Transaction value includes actual cash paid to the government, cash invested directly into the Czech company and irrevocable, contractual investment commitments. The rest of the privatization projects have been either turned down by the Czech authorities or have died because foreign partners withdrew, during the often lengthy negotiation process. In some cases, other competing projects were approved. The average purchase price has been close to book value, but the market to book value ratio varies widely, between 0.5 and 4.5.

Projects with foreign participation have been subject to particular scrutiny and since they often affected the best enterprises in the economy, have often been highly controversial. In evaluating projects with foreign investment, specific attention has been paid to both the deal structure (debts versus equity, plans to increase equity, etc.) and social issues like employment and environmental protection. Newly privatized companies have been required to take over all the obligations of the former enterprise,

including environmental liabilities, making a strong proposal for resolving these problems an important factor in negotiations.

A Standard Form Purchase Contract and two separate standard contracts for the sale of assets (Enterprise Purchase Agreement) and the sale of equity (Share Purchase Agreement) have been designed and are already in use. These standard forms have been enormously helpful in making the contractual conditions consistent from one project to the next, one bidder to the next, and thus have improved and accelerated the negotiation process to reach definitive agreements between the foreign investor and the NPF. As a rule, foreign investors are given the standard contracts at the initial meeting, to highlight the relevant business and legal issues of privatization and of doing business as a foreigner in the Czech Republic generally. The contract would then be negotiated and the differences ironed out, before the project could be submitted for review to the MP Approval Commission. These standard agreements have been continually updated over the years to reflect new governmental resolutions and policies.

When there have been delays in closing at the NPF, they have usually occurred for one of the following reasons:

- the existence of new legal requirements relating to economic competitiveness and
- environmental concerns;
- the need to update certain contractual terms, due to time elapsed, changes in the
- financial condition of the Czech target company, or other changes in circumstances;
- findings of the governing ministry that required a contract revision. In the early years, this agency analyzed the privatization projects independently for an average of four months before presenting their standpoints to the Ministry of Privatization.

The process of privatizing a company through the National Property Fund generally took from several months to more than a year. The bid was initiated by submitting a take-over intention to the relevant founder ministry. The ministry could then ask for competing bids, and the entire procedure had to receive the approval of the Ministry of Privatization, the Council of Economic Ministers, the Ministry of Finance and the Ministry of Economic Affairs after a quite sophisticated review of the business plans, financial statements, valuations, environmental audits, contracts and all other relevant information. The selection was then made based on commitments to invest, train management and employees improve the environment, provide new technology and access to export markets. Investors are also judged on their proposed pricing policy, remuneration strategy and willingness to co-operate with domestic competition.

Table 10: Stakes acquired by foreign investors during privatization

% acquired	% of transactions
1 – 30	4.9
31 – 50	6.9
51 – 70	32.6
71 – 99	21.5
100	34.1
Total	100 %

Source: Ministry of Privatization, 1996

Given the weakness of the domestic capital market - which is at best underdeveloped and in some areas is missing altogether - and given the weak bargaining power of the domestic owners, there may well have been no alternative in 1991-94 to these rather burdensome bureaucratic procedures. However, foreign investors found the process frustrating, and possibly for this reason, they generally preferred to acquire a majority interest and clear control in the privatized firm (see Table 10). More than 88% of all investors have acquired a majority interest in the target enterprise.

Structure of foreign investment has been significantly influenced by large deals during the privatization, of which to the data majority has been in manufacturing. First large deal has been closed between Skoda Mlada Boleslav, car factory and Volkswagen in April, 1991 (see chapter 2). In 1992 Philip Morris acquired 77% of Tabak Kutna Hora for about 0.5 bn. USD and NESTLE-BSN bought 69% of COKOLADOVNY for 0.2 bn. USD. Ten out of 15 largest joint ventures created in the Czech Republic by the end of 1997 (TELECOM, SKODA-VW, TABAK, Power Station Opatovice, NESTLE-Cokoladovny, RadioMobil, Czech Refinery, Linde-Technoplyn, Glavunion, Galena, Siemens Elektromotory Mohelnice, and four Cement Factories) ten were in manufacturing. Share of manufacturing will most probably show tendency to decline with the time. There are new sectors opened for foreign investors such as telecommunication, oil refineries, energy generation and distribution, banking, privatization of strategic stakes in large banks. Public utilities do not stay out of privatization via foreign acquisition. In 1997 the most invaded sector by foreigners was energy generation and distribution. National Power (British power corporation) acquired Electricity Power Station Opatovice (5.3 bn. CZK), further Germany, Holland France, Sweden.

Largest foreign investment as by 1995, was realized by acquisition of 27% of SPT Telecom to the Netherlands-Switzerland consortium TelSource for 1,3 bn. USD in the second half of 1995. However as mentioned above, Table 10 does not capture this foreign investment. Acquisitions will still continue, in case of three large banks and stakes in via tenders, however the stock exchange should play more significant role in the foreign investment into the enterprises. During last two years number of green field investment is increasing which are however rather small or medium size. Recently Tchaiwan Computer Company FIRST INTERNATIONAL COMPUTER will build a factory for computer assembly for 0.1 bn. USD employing 150 employees.

The acquisition of the chocolate producer Cokoladovny by NESTLE/BSN is a good example of a restructuring by a foreign owner. Right after the privatization, the COKOLADOVNY-NESTLE/BSN company headquarters was completely reorganized with a new emphasis on marketing and sales. First of all, a marketing department was established to provide market research and new product ideas and changes and improvements in packaging. Because of their greater experience, this department was and continues to be run by foreigners. For instance, the company decreased the number of candy varieties from 500 to 150 that they felt could be marketed more effectively.

NESTLE focused on human resources and training. The company restructured the personnel department and worked to provide better training. They prepared a social program to improve the work environment and help prepare workers for lay-offs arising from job duplication, and they improved the efficiency of training by teaching more intensively and effectively. The new management also initiated a major campaign to improve communication within the company, hoping that by giving workers more insight into company planning and development, it would increase their motivation. To support this program, they now send Czech middle managers abroad for training.

Furthermore, the company centralized all materials purchasing, from domestic suppliers as well as importers and separated the sales operation from both distribution and logistics. They created a local network for sales, and four regional distribution warehouses to improve efficiency of product delivery. Previously, customers were resupplied monthly by each production unit with a range of goods that was often incomplete. Now, the company is able to deliver virtually the entire assortment (90) selected products, representing 80 per cent of sales) every two weeks, which means not only that everything is available, but also fresher. The sales department was increased from 10 to 200 employees, reflecting both an increase in the number of clients and an emphasis on improved customer service.

In the next step of restructuring, the company created two production-management divisions at headquarters, for chocolates and non-chocolate sweets, for which there are eight production locations; and biscuits (cookies), with seven. The company installed a new computer network with NESTLE management software. They introduced cost control modules, which generate complete financial profiles on individual plants and began by installing computer monitoring at Opavia and Orion, the two most productive plants. They also set up training programs there to teach the other four plants how to use the system.

Once the management changes were in place, NESTLE began adapting the operation of individual plants. Overall, their goal has been to replace the former top-down management with a more horizontal, collaborative approach now preferred by most Western managers. Plants received targets for quantity, quality, efficiency and production deadlines. Financially, the plants are accountable only for operating within a budget. Plants were not responsible for pricing their end product nor do they deal with marketing or market research. Investments were focused on concentrating production, increasing specialization, and adjusting capacities to market size. NESTLE estimated that productivity has been improved by about 25 per cent simply through more efficient use of existing resources, better management, higher capacity utilization, etc., and has acknowledged the progress by significantly increasing its investment commitment (Charap and Zemplinerová, 1994).

Czech privatization in many cases transferred enterprises to owners who lacked a long-term strategy and also capital. The transfer of ownership was further hampered by the poor performance of the stock market. Inefficient corporate governance, poor shareholder protection, and subsidies enabled large Czech firms to survive without restructuring. One of the most pressing issues is weak enforcement of the law, especially the bankruptcy law, so delaying the necessary reallocation of labor and capital.

In general and in most cases, the government has avoided restructuring an enterprise prior to privatization, leaving it to the new owners to reorganize as they judge best. In cases where companies have been sold outright to foreign investors, as with SKODA or COKOLADOVNY, control was transferred immediately to the new owner/managers who rapidly began improving company performance. By contrast, if the ownership remained ill-defined, with neither direct state control nor effective private owners, the restructuring was often delayed and necessary changes were slow in coming.

Privatization program 1992-1995 has been a mixed blessing. It has created investment opportunities that attracted foreign capital, but it has also thrown up barriers that have slowed or in some cases deterred altogether the involvement of foreign investors. According to balance of payment statistics, from the start of transition until the end of September 1995, FDI stock in the Czech economy reached approximately USD 5.3 bn. This was rather small amount compared to other parts of the world, and also less than in Hungary and Poland during the same period of time. During the period of large-scale privatization program, it was estimated that privatization opportunities were responsible for about ¾ of total FDI stock as by 1995.

4 Residual privatization and companies´ restructuring

The key elements of the economic reform were put into place on January 1991, when the majority of prices were liberalized, the currency was declared to be internally convertible, and foreign trade was liberalized. Conservative fiscal and monetary policies have produced a stable and reliable investment. The economy started to grow in 1994, higher inflation in 1993 has been caused by introduction of Value Added Tax.

Creation of a new legal framework and privatization of state enterprises progressed since the outset of the reform, but naturally at a slower pace than the macroeconomics measures. In the legislation the major piece of work has been done when Commercial Code has been enacted in January 1992, which replaced together with other 83 special Laws.

Privatization of state enterprises was considered to be a major source of growth. As described in chapter 3, foreign investors have been excluded from the most of the privatization program 1991-1995, from restitution (restitutor had to be a Czech citizen), from small scale privatization (foreign firms were not allowed to participate in auctions) and from voucher privatization which was only for Czechs older than 18 years. Large share of the economy was privatized, without a capital however it remained unrestructured what – with a certain lag – had an impact on the growth of the economy. Only standard methods, direct sales allowed for involvement of foreign investors. As mentioned above, the sectoral and size structures of FDI have been influenced by five large deals during privatization: Skoda-Volkswagen, Tabak-Philip Morris, Cokoladovny-Nestle, Technoplyn-Linde and SPT Telecom/ TelSource. Almost half of the total FDI came from these large projects as by 1995. Except for telecommunications, all were in manufacturing. The largest foreign investment realized during that time was the sale of 27% of SPT Telecom to the Dutch-Swiss consortium TelSource for USD 1.3 bn. in the second half of 1995.

Table 11: The Largest foreign M&A during privatization in the Czech Republic 1991-2002

Total Investment (in mil.of USD)	Foreign partner, Country	Activity, time span	Czech company in case of acquisition
3,900	RWG, Germany	Gas pipeline and distribution 2002	Transgas
1,460	TelSource, Netherlands, Schwitzerland	Telecommunication 1995	Český Telecom,a.s.
900	Volkswagen, Germany	Cars, 1991-1998	Skoda Automobilova a.s.
1,110	KBC, Belgium	Banking, 1999	CSOB
1,030	Societe Generale	Banking, 2001	Komercni banka
629	IOC, The Netherlands, USA, Italy	Petroleum refining, 1995-2000	Ceska rafinerska
500	Erste Bank, Austria	Banking 2000	Ceska sporitelna
499	Assidoman, Sweden	Packaging materials, 1995-1998	Empack Olomouc, Pakaging Zebrak, AssiDoman Zatec,a.s.
450	ABB, Sweden, Switzerland	Electronics, engineering, 1991-1998	11 companies in total
420	Phillip Morris USA	Tabacco, 1992	Tabak Kutna Hora a.s.
400	National Energy Corp., El Paso Energy, NRG Energy, USA	Energy, 1997-1999	Energeticke centrum Kladno
357	Daewoo-Steyr, South Korea, Austria	Vehicles, 1995	Avia, a.s. Praha

Source: Dušek L. and Jurajda Š. (2004, p. 32)

Till the end of 1996 the Czech economic transformation has been considered to be very successful. However, by the end on 1996 it became clear that some problems in the economy are becoming more urgent. Growth of GDP slowed down in 1996 and 1997.[11] Nominal salaries grew by 18,5%

11 As for the contribution to GDP in 1996, construction and industry recorded decrease in the dynamics. Fastest growth recorded trade, hotels and restaurants, transport and communication. These are just sectors in which small and medium businesses play an important role.

in 1996, at the same time the productivity grew only by about 10%. Czech Republic had the most expensive labor in the Central and Eastern European Countries, enterprises were losing the competitiveness, the restructuring proceeded slowly. Another problem of the economy is the fact that trade balance deficit increased to more than 8 % of GDP and has been forecasted to grow in the future.

As shown in Table 12, the economy declined in 1997 and 1999. Following reasons are often quoted for low pace of restructuring and bad quality of enterprise's management leading to low productivity growth: allowing for growth of salaries, low efficiency of the financial system and decrease of foreign demand due to the problems in EU countries, which is the major trade partner. Prior to and during the large-scale privatisation, the state did not restructure enterprises in any sense other than divide enterprises into several parts. (Charap J. and Zemplinerova A., 1993) Restructuring was left to future private owners. Numerous companies, Often companies which have not been divided and which were partially privatised as a whole, are indebted and facing bankruptcy and have to be restructured.

Table 12: Major Economic Indicators, Czech Republic 1993-2000

Year	1993	1994	1995	1996	1997	1998	1999	2000
GDP (% y/y avg.)[2]	0.6	3.2	6.4	3.9	1.0	-2.7	-0.2	2.2
Inflation (% y/y avg.)[4]	20.8	10.0	9.1	8.8	8.5	10.7	2.1	3.9
Industrial production (y/y)[3]	-5.3	2.1	9.2	6.8	6.1	0.6	0.0	1.4
Productivity (% y/y)[16]	2.3	2.4	3.6	2.9	1.8	-0.3	2.5	
Real Wages (% y/y avg.)[6]	3.7	7.7	8.7	8.8	1.9	-1.3	4.5	2.6
Unemployment (%)[7]	3.5	3.2	2.9	3.5	5.2	7.5	9.4	8.8
Imports (% y/y, curr. prices)[8]			23.5	6.6	20.0	17.7	7.0	28.2
Exports (y/y, curr. prices)[9]			33.7	13.0	15.3	0.9	7.0	23.4
Trade Balance (CZK bill.,[12]	-15.3	-39.8	-97.6	-159.5	-144.0	-82.4	-65.8	-126.8
FDI stock (USD bill.)[13]	3.42	4.55	7.35	8.57	9.23	14.38	17.55	*22.10
CZK/DEM (avg.)[14]	17.64	17.75	18.52	18.06	18.28	18.33	18.86	18.21
CZK/USD (avg.)[15]	29.16	28.78	26.55	27.14	31.71	32.27	34.60	38.54
State Budget (+,-% GDP)	0.1	0.9	0.5	-0.1	-1.0	-1.6	-2.7	n/a

Source: CSO

*unless stated otherwise, indicators are in % and y/y basis; n/a – not available

Table 12 tracks annual growth rates from 1993. The rate of growth of industrial production has been lower than growth rates of the trade and foreign direct investment. Czech economy is open economy. As by 1999, export and import/GDP ratios reached 62% and FDI represented 27 per cent of GDP. Czech economy became heavily depending on international relations.

Government has been criticized for maintaining a laissez-faire approach to managing the nation's economy and for allowing the situation to deteriorate without intervening. April 16, 1997, a long awaited economic-measures package, a short-term stabilization program has been unveiled by the government. This package of measures aimed at curbing consumer demand and economic crime - which should translated into long-term growth. In the framework of this package, the government should create greater capital-market regulations, tougher laws on capital-market crimes and greater law enforcement against economic crimes.

Among the short-term macroeconomics policy corrections introduced to help stabilize the economy are cuts of 25.5 bn. CZK ($911 million) or roughly 5% of the planned 549bn CZK 1997 state budget. The cuts were designed to hit all government ministries equally with the exception of defense and transport - transport because the government has already settled one railroad strike and does not want to deal with another and defense because it would not be good to cut military spending at a time when the country in proposed for NATO membership.

Reduction in the budget should include a reduction in public sector wage increases from the planned 11.9% to 7.3%, which is to save 4.2 bn. CZK; and social-transfer cuts of 3.3 bn. CZK, which are to be achieved primarily by delaying pension increases. The government planned to suppress wage growth below 10 % in state-owned companies and those in which it has significant share, while also seeking support from social partners such as employers and trade unions to tie wage growth to labor productivity in the private sector. As a possible cure for the major problems of the economy

the crown has been fully floated since May 28, 1997[12]. Since that currency was devaluated by about 10%, it boosted exports, and thus was supported by some Czech exporters.

After the end of privatization program, the state sustained its influence over the significant part of the Czech economy.[13] Part of the property controlled by state was supposed to be privatized in the future. In the first group, the most important companies, which were waiting for privatization, called "strategic companies", i.e. companies that had dominant position in the market or played a key role in the economy, namely companies operating in banking. Worsening of macroeconomic situation starting in 1997 accelerated the delayed privatization of residual state stakes in banks and strategic state owned enterprises.

In the second group there were industries, which were developed under the centrally planned economy, having overcapacities and obsolete technology and it is difficult or impossible to find a strategic investor. These are large enterprises that have social leverage and cannot be shut down. This is the case of steel industry, metallurgy, mining companies or petro chemistry that should be fundamentally restructured or revitalized before privatization or eliminated. Due to a big concentration of labor, the restructuring and subsequent privatization is not only economic but also political issue in which labor unions are involved. To address the issue of failing companies, the government implemented a revitalisation program for large industrial enterprises. In the framework of the revitalisation programme Konsolidation Bank (KOB) established in February 1999, based on the decision of the government, a 100% subsidiary of KOB Revitalisation Agency, which had to handle selected specific cases and specialises itself in restructuring transactions with large corporate clients. Based on international public tender, the agency is managed by international consortium. The consortium recently

12 From February 29, 1996, Czech National Bank announced widened the currency bands within the crown could move from 0.5% to 7.5% above and 7.5% below the given fixed exchange rate.
13 See for instance Kocenda E., 1999 or Turnovec, 1999, who showed that the degree of the state holdings is even bigger thanks to the indirect or cross-ownership.

works on restructuring of 8 problematic Czech industrial companies, selected by special governmental commission out of relatively long list of companies.

The third and last group was created by network industries, which used to be natural monopolies such as telecommunication, energy sector, and transport or oil industry. State ownership in these industries is a way to regulate these industries in which competition does not exist. For many years these industries were and in some countries still are in state hands even in developed market economies and privatization started later.

Reasons for keeping of assets by state years after the formal end of privatization program were different according to the sector. First group was created by financial institutions. For a long time, bank privatization had been postponed due to several reasons including interests of political parties in power and large scale of bad debts in the portfolio of state banks. Also bank management opposed successfully privatization. In case of banks, reasons for keeping of assets by state in banks include interests of political parties in power and large scale of bad debts in the portfolio.

In case of industries, which were developed under the centrally planned economy, having overcapacities and obsolete technology and it is difficult or impossible to find a strategic investor. These are large enterprises that have social leverage and cannot be shut down such as steel, metallurgy or mining companies that should be fundamentally restructured or revitalized before privatization. Due to a big concentration of labor, the restructuring and subsequent privatization is not only economic but also political issue in which labor unions are involved.

The privatization of the network industries is more difficult as it requires vertical unbundling and creation of regulatory and legislation framework allowing for full liberalization of these industries. Oil and chemical industry is somewhat mixture of third group with the previous group needing restructuring. The most typical network industry is energy (see more below).

In general the government can decide whether to privatize the energy sector as a whole, vertically integrated company to one investor or to unbundle the company and privatize individually each company to different investors. Accordingly, there were two proposals or concepts, completely opposite in the privatization of the energy sector. One leads to creation and maintenance of monopoly, the other allows for competition. Both concepts have pros and cons.

Integrated approach: prior to privatization the energy sector is consolidated. Energy Production Company (CEZ) would be merged with transmission and distribution companies. Thus a huge monopoly would be created and the whole energy sector controlled including production, transmission and distribution. Later this huge monopolistic company should be privatized. This approach would guarantee higher sales price. In case of the sale of monopoly the price is higher than sales of companies in competitive environment. At the same time, consumer would have most probably paid higher – monopoly price. However the company would have to compete with other companies in the world market.

On the contrary, fragmented approach would separate energy production, transmission and distribution would be privatized separately and step by step. Advantage of this approach would be creation of competitive pressures, which would lead to lower energy prices for consumers. On one hand the second approach would be more in accordance with the trends in energy sector and EU guidelines for unbundling. In Europe utility companies are being privatized and exposed to competition. Liberalization means to allow customers of electricity to choose supplier from any region or country. On the other hand utility companies which where monopoly on the regional or national markets, are becoming competitors in the global world. At the same time global markets require global scale and many utility companies merging, the number of companies will shrink dramatically while optimizing of performance. Ownership is becoming international with the extensive

participation of US companies in the European markets. In combination with growth of e-commerce, retailing markets create possibilities for new energy trading. The emerging trading market will most probably grow with multiple new entries.

4.1 Privatization of large banks

In 1991 four large banks have were transformed into the joint stock companies, with shares kept by the National Property Fund. Part of the shares was included in the first wave of the "large-scale" privatization, which started in 1992 and was offered through the voucher privatization scheme (see Table 13). Four large banks have been included into the voucher privatization; government however retained the strategic stakes in partially privatized banks. Investment funds contributed to greater concentration of the dispersed ownership otherwise generated by voucher privatization. At the same time the government retained its impact on the lending decisions. During 1990-1998, the four large banks have been publicly owned, even after going through the privatization program. Direct sale to a strategic foreign investor was not feasible - neither economically nor politically (see above). This is why full privatization of the banking sector is being finalized almost one decade later.

Table 13: Privatization Plans of Major Financial Institutions in the Former CSFR

Percentage of Share Capital

	Total registered Share Capital (CZK bill.)	For Voucher Privatization	For Foreign Direct Investment	For Domestic Direct Investment	FNPs Holdings	Other*
Česká spořitelna	5.60	37	0	20	40	3
Investiční banka	1.00	52	0	0	45	3
Komerční banka	4.56	53	0	0	44	3
ČSOB	1.10	0	0	0	0	100

Source: Data from Kuponová privatizace No. 6 and 11, Centre for Voucher Privatization, (1992), and CNB Monetary Reports, in Janacek-Tomsik, 2001.

*Note: 3 percent of each institution´s shares were devoted to the Restitution Investment Fund

Till 1997 there existed no strategy or privatization plan of state stakes in the banks in the Czech Republic. This fact has decisive impact on the corporate governance. State performed inefficiently as an owner and was passive in the role of major stakeholder. Strategic development has been determined by the top management. Representatives of state on the boards did not receive nor guidelines for their decision making, neither had any responsibility for their decisions.

Bank privatization started under the temporal government (Jan. 1998-June1998). First IPB became part of the Nomura Group in beginning of 1998, when NOMURA acquired 36% of IPB for USD 0.038 bn. Country third largest bank CSOB has been sold to KBC Bank of Belgium for 1.2 bn. USD in June 1999. As by February 2000 share of 52% of Ceska sporitelna has been acquired by Erste Bank der Osterreichishen Sparkassen for 0.5 bn. USD. There existed a special group for bank privatization in the Ministry of Finance. Last large bank to be privatized was Komercni Banka.

First two banks to be privatized earlier, IPB and CSOB have been privatized without any state intervention. IPB was the first out of the big four which has been privatized with negotiations started in 1997 and finally sold in 1998. Decision to sell the state stake of CSOB to strategic investor has been done in 1997, however the stake was sold only in 1999.

IPB privatization was problematic from several reasons. In 1993, the state did not participate at the increase of nominal capital and thus its share in IPB has been diluted from 47.4% to 37.5% and state lost the possibility to sell majority stake. At the time of privatization decisions macroeconomic situation was relatively good and government preferred more risky sale to public costs and safe sale to strategic investor. In addition, Nomura, contrary to other investors, did not require the restructuring of credit portfolio. The fact that not majority stake was offered together with no restructuring prior to privatization of IPB was reflected in the price. Nomura was not direct investor

but Saluka Investments B.V. Thus the risk of investment has been removed out of the balance sheet of Nomura, which however controlled Saluka. Nomura did not perform as strategic investor including the commitments which characterize strategic investor. As by March 2000, Saluka did hold 46.2 %, Bankovni Holding, 15.1 %, Ceska Pojistovna 11.4 % and RIF 6.6 %. Ownership of other shareholders did not exceed 5 % of Share Capital. Its total assets as by March 31, 2000 were CZK 319.9 billion and it was third largest bank in the Czech Republic.

CSOB was privatized in July 1999, with the Czech government selling its 65.69% stake to KBC. Later in the year, it acquired the 16.66% stake in CSOB held by the Slovak state. In total, the KBC group owned 81.50% of CSOB at Sept. 30, 2001; with 75.95% held by KBC and 5.55% held by KBC Verzekeringen N.V. The International Finance Corporation (IFC) did hold a further 4.39% of CSOB's shares, and the European Bank for Reconstruction and Development (EBRD) 7.47%. The remaining 6.64% was widely held. Although KBC is the strategic shareholder of CSOB, it has broadly maintained the composition of the existing board of directors and senior management. KBC is, however, represented in the board of directors by the heads of the organization and information systems, retail, and small and midsize corporate banking divisions. There are also about 12 middle ranking managers, located in strategically important positions supporting line managers within the bank. KBC aims to diversify its customer base and revenue flows via international expansion, primarily in the Central and Eastern European (CEE) EU accession countries of Hungary, Poland, and the Czech Republic. KBC's acquisition of a majority stake in CSOB, as by 2000 the largest bank in the Czech Republic with a market share in customer deposits of more than 23%.

Two remaining large state banks have been privatized later and the macroeconomic situation has been less favorable than in case of first two banks. CS and KB have been stabilized between 1998 and 2000, however

this restructuring has been directly related to privatization of state stakes. State interventions aimed at stabilization, cleaning up the portfolios and capital injections in these state-owned banks.

For state-owned bank which is privatized the net value is important. Privatization brings government costs but also revenues. For the improvement of negotiation position of the seller/investor – the state and for the future performance of the company, it may be efficient to invest into the company while preparing it to privatization to the strategic owner. State can behave as a strategic investor and restructuring of state owned banks has to be considered as part of privatization plan. In Table 14, restructuring costs are related to privatization revenues.

Table 14: Stabilization costs and Privatization revenues, large banks

	Year	Buyer	%	Revenues Bn. CZK	Net Costs
IPB	1998	Nomura	36 %	3	0*
CSOB	1999	KBC Bank	66 %	40	0**
CS	2000	Erste Bank	52 %	19	35
KB	2001	Société Générale	60 %	40	56
Total				102	91

*from annual reports of IPB follows that NPF provided guarantee up to 2 billion CZK in (1993,1995), Czech National Bank provided guarantees of fund loans made by the bank to Housing Cooperatives up to 19 billion CZK (1994, 1995) and Subordinated debt 2 billion CZK (1997).

As by March 1998 financing of Housing Cooperative Construction has been transferred to KoB in relation of privatization of state stake to foreign investor.

As by May 1999, government decided that KoB will buy from IPB 49% of equity hold in CKD Dopravni systemy for 40 million CZK and NPF another 11% of equity for 9 million CZK.

** The restructuring of CSOB's lending in the 1990s aimed to help improve asset quality by replacing a large proportion of nonperforming loan (NPL) exposures, granted before 1990, with loans to state-owned collection companies. The loan granted to the Czech collection agency was performing normally. No provisions have been raised on this loan, as it is backed by a state guarantee (but not an explicit timely guarantee). The Slovak Collection Unit has defaulted on its loan, however, as the Slovak government has provided no funding for the unit. On April 10, 1997, CSOB declared the entire loan balance immediately due and payable, and on April 18, 1997, filed an arbitration request with an international arbitration court. Although legal remedies are still being sought, the Czech government

has recognized the uncertainties relating to CSOB's claim on the SCU, and on April 14, 1998, it signed an agreement with the bank whereby the Ministry of Finance is obliged to pay 90% of the outstanding SCU loan balance as at Dec. 31, 2002, including interest. CSOB will continue to use its best efforts to collect the SCU loan before 2002. The un-guaranteed portion of the SCU loan has been fully provided for by CSOB.(S&PP materials)

In March 1999 government decided about privatization of Česka spořitelna, a.s. to the strategic partner as assumption of strengthening of financial sector of the Czech Republic and thus the whole economy. Government agreed on restructuring of the CS in order to decrease the risk coming from the quality of debts portfolio prior to the sale. CS became more attractive and the negotiation position of state has been strengthened. In the long term the impact on state budget should be positive. Restructuring increased certainty, deceased risk and allowed for increase of price for the stake and increase of competitiveness of the bank.

CS was the largest bank with total consolidated assets of CZK 472 billion as by June 2001. In case of CS, before privatization the Czech government stabilized CS' balance sheet. Asset transfers and guarantee agreement ring-fencing improved the asset quality. In November 1999, CS transferred 33 billion CZK in nonperforming loans to KoB at a discount value of 20 billion CZK. Furthermore existing assets were ring-fenced in the following way:

- Dec. 31, 1999 are covered by a government guarantee
- standard and watch to be reviewed and reclassified into the nonperforming classification by June 30, 2001
- off-balance sheet risks are guaranteed
- selected bond risks, interbank and derivative business and commercial leasing are covered by government guarantees. The government guarantee concludes in 2005. Net value of pre privatization costs is estimated to about 35 billion CZK.

In February 2000, 52,07 % shares of České spořitelny, a.s have been sold to Erste Bank der oesterreichischen Sparkassen AG for nominal purchase price 19 billion CZK. Erste commited to increase equity in CS group by 4

billion CZK within 2 years and providing credit and supportive programs for selected industries in the total value of 6,5 billion CZK. (gov. Decree 2000 No 144)[14] There was no problem with due diligence and debt classification or portfolio evaluation. The bank was relatively transparent and risk possible to estimate.

KB was a second-largest bank in terms of total assets of 390 billion CZK as by 2000.[15] During 1999-2000, the bank received financial support from the Czech government in the forms of bad-debts transfers (contractual price of problem assets lifted off-balance sheet was 49.6 billion CZK), capital injection (6.7 billion CZK as by Dec. 1999 and Jan. 2000) and asset guarantees (Dec. 2000), at max. 20 billion CZK to cover losses on adversely classified assets. At the same time new management has been installed and in 2001 state sold 60% stake to Societe Generale, who is expected to improve capital flexibility, systems and product development, and risk management expertise.

State in the role as owner can play similar role as any other strategic investor interested in long term prosperity of the company. In the process of large bank privatization, government aimed at increasing of attractiveness and thus strengthening of its negotiation position. Cleaning of credit portfolio deceases risk and allowed for higher price for the stake. Government was looking for strategic investor, hence a majority stake should have been sold, what on hand allows again for higher price while seller larger market share and on the other hand it is expected that strategic foreign investor will improve of efficiency and thus increase of competitiveness of the bank. In the long term the impact on state budget should be positive.

In a long term it did prove a positive impact also on the stability of banking sector that during the financial crises 2009. The world financial

14 Restructuring and guarante contract has been closed together with sale

15 Komerční banka, a.s. was as for the value of assets as by 31.12.1998 with the balance sum 426,5 billion CZK, the biggest Czech bank.

crisis did not have a very strong direct effect on the Czech banking sector Banks have not provided foreign currency loans to any large extent (are not dependent on functioning of exchange rate risk hedging markets). Ratio of "toxic" assets is negligible (< 1% of assets), is well capitalized and remains profitable. The Czech financial system is less vulnerable than Elsewhere. The domestic financial sector should be capable of withstanding incoming shocks to a large extent. [16]

16 Czech National Bank. (2009): Czech Republic: Impact of the Current Crisis on the Financial Sector

5 Statistical and econometrical analysis

Assumptions to meaningful statistical and econometric analyses are good data. The statistical and econometrical analysis presented here is based on a set of firm individual data sets systematically build at CERGE-EI during 1989 – 2010. The firm-level data were provided by the Czech Statistical Office (CSO), and if not stated explicitly otherwise, the source for the data in the tables and graphs are CSO data. Enterprise data are from regular surveys of the CSO (forms P5-01 and P3-04 respectively). In the case of the quarterly surveys (P3-04), data have been aggregated in order to get annual observations, which are comparable with the yearly survey (form P5-01). The data set used in the analysis comprises information on Czech firms employing enterprises with 20 or more employees.[17]

For some parts of the analysis, enterprises with 100 or more employees are used. For the analysis of small foreign enterprises, data have been matched with special CSO surveys on small enterprises (see more below). The main variables used in the analysis are output (sales), the number of employees, value-added, investment, profit, and capital as recorded in the balance sheets and financial statements of enterprises. In addition to these for certain years, enterprises recorded also direct exports and imports by each individual firms. All data have been checked for consistency: each year should be positive; depreciation should be positive; investment, should be non-negative and smaller than end-of-the-year capital stock; production should be positive; sales should be non-negative; and wages should be higher than the minimum wage.

17 In the methodology of the Czech Statistical Office, the borderline between „small" and „big" enterprises changed over time. The Czech Statistical Office recorded full information on all enterprises with 25 or more employees up to 1994. In 1995 and 1996, full information on manufacturing enterprises with 100 or more employees was recorded. Starting in 1997, the reporting unit for industrial statistics is a firm with 20 or more employees, both legal and natural persons.

Output or **sales** is reported in the CSO forms as *„revenues from sales of own products and services"* since 1997.[18] The indicator enables us to analyze the total volume of industrial output and its structure and to calculate the growth rate and labor productivity.

Employment data are consistent with the output and are data from the same statistical reports of enterprises. Employment is the sum of workers in the enterprises which have been included into the analysis. The average number of registered employees encompasses all categories of permanent, temporary, and seasonal employees contracted to work in the enterprise, which is then re-computed for full-time.

Capital can be expressed as own assets, fixed assets, equity, the basic or subscribed capital of the company.

Value added is the difference between gross output and intermediate consumption (products, goods and services minus raw materials, supplies, energy and services.

Foreign direct investment (FDI), which is (as a rule) recorded by a balance of payment statistics is here captured through the „enterprises with foreign capital" or „enterprise under foreign control" i.e., based on industrial statistics and same enterprise data as data on output and employment mentioned above.[19]

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18 "Revenues from sales of own products and service" are the difference between the credit and debit sides on accounts in the Account Group 60 (Revenues from own outputs and goods). Before 1997, **Industrial output** had been reported as „*production of goods*" or "*revenues from sales of own products and services*"

19 **Type of ownership** can be identified by each enterprise. Two ways exist on how to identify ownership which are relatively compatible. The CSO distinguishes the following types of ownership: private, cooperative,state, foreign (100% owned by foreigners), international (any 1-99 per cent of foreign ownership), mixed (state and private), others (communal, political organizations, and associations or not-identified). The other identification uses the definition of a firm „under foreign control" which means either the dominant share of asset ownership or the control of enterprises through the majority on a firm's board of directors. For the purpose of this analysis, both enterprise and groups of foreign firms were merged (fully and partially owned) into one group „enterprises with foreign capital", and we use this definition throughout the book.
Subsequently, all enterprises have been broken into the two groups: foreign-owned enterprises (international and firms wholly owned by foreigners or firms under foreign control respectively) and domestically owned enterprises.

Direct export sales: The enterprise statistic serves as one source for the export data (the second is custom statistics). Although exports from enterprise statistics differ from exports from the custom statistics, they are compatible with output data and are being based on a regular survey carried out through the years. Enterprise export statistics are not available for 1995 and 1996 as the methodology of statistical recording changed not only for the size of involved enterprises but also for items being recorded. Exports have not been recorded for those two years.

Direct imports: Enterprise statistics can serve as a source of direct imports by firms. As a rule, these imports are not related to the major activity of the firm but are equipment (machines) or materials, parts and the like needed for the final product of the firm.

Each firm is identified by industry according to the two or three-digit NACE industries. For the purpose of some parts of the analysis on industry level, we aggregated the firm data according to their **major activity.** into 21 two-digit or 101 three-digit manufacturing sectors according NACE respectively. (Manufacturing NACE or OKEC codes range from 15-37 or 151 to 372 respectively). As mentioned above, the 3-digit level of NACE allows us to link data from the industrial statistics with trade statistics. The analysis of the 3-digit NACE aggregated industry data allows us to avoid a problem of unbalanced panel data that often is present when one works with enterprise-level data.

Beside financial indicators each firms is identified not only by industry according to NACE and by ownership but also by legal form, and the way of establishment, i.e. as **"green-field fir or by merger (M&A).** As transition period was characterized by a large number of green field investment and spin-off firms that are entering the market and firms exiting from the market through bankruptcy, this identification can be interesting for our analysis.

Most of the analysis is done for manufacturing industries. In some parts, the analysis is expanded from firms operating in manufacturing industries to other non-financial enterprises. There are caveats related to the industry definition: According to the Czech Statistical Office, a firm belongs to a 3-digit industry if the largest share of its revenue comes from the sale of products classified within that industry. The shortcoming of this methodology is that firms can switch industries over time because the relative shares of different products in total revenue may change due to the market condition, new strategies, and other factors. The enterprise can manufacture products falling into several sectors (groups of products); however, its classification is governed by the nature of the *major part of its output* (for the industrially defined on 2-digit or 3-digit level we also use „sector“).

One should pay attention to the following: The data presented in the paper result from a careful adaptation of the data from the Czech Statistical Office. However, the data are not always fully comparable with officially published as they are results of our own computations but based on the data from the Czech Statistical Office. Thanks to those adaptations and to our own computations, these unique results are shedding more light onto the developments in manufacturing enterprises, their structure, and performance. As well, links with trade and foreign direct investment have been obtained. (Zemplinerová, 2010)

5.1 Small foreign enterprises

Before 1989, foreign investment was negligible in what is now the Czech Republic. Foreign direct investment (FDI) has started to grow since 1990, thanks to large joint-venture privatizations, like Volkswagen-Skoda or Nestle-Cokoladovny. At the same time, numerous small foreign firms have appeared on the scene. There were numerous small investments, often green-

field which were not involved into the official statistics, they nevertheless play an important, dynamic role in the economy.[20]

This chapter aims at the analysis of small businesses with foreign participation in the Czech Republic during the period 1992-1996. Official statistical evidence on both foreign direct investments as well on small businesses during first years of transformation was far from perfect. In order to generate more reliable information, we made two major adaptations of data sets to get additional information on the role of small and foreign enterprises in the economy: we joint two data sets – surveys on small businesses with surveys of large medium and large firms. At the same time we divided all enterprises according to ownership – on foreign and domestic in order to compare their performance. Thanks to this approach, computations based on the official statistics allow to draw some conclusions about comparison of the performance of enterprises by size and ownership.

Small sized enterprise is an indispensable segment of a developed economy as a source of innovation, value added and employment. Small and medium sized enterprises (SMEs) are considered as the driving force of economic growth and restructuring, while responding quickly to the change of internal and external economic conditions.[21] Socially, the SMEs sector

20 The Czech National Bank does not publish data on the number of investment projects. It is only known that one quarter of them were apparently very small. Foreign investment up to USD 18,500 (CZK 0.5 mn) is not covered by the official statistics. Often firms are registered with only the minimum capital requirement of CZK 100,000. Less than one quarter of the projects had a capital of USD 3.7 mn or more.

21 In the 'Recommendations of the Commission' published in the Official Journal of the European Communities (Nr. L 107/6, 1996) , SMEs are defined as enterprises which posses economic independence, have less than 250 employees and turnover less than ECU 40 million or balance sheet total less than ECU 27 million.

Within SMEs, the following main size-classes are distinguished:

- very small enterprises, which employee less than 10 employees; this group also includes enterprises without any employees, which only provide employment for the self employed
- small enterprise, which employee between 10 and 49 employees
- medium sized enterprises, which employee between 50 and 250 employees

This definition however cannot be always taken into account in this study because of lack of statistical information. In the Czech Republic SMEs are still defined by Law on the "State Support Small and Medium Enterprises". This is a Law of the Czech National Council No.299 of April 28, 1992 and defines SME as firms up to 500 employees. European Union requires to record for all independent SMEs number of employees, turnover or equity (own capital).

is closely linked to the middle class, and accordingly, the growth of this sector has implications for long-term political stability. For all these reasons, SMEs are of crucial importance in the transitional economies (Benacek and Zemplinerova 1995).

In the Czech Republic until 1989 small business sector was practically non-existent because the central planning concentrated in developing the large-scale corporate sector only. Since 1989 when the economy embarked upon the road to the market, the conditions of small and medium enterprises (SMEs) development have been more favourable, during first years of the transition (1990-1992) even receiving a special support in comparison to large enterprises: The state provided advantages in taxation for small businesses with less than 25 people. For the physical units there was tax exemption in case of re-investment of the profit (60% in the first year, 40% in the second and 20% in the third year).

Small private newly starting businesses have been supported by better than "average" conditions: for instance salaries regulation in the state sector allowed to attract labour to private enterprises. It was not difficult to obtain credit during the period of the second half of 1990, 1991 and first half of 1992.[22] The banks did not require collateral other than assets on which the credit was provided, did not ask for credit history, business plans required were simple and were not a subject of special analysis and evaluation. Besides that the state did not have any strong and sophisticated net of internal revenue service. Last but not least the bureaucracy was intimidated and endowed by regulative legislation, thus giving the permission without any bigger problems and prolongations.

In the Czech Republic the SME sector grew from scratch through new start-ups, restitution, small scale privatization and the division of big state

22 The relatively liberal credit policy was caused by the fact that the Central bank provided big amounts for re-finance credits and the existing state banks did not consider the risk of providing credits to SMEs.

enterprises into smaller units. The old monopoly structure provided numerous niches and opportunities for SME sector activities. There were underdeveloped industries with great potential for growth in the economy (Zemplinerova 1997). All these together with the large potential of entrepreneurship, led to the boom of small business. Number of private entrepreneurs increased from several thousand in 1989 to more than one million by 1995 as recorded by the Business register of Czech Statistical Office.

As illustrated by Table 15, importance of small businesses strongly varies according to the sectors of the economy. As might be expected, the majority of private entrepreneurs and thus SMEs work in trade, services, tourism, construction and other labour intensive industries. Small units start to play an important role also in education and health care. The significance of SME's varies significantly with the sector as shown by table 4. SMEs are engaged prevalently in trade, the services, tourism, construction and other labor intensive industries. Small enterprises began to play an important role in education and health care as well. More than half of employment provides small businesses in real estate and related businesses and other personal services. High number of small businesses in real estate and related activities is apparently caused by the restitution of houses, hotels, pensions, shops, which received the original owners or their heirs and which are often being rented. Share of small businesses on employment in manufacturing has been estimated to 19% as by 1995.

Table 15: Small enterprises according to the sectors, 1995*

	Share of small enterprises on the total sector employment
agriculture and forests	25 %
mining	3.5 %
manufacturing	18.6 %
electricity and gas distribution	4.6 %
construction	43.1 %
trade	60.6 %
transport and communications	26.5 %
finance and insurance	27.4 %
services	50.6 %
public administration	21.2 %
education	54.6 %
health care	22.1 %
others	35.9 %
TOTAL	33.1 %

*) small enterprise is defined as a firm with 100 and less employees, in this computations also enterprises with 24 and less employees are involved.

Source: Data of Czech Statistical Office 1995, Sample surveys carried out by Czech Statistical Office for small enterprises (1-24 employees) on the yearly basis have been re-computed via official coefficients for the total population and merged the data sets for small enterprises with the data on large enterprises in order to reveal what is the role of small enterprises in general and small foreign enterprise in particular, own computations

As it is illustrated by the following Table 16, foreign enterprises employed the mere 4.7 % of the total labour force as by 1994. This share however was growing with the time. Foreign enterprises paid much higher salaries in comparison to state and private domestic enterprises and the difference in the average salary according to the ownership is growing.

Table 16: Employment and average salary by ownership, 1994

	Share on employment	Average monthly salary in crowns
State enterprises	48.7	6921
Private domestic enterprises	26.8	6798
Foreign enterprises	4.7	8693
Others*	19.8	6292

* Czech statistical office distinguishes 8 types of ownership: state, cooperative, domestic private, municipal, social, foreign, international and mixed, which means mixture of first five types. For the purpose of our analysis foreign and international enterprises are aggregated. „Others" involve cooperatives, municipal, social and mixed enterprises.

Source: Czech Statistical Office, only enterprises with 24 and more employees

As by 1996 there were about 17 thousand very small enterprises (up to 24 employees) of which 2.2 thousand foreign firms registered by CSO.[23] Further there were 2181 domestic enterprises and 420 foreign enterprises with 25-99 employees, for which full information (for total population) is available. For the total manufacturing if small enterprises (with 1-99 employees) are included, the relative indicators for the total manufacturing would not change as there is proportional representation of small domestic

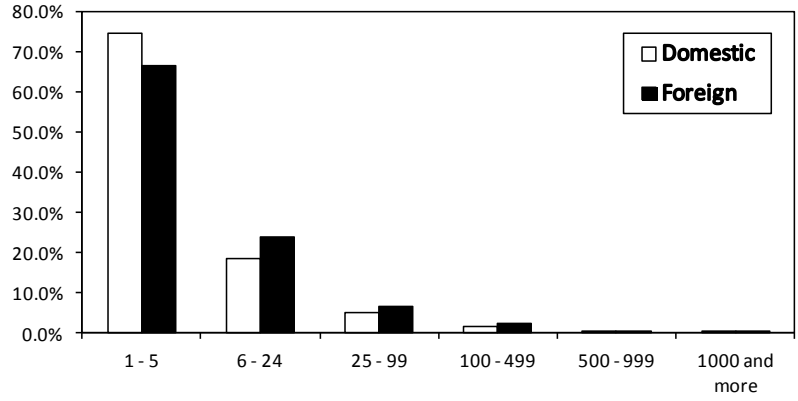
23 For the purpose of the analyses enterprises have been arranged according to their ownership into two groups: foreign investment enterprises, i.e. enterprises with any foreign participation and domestic enterprises. According to the methodology regulation of the Czech Statistical Office No. 8 from April 1993 eight types of ownership are being distinguished, of which foreign and international were in the first group – "foreign enterprises" and the rest created "domestic enterprises"…

-Foreign ownership: unit established by foreign physical or legal unit, non-resident of CR, owning 100% of assets (total equity)..(note of the author -they might be considered for green field rather than incumbent privatized via foreign investment)

- International ownership/foreign investment enterprises : joint ventures established jointly by domestic unit and foreign unit, i.e. units with domestic and foreign capital (enterprises with any foreign contribution except for total equity).
- private ownership of private domestic physical or legal unit
- cooperatives
- state ownership: units of public administration, enterprises founded by the ministries or other central administrative body, or other institutions paid from state sources, joint stock companies in case when state is the only shareholder
- municipal ownership
- non-governmental organizations: ownership of parties, associations and church
- mixed ownership of more than one domestic founders with mixed ownership (mixture of first five mentioned above). The mixed ownership is a combination of the private and state ownership.

enterprises. However as will be shown below there exists large differences according to the industries.

Figure 5: Size distribution of enterprises



Source: Business Register, Czech Statistical Office, Enterprises with no record on number of employees is excluded from the analysis.

As Figure 5 shows, most foreign enterprises are very small. There were only 9 foreign companies that have more than 2000 employees and only three companies which have more than 5000 employees. Involvement of small enterprises into the analysis shows that the foreign investment into the Czech manufacturing industries is not targeted especially on big corporations or enterprises with a market power. Very often medium or even small firms are established as green field enterprises or taken over. The restructuring in SMEs is easier to accomplish.

Computations based on the official statistics have been made in order to draw some conclusions about comparison of the performance of enterprises by size and ownership. The analysis works with the statistical data on manufacturing enterprises. The following computations do not involve either small enterprises with 24 and less employees nor micro-enterprise.

More than half of enterprises operating in the manufacturing are enterprises with less than 100 employees and almost 90% have less than 500 employees. There were 1.16 million employees working in the manufacturing industries in the Czech Republic. The total output of manufacturing was 737.15 million crowns in 1994. In what follows, manufacturing small enterprises are compared with large ones and within the group of small enterprises small foreign enterprises are compared with the indigenous ones.

Small sized enterprise is an indispensable segment of a developed economy as a source of innovation, value added and employment. Small and medium sized enterprises (SMEs) are considered as the driving force of economic growth and restructuring, while responding quickly to the change of internal and external economic conditions. Socially, the SMEs sector is closely linked to the middle class, and accordingly, the growth of this sector has implications for long-term political stability. For all these reasons, SMEs are of crucial importance in the transitional economies (Benacek-Zemplinerova, 1995).

The SME sector grew through new start-ups, restitution, small scale privatization and the division of big state enterprises into smaller units. The old monopoly structure provided numerous niches and opportunities for SME sector activities. There were underdeveloped industries with great potential for growth in the economy.

Two factors have been critical for the development of the SMEs sector during first years of transformation: privatization of existing enterprises including restitution and new entry of domestic and foreign entrepreneurs. Privatization of smaller units, such as retail shops and repair facilities, generally occurred with a minimum of economic disruption and political opposition; In the Czech Republic, a substantial fraction of the small units in the economy have been privatized or leased to the private sector. Deconcentration and demonopolisation, a part of the process of privatizing

large enterprises, facilitated SMEs development by providing smaller units, as well as seeking to diminish the economic and political powers of large enterprise.

The previous parts of analysis covered enterprises with 100 and more employees what represented 75 % of total employment 84 % of sales and 89 % of investment of all (i.e. including enterprises with 99 and less employees) foreign investment enterprises. Manufacturing enterprises with less than 100 employees are reporting differently to CSO. There are special surveys covering 100 % of enterprises with 25-99 employees carried out quarterly. There are sample surveys available for very small enterprises (1-24 employees) on the yearly basis which however have been re-computed via official coefficients for the total population. In this part we analyze the role of small enterprises in manufacturing; hence we merged the data sets for small enterprises with the data on large enterprises in order to reveal what is the role of small foreign investment enterprise.

As by 1996 there were 17 thousand very small enterprises (up to 24 employees) of which 2.2 thousand foreign. Further there were 2181 domestic enterprises and 420 foreign enterprises with 25-99 employees, for which full information (for total population) is available. For the total manufacturing if small enterprises (with 1-99 employees) are included, the relative indicators for the total manufacturing would not change as there are proportional representations of small domestic enterprises. However as we will show bellow there would be revealed large differences according to the industries.

Involvement of small enterprises into the analysis shows that the foreign investment into the Czech manufacturing industries is not targeted especially on big corporations or enterprises with a market power. Very often medium or even small firms are taken over. The restructuring in such firms is much easier to accomplish.

Usually it is assumed than SMEs play an important role only in trade and services sectors. It is rather surprising that small and medium foreign investments play importune role in some manufacturing industries. As for the total sales of foreign investment enterprises within industries, 72% are produced by small enterprises in wearing apparel and dressing, 56% in wooden products, 47 % in office machinery and 45% in leather products. Measured by employment, small foreign investment enterprises play an important role the same set of industries and in addition in fabricated metals and furniture, which are labor intensive industries. This would indicate that in these industries cheaper labor still plays a role in the foreign investment allocations.

There exist a set of industries in which involvement of small enterprises into the analysis change the market share of foreign investment enterprises significantly. In most manufacturing industries the market share of foreign investment enterprises decreases after involvement of small enterprises, however not very significantly. This is caused by higher representation of small domestic enterprises in the industry. Sharpest decline of foreign penetration can be observed in printing and publishing, other non-metallic minerals, radio, TV sets and furniture. There exists only one industry, wearing apparel in which the share of foreign investment enterprises on total sales of industry increased from 5 to 12% after inclusion of small business into the total sales. In case of other manufacturing industries remains about the same (see Table 17).

Table 17: Foreign enterprises by size and share in output and employment according to industries, 1996 (in %)

	Output		Employment	
Industry	**Share of small enterprises (1-99) over ALL**	**Share of small FIEs (1-99) over total FIEs**	**Share of small enterprises (1-99) over ALL**	**Share of small FIEs (1-99) over total FIEs**
FOODPRODUCTS AND TOBACCO	23	9	28	14
TEXTILES	14	33	14	32
WEARING APPAREL, DRESSING	33	72	34	70
TANNING, SHOES, LEATHER	17	46	17	56
WOOD	52	57	57	56
PAPER AND PAPER PRODUCTS	10	13	12	11
PUBLISHING, PRINTING	52	36	56	46
COKE AND PETROLEUM	0	0	0	0
CHEMICALS	8	9	11	18
RUBBER AND PLASTIC	35	33	30	24
OTHER NON-METALLIC MINERALS	19	10	20	14
BASIC METALS	3	15	4	22
FABRICATED METALS	36	30	41	46
MACHINERY AND EQUIPMENT	22	31	17	30
OFFICE MACHINERY	51	46	25	18
ELECTRICAL MACHINERY AND APP.	20	9	24	14
RADIO, TV SETS	45	30	28	18
MEDICAL, PRECISION, OPTICAL INSTR.	41	31	31	27
MOTOR VEHICLES, TRAILERS	2	1	3	1
OTHER TRANSPORT EQUIPMENT	8	30	6	25
OTHER MANUFACT. (FURNITURE ETC.)	32	19	32	44
RECYCLING	40	10	35	26
Total manufacturing FIEs		16		25
TOTAL manufacturing FIEs and DEs (ALL)	20		23	

Source: Balance sheets of individual enterprises, data from Czech Statistical Office 1993-1996, all manufacturing enterprises including with less than 100 employees, own computations

Foreign and domestic enterprises by size and selected indicators are in table 37 and 38 in the Appendix. In 1994 there were 375 manufacturing enterprise out of 4308, which were controlled or co-owned by foreign investor. About 65% of all foreign enterprises have less than 100 employees. As by 1994, foreign enterprise employed 7.4% of the total labour force in manufacturing, produce more than 12% of the total output of manufacturing, exported 16.5% of the total exported manufacturing products and invested three times more than the rest of enterprises (about one quarter of total new investment in manufacturing comes to foreign enterprises). Thus they were potential growing segment of the economy.

Small foreign enterprises are almost as good exporters as are the large ones, their employee receive lower pay than in large foreign enterprises.

Foreign enterprises are less profitable than domestic ones. Nevertheless, it is only large foreign enterprises who are loss makers. Large foreign enterprises do not record profits most probably because they succeed to manipulate accounting and shift profit into reserve fund, from which they can invest this profit without paying taxes. Small foreign enterprises are more profitable not only than the large foreign enterprises but also more than small domestic enterprises.

One tenth of total number of small enterprises in manufacturing (enterprises with 25-100 employees) is fully or partially owned by foreigner. Small foreign enterprises are more profitable not only than the large foreign enterprises but also more than small domestic enterprises in manufacturing. Small foreign firms export 40% of the sales (in comparison to 15% in the case of small domestic enterprises) and invest almost twice as much as small domestic enterprises. Thus small foreign businesses are potential growing segment of the economy, which succeeds to penetrate to foreign markets.

Development 1993-2010

The following part of the analysis is devoted to developments during the period 1993-1996 and includes 1715 enterprises of which 89 FIE in 1993, 2032 enterprises of which 133 FIE in 1994, 2288 enterprises of which 216 FIE in 1995 and 2263 manufacturing enterprises of which 284 have been fully or partially owned by foreigners in 1996 (all enterprises with 100 and more employees). From the numbers of enterprise we can see that while the total number of manufacturing enterprises has decreased between years 1995 - 1996, number of foreign investment enterprise continued to grow.

During the analyzed period, between 1993-1996, total manufacturing employment (in both domestic as well foreign investment enterprises) declined by 10%, Deepest decline of employment experienced coke and petroleum (65%), leather products (34%), machinery and equipment (23%) and wooden products (22%). On the other hand employment increased in rubber and plastics, chemicals, printing and publishing and electrical machinery (10-16%).

Between years 1993-96 output (sales) grew by 34% (current prices). Fast growth has been recorded in radio; TV sets (100%), office machinery (87%), medical, precision and optical instruments (86%) and chemicals (84%). Deepest decline in real terms experienced tanning and dressing from leather (nominal decline 22%), wooden products (nominal growth 7%) coke and petroleum (nominal growth 16%), wearing apparel (nominal growth 16%), machinery and equipment (nominal growth 16%) and textiles (nominal growth 19%). Declining industries are mainly labor based industries.

The above numbers show that the structure of manufacturing changed profoundly between years 1993-1996. As for the total manufacturing, the decline of employment and rise of output indicate growth of productivity. However salaries grew even in higher pace than the productivity.

Position of foreign investment enterprises strengthened in total manufacturing between years 1993-2010 measured by all indicators. Share in assets doubled reaching almost one fifth by 1996. The share in total sales increased to 23% and in employment 13%. Share of foreign investment enterprises on the investment outlays was one third and on total gross profit 92%. Position of foreign investment enterprises is improving in investment and profits more significantly, what can be caused by the pure performance of domestic enterprises

Salary increased in average in foreign investment enterprises by 56% and in domestic enterprises by 59%. Most of all industries in case of foreign investment enterprises increased the average salary in publishing and printing, in furniture and other manufacturing, in textiles, in medical precision and optical equipment. In case of domestic enterprises average salary increased most in paper products, radio & TV sets and printing and publishing.

Foreign companies are growing more dynamically. While except for chemicals all domestic companies decreased the average *own capital per company* between 1994 and 1996, foreign companies have been growing fast in wooden products, radio, TV sets, wearing apparel chemicals paper and paper products and food products and tobacco. *Value added per employ* increased most in other transport equipment, publishing and printing and furniture and machinery in case of foreign investment enterprises. In case of domestic firms, value added per employee increased most in office machinery, radio, TV sets and paper products.

Table 18: Share of foreign enterprises on selected indicators, manufacturing 1993-2010

	1993	1999	2002	2005	2007	2010
Number of firms	7	21	32	38	48	53
Sales	10	41	62	70	77	79
Employees	6	26	42	52	60	64
Wages	7	31	48	58	66	68
Export (direct)	15	60	76	80*	82	n.a.
Import (direct)	n.a.	64	83	96*	89	n.a.
Value added	9	42	59	66	74	73
Investments	26	51	67	71	79	74
Profits	n.a.	1,8	69	77	84	79

Source: Balance sheets of individual enterprises, data from Czech Statistical Office 1993-2010, enterprises with 100 and more employees, own computations

*Data for 2004

As illustrated by the Table 18, position of foreign investment enterprises strengthened in total manufacturing between years 1993-2010 measured by all indicators. Share in total sales grew 8x reaching almost 80% by 2010. The share in total employment increased to 64% and in wages 68 %. Share of foreign investment enterprises on the investment outlays was three quarters and on total value added 73%. Position of foreign investment enterprises is improving more significantly, what can be caused by the pure performance of domestic enterprises.

By the end of 1995, there were 32,946 foreign firms partially or fully owned by foreigners registered in the Register of Organizations by CSO, by the mid of 1996 their number rose to 37,493. These numbers illustrate dynamics of the number of foreign firms. Number of foreign firms in the economy has risen in faster pace as did the total number of firms in the economy. This statistics however can serve only for illustration and the numbers are not very reliable as was confirmed by EUROSTAT PECO PANEL. Out of 1.32 registered firms by the end if 1995 almost half of

million firms (475 thousand - prevalently very small firms) registered but did not operate. Nevertheless the dynamics of foreign firms as for their increasing number cannot be doubted and was also described by previous studies (Drabek, 1992).[24] Foreign investors demonstrate continued interest in investing in the Czech Republic or at least a"wait and see" strategy.

Percentage of foreign investment enterprises varies considerably with the sector showing a markedly different pattern of investment from the domestic businesses. If measured by number of firms much more intensive foreign investment in activities related to the real estate, mining, wholesale trade and services (see also Zemplinerova 1996a). In absolute numbers, there were more than 22.7 thousand foreign investment enterprises in wholesale and retail trade in 1995 rising to 30.1 thousand in March 1998. More than 6.5 thousand in manufacturing and construction in 1995 rose during the same period of time to 9.7 thousand. Total 3.7 thousand foreign investment enterprises providing business services and 1.4 thousand firms registered in the field of real estate and consulting increased to 4.6 thousand and 2.1 thousand respectively.

Register of firms provides very little information about individual firms. More information that allows evaluating the structure and role of foreign investment enterprises is available for medium sized and large enterprises in "non-financial sector". Table 19 is related to the non-financial sector and involves enterprises "under the foreign control". The analysis of the structure of FIEs across the sectors shows that foreign investment enterprises are concentrated in manufacturing, trade and real estate related activities. Foreign investment enterprises have different structure than domestic enterprises. Foreign investment was and is directed to the underdeveloped sectors such as trade and to manufacturing. Apart from agriculture, domestic investors are more represented in construction and transport and communication which,

24 Following reasons for not - operation have been identified: about 23% of the entrepreneurs/firms registered but never started the business, 20% interrupted and 57% closed down the firm during last five years. As there is now legal obligation to cancel registration once the firm stops to operate, the BR does not depict realistically the existing number of firms.

the last being the sector closed for foreign investors for long time. Thus foreign investment contributes to the change of the structure in the whole economy.

Table 19: Sales in 1996 (percentages)

Sector	Share	Distribution		Growth 95-96	
	FIEs	ALL	Foreign	ALL	FIEs
AGRICULTURE AND FORESTRY	0.00	3.89	0.00	-10.6	-
MINING AND QUARRYING	1.98	2.66	0.38	4.2	77.10
MANUFACTURING	22.61	43.79	70.70	8.5	46.38
ELECTRICITY AND WATER	2.34	9.64	1.61	-5.0	1,137.14
CONSTRUCTION	2.98	10.68	2.28	18.3	79.47
WHOLESALE AND RETAIL TRADE	14.21	16.17	16.42	1.8	23.36
HOTELS AND RESTAURANTS	25.52	0.57	1.03	9.7	9.81
TRANSPORT AND COMMUNICATION	3.40	6.79	1.65	24.9	25.94
REAL ESTATE AND RENTING	14.66	4.39	4.60	21.3	51.61
OTHERS	13.07	1.42	1.33	19.5	16.48
TOTAL	14.00	100.00	100.00	7.4	43.58

Sources: Czech Statistical Office Data, Ekonomické výsledky nefinancních podniku a korporací za rok 1995 a 1996 (Economic results of non-financial enterprises and corporations), own computations, enterprises with 100 and more employees,

* Share of FIEs within sector (all enterprises in sector=100%)

As documented by the Table 19 as by 1996 foreign investors have been active in public utilities and electricity distribution companies. In electricity and water distribution, the share of foreign investment enterprises increased dramatically during last two years and will continue to grow in the future. However the major stakes still have to be privatized. By the mid of 1998 state has hold stakes 46-48% in 16 energy distribution firms which have to be privatized (market value being estimated to about 1 bn. USD).

The Table 20 illustrates allocation pattern of domestic and foreign investment enterprises as by 1996. Out of the total number of employees in enterprises under the foreign control almost three-quarters work in

manufacturing compared to not even a half in case of domestic enterprises. Similar results or even more significant results are obtained if sales, assets or own capital measures allocation pattern. Out of the total output of foreign investment enterprises 79% is produced in manufacturing and the share of manufacturing on total foreign own capital in the economy is almost 85%.

Table 20: Employment of enterprises under domestic control (DE) and enterprises under the foreign control (FIEs) by sectors 1996 (in %)

Sector	Employment in DEs across sectors	Employment of FIEs across the sectors
AGRICULTURE AND FORESTRY	8	0
MINING AND QUARRYING	4	1
MANUFACTURING	46	73
ELECTRICITY AND WATER	4	3
CONSTRUCTION	11	2
WHOLESALE AND RETAIL TRADE	6	9
HOTELS AND RESTAURANTS	1	3
TRANSPORT AND COMMUNICATION	13	1
REAL ESTATE AND RENTING	5	7
OTHERS	2	1
TOTAL	100%	100%

Source: Czech Statistical Office Data, 1995 and 1996 "Economic results of non-financial enterprises and corporations", own computations, enterprises with 25 and more employees, except for manufacturing where enterprises with 100 and more employees are involved

First columns of Table 20 gives an account for foreign penetration within sectors of national economy measured by share of foreign investment enterprises on sales within each sector. In 1996 the foreign penetration in non-financial sector was still relatively low with 14% share on total sales of non-financial sector. The respective share on employment was 8% in the non-financial sector. The position of enterprises under the foreign control is however getting stronger - the share of enterprises under the foreign control

on total employment of non-financial sector was the mere 5% in 1995. The foreign penetration varies with the sector significantly. The most penetrated sectors are hotels and restaurants with a quarter of sales related to the FC operation, manufacturing FC produce 23% of sales, and more than 14% sales of trade as well as real estate and renting services can be attributed to the enterprises under the foreign control. In the following chapter we will carry out the detailed analysis for manufacturing as a whole and its industries with special attention to foreign investment enterprises.

As we have shown above, foreign investors allocated the largest amounts of investment into the manufacturing. As by 1996, manufacturing produced about a quarter of the GDP in the Czech Republic. Czech manufacturing as a whole is relatively highly concentrated into few industries. Measured by sales of all enterprises manufacturing is concentrated in food products & tobacco (17%), basic metals (12%), and chemicals, machinery and motor vehicles, which each has 9%. Foreign investment enterprise manufacturing sector is even more concentrated than manufacturing in total. Three manufacturing industries produce 58% of the total output of foreign investment enterprises in manufacturing (motor vehicles 28%, food products 19% and non-metallic products 11%) and employ 42% of employees of foreign manufacturing enterprises. This situation will be most probably reproduced in the future as we can see from the structure of the investment. Out of the total investment done by foreign manufacturing enterprises in 1996, 35% have been in motor vehicle, 17% in non-metallic minerals and 16% in food products. However this is mainly due to the investment activity of foreign investment enterprises.

Table 21: Comparison Domestic (DEs) and Foreign Enterprises (FIEs): investment, assets and sales patterns across manufacturing industries, 1996

Sector	Investment oulayes		Assets		Sales	
	DEs	FIEs	Des	FIEs	DEs	FIEs
FOODPRODUCTS AND TOBACCO	14.93	16.13	11.35	15.86	16.76	18.82
TEXTILES	5.02	1.69	6.16	1.82	4.82	1.68
WEARING APPAREL, DRESSING	0.81	0.08	1.09	0.12	1.00	0.20
TANNING AND DRESSING OF LEATHER	0.62	0.03	1.10	0.07	1.58	0.22
WOOD	1.21	0.33	1.84	0.52	1.68	0.74
PAPER AND PAPER PRODUCTS	7.30	1.51	3.84	1.44	3.31	2.30
PUBLISHING, PRINTING	2.27	1.48	1.84	2.16	1.60	2.24
COKE AND PETROLEUM	2.00	0.00	1.51	0.00	6.31	0.00
CHEMICALS	13.97	5.38	11.55	9.17	9.95	4.34
RUBBER AND PLASTIC	2.05	4.88	1.94	5.59	2.21	5.90
OTHER NON-METALIC MINERALS	6.86	17.02	5.11	20.04	3.82	10.97
BASIC METALS	15.92	0.97	16.20	1.38	14.80	1.62
FABRICATED METALS	4.46	3.32	5.00	6.15	5.47	6.75
MACHINERY AND EQUIPMENT	8.26	2.24	14.02	3.88	11.16	3.35
OFFICE MACHINERY	0.06	0.03	0.13	0.01	0.12	0.04
ELECTRICAL MACHINERY AND APP.	3.11	5.63	3.21	4.89	3.90	6.29
RADIO, TV SETS	0.42	1.52	1.02	1.16	0.76	1.46
MEDICAL,PRECISION,OPTICAL INSTR.	0.80	1.64	1.04	1.22	0.96	0.91
MOTOR VEHICLES, TRAILERS	4.36	35.10	4.48	22.28	4.02	27.84
OTHER TRANSPORT EQUIPMENT	3.02	0.06	4.54	0.54	2.67	0.18
OTHER MANUFACT. (FURNITURE ETC.)	2.34	0.83	2.67	1.21	2.64	3.25
RECYCLING	0.20	0.14	0.37	0.49	0.46	0.92
TOTAL MANUFACTURING	100.00	100.00	100.00	100.00	100.00	100.00

Source: Enterprise data from the Czech Statistical Office 1996, own computations, enterprises with 100 and more employees

The conclusion, that foreign investment enterprises have different allocation pattern than domestic enterprises can be confirmed by more detailed desegregation of manufacturing industries as confirmed by computations of the selected indicators by industries Table 21. The allocation pattern of foreign firms is significantly different from the domestic enterprises. While in case of domestic firms 16% of the total assets is allocated in basic metals,

14% in machinery, 12% in chemicals and 11% in food products, foreign investment enterprises are concentrated in motor vehicles, food products and ”other non-metallic minerals”. The only industry, which has similar share in case of both domestic as well as foreign investment enterprises, is food products measured by sales in case of all enterprises, the largest weight has food processing including tobacco. Foreign investment enterprises are lead by motor vehicles, followed by food products and non-metallic minerals.

Position

As by 1996, foreign investment enterprises' position in the Czech manufacturing was still relatively weak. With about 20% share on total assets and sales, foreign penetration is still fairly behind the Hungary in which the respective shares exceed 60% (Hunya, 1996). There exist however big differences in foreign penetration according to the industries. On one hand there exist manufacturing industries in which the position of foreign investment enterprises is already relatively strong as is the case of motor vehicles or non-metallic minerals where foreign companies own about a half of assets. On the other hand there are still industries in which foreign penetration via ownership of assets is zero such as petroleum and coke or negligible like in leather products, office machinery, basic metals or wearing apparel and dressing (we will see later that in wearing apparel the position is strengthened in small foreign investment enterprises are involved into the analysis). Low penetration can be found also in textile and machinery, which beyond to the traditional manufacturing industries in the Czech Republic. Restructuring in these industries is apparently difficult and these are not growing industries in the world context.

Table 22: Position of foreign investment enterprises by manufacturing industries, selected indicators, in % of total 2digit industry 1996

Sector	Sales	Labor force	Fixed capital	Investment	Value added	Own capital
FOODPRODUCTS AND TOBACCO	25	17	24	35	31	30
TEXTILES	9	9	7	15	9	5
WEARING APPAREL, DRESSING	5	6	3	5	5	4
TANNING,DRESSING OF LEATHER	4	3	1	3	4	1
WOOD	11	9	6	12	14	6
PAPER AND PAPER PRODUCTS	17	11	7	9	19	10
PUBLISHING, PRINTING	29	19	23	25	25	22
COKE AND PETROLEUM	-	-	0	-	-	-
CHEMICALS	11	9	17	16	20	15
RUBBER AND PLASTIC	44	31	39	54	44	42
OTHER NON-METALLIC MINERALS	46	23	51	56	44	54
BASIC METALS	3	2	2	3	3	2
FABRICATED METALS	26	12	20	27	17	19
MACHINERY AND EQUIPMENT	8	6	6	12	8	6
OFFICE MACHINERY	9	20	2	23	17	2
ELECTRICAL MACHINERY AND APP.	32	24	28	48	26	27
RADIO, TV SETS	36	20	17	65	39	21
MEDICAL,PRECIS.,OPTICAL INSTR.	22	18	23	51	18	12
MOTOR VEHICLES, TRAILERS	67	40	56	80	56	64
OTHER TRANSPORT EQUIPMENT	2	2	3	1	2	0
OTHER MANUFACT, (FURNITURE)	27	9	1	15	12	5
RECYCLING	37	25	22	25	38	29
TOTAL MANUFACTURING	23	13	20	34	22	21
Total non-financial sector	14	8	n.a.	14	13	8

Source: Enterprise data from the Czech Statistical Office, own computations, enterprises with 100 and more employees

There exist basic reason for low penetration by foreigners in machinery and basic metals industry: the enterprises are in bad shape and need a profound restructuring such as basic metal industry or machinery (these two industries represent one third of total domestic assets). There are exemptions and also very good enterprises have been closed for foreigner owners and hold as "family silver" for some time. In some cases the government preferred to sell assets to domestic managers for higher price than to sell it cheap to foreign multinational firm as was the case of SKODA Pilsen, which Siemens had interest to buy. Domestic enterprises are in general more dispersed across industries and less specialization exist than in case of foreign investment enterprise. Domestic enterprises have still stronger position in chemicals and monopoly position in coke and petroleum.

If we look at the position of foreign investment enterprises within the industries, we can conclude, that in some industries foreign investment enterprises have relatively strong position. The structure of foreign investment in manufacturing is apparently influenced by large privatization deals. First large deal was investment of Volkswagen into the Skoda car factory in 1991. In motor vehicles foreign companies produced 68% of sales as by 1996. Car industry is followed by "other non-metallic minerals, where foreign companies produce 46% of sales. There are Glaverbel-Asahi Glass, Italcementi and other large investment in this industry. The respective share in rubber and plastics is 44%, where Intercontinental invested., electrical machine with 32% share of foreign companies on sales is most probably thanks Siemens investment. The situation will be reproduced in the future as documented by the share of foreign investment enterprises in investment by industries.

About one third of the sales are performed by foreign investment enterprises in recycling, radio and TV (Matsushita) and electrical machinery and printing and publishing (Rignier). One quarter of sales by foreign investment enterprises is recorded by food products and tobacco, what is

not surprising thanks to the large FDI (Nestle and Philip Morris). Lowest penetration is recorded in other transport equipment, basic metals, tanning and dressing of leather, wearing apparel, machinery and equipment and office machinery and PC (Matsushita is not yet involved into the computations). Similar pattern is obtained if penetration is measured by employment in foreign investment enterprises.

If small enterprises are neglected, it can be concluded that there is a significant trend to orientate the FDIs into capital intensive production and FDIs do not find labor intensive industries attractive enough for changing the strategy. The hypothesis that cheap local labor offers a comparative advantage for FDI development thus cannot be confirmed (compare Benacek, Zemplinerova, 1997). However the involvement of small enterprises into the analysis shows that same labor intensive industries are still attracted by foreign capital.

Performance

Table 23 summarizes the comparison between domestic and foreign investment enterprises. In all indicators and on average foreign firms outperforms domestic enterprises. Foreign investment enterprises have on average twice as high productivity and by third higher export per sales ratio. Foreign investment enterprises invest five times more per employee than domestic enterprises and are more profitable. They are also better endowed per capital and pay higher salary on average.

Foreign investment enterprises if measured by sales are twice as big in average as domestic enterprises. Average size of domestic manufacturing enterprises if measured by number of employees was slightly 427 employee per enterprises and 450 in case of foreign investment enterprises as by 1996.

Table 23: Comparison of performance of foreign and domestic enterprises in manufacturing, 1996

Indicator	Foreign/Domestic Enterprise
Relative productivity	194%
Exports per sales*	132%
Investment outlays per employee	544%
Profitability	4192%
Average salary	121%
Endowment by capital	152%

Source: Balance sheets of individual enterprises, data from Czech Statistical Office 1996, enterprises with 100 and more employees, own computations

* 1994

Productivity comparison

Performance of foreign investment enterprises is being evaluated on the basis of comparison with domestic enterprise. In average foreign investment enterprises are reaching almost twice as high productivity as domestic enterprises. Results are summarized in the Table 24. Except for wearing apparel, office machinery and other transport equipment, foreign investment enterprises record in average higher productivity than domestic enterprises. This is especially truth in the case of following industries: furniture, fabricated metals and non-metallic minerals (cement, building materials).

Table 24: Performance comparison, selected indicators, manufacturing, and 1996

Industry	Relative productivity*	Relative value added	Relative endowment of labor	Relative export per sales**
	FIEs/DEs	FIEs/Des	FIEs/DE	index FIEs/ DEs
FOODPRODUCTS AND TOBACCO	143	178	149	183
TEXTILES	105	107	78	203
WEARING APPAREL, DRESSING	93	89	50	112
TANNING AND DRESSING OF LEATHER	127	143	48	108
WOOD	132	163	65	272
PAPER AND PAPER PRODUCTS	151	167	63	139
PUBLISHING, PRINTING	152	129	124	106
COKE AND PETROLEUM	x	X	x	X
CHEMICALS	131	228	210	189
RUBBER AND PLASTIC	141	143	195	230
OTHER NON-METALLIC MINERALS	198	189	344	240
BASIC METALS	191	208	117	194
FABRICATED METALS	224	147	181	132
MACHINERY AND EQUIPMENT	129	124	95	130
OFFICE MACHINERY	47	86	9	x
ELECTRICAL MACHINERY AND APP.	132	109	122	226
RADIO, TV SETS	178	191	83	151
MEDICAL,PRECISION,OPTICAL INSTR.	120	100	136	246
MOTOR VEHICLES, TRAILERS	168	140	195	240
OTHER TRANSPORT EQUIPMENT	82	70	146	150
OTHER MANUFACT, (FURNITURE ETC.)	300	139	111	273
RECYCLING	145	151	84	x
TOTAL MANUFACTURING	194	165	152	132

Source: Enterprise data from the Czech Statistical Office, own computations, enterprises with 100 and more employees

*Relative productivity = output / number of employees

**1994

Although foreign investors tend to flow to firms of initial above average productivity, profitability and better endowed firms, foreign investment

enterprises seem to improve the productivity after the acquisition by massive investment into the technology, training the employees and improvement of production organization.

Foreign investment enterprises pay as a rule higher salaries and thus are able to attract more skilled labor, which in turn contribute to the higher productivity. (See Table 25).

Table 25: Comparison of average salary and endowment of labor by fixed capital in manufacturing, 1996

Industry	Average salary in CZK[a]	Relative salary in %[b]	Endowment per employee.[c]	Relative endowment in %[d]
	ALL	FIEs	ALL	FIEs
FOODPRODUCTS AND TOBACCO	9,518	128	1017	137
TEXTILES	6,928	111	644	80
WEARING APPAREL, DRESSING	6,649	102	256	51
TANNING&DRESSING OF LEATHER	7,000	116	268	48
WOOD	8,014	134	737	67
PAPER AND PAPER PRODUCTS	9,309	101	1526	66
PUBLISHING, PRINTING	12,195	124	1239	119
COKE AND PETROLEUM	11,525		1879	
CHEMICALS	10,969	117	2244	192
RUBBER AND PLASTIC	9,605	117	761	127
OTHER NON-METALLIC MINERALS	9,712	127	1274	220
BASIC METALS	10,821	103	1139	117
FABRICATED METALS	9,506	119	538	165
MACHINERY AND EQUIPMENT	9,218	112	628	95
OFFICE MACHINERY	7,248	97	323	11
ELECTRICAL MACHINERY&APP.	9,414	103	514	116
RADIO, TV SETS	8,627	123	479	86
MEDICAL,PREC.,OPTICAL INSTR.	8,784	101	466	128
MOTOR VEHICLES, TRAILERS	10,799	122	1285	141
OTHER TRANSPORT EQUIPMENT	9,428	86	874	144
OTHER MANUF. (FURNITURE ETC.)	7,977	118	405	109
RECYCLING	9,935	121	992	87
TOTAL MANUFACTURING	9,338	121	881	152

Source: Balance sheets of individual enterprises, data from Czech Statistical Office 1993-1996, enterprises with 100 and more employees, own computations

a- average salary of employee by all enterprises (domestic and foreign) in CZK

b- average salary in foreign enterprises in relation to average salary of all enterprises, domestic and foreign=100%

c- average endowment of employee by fixed capital the all enterprises (domestic and foreign) in thous. CZK

d-average endowment of employee by fixed capital , enterprises (domestic and foreign) = 100%

There are factors which probably contribute in major share to the higher productivity and which cannot be captured by our statistical analysis such as managerial skills, which allow for effective investment decisions. However the investment activity is the most important indicator and it shows clearly that foreign investment enterprises are restructuring more intensively than domestic enterprises. It is truth that foreign investment enterprises have as a rule better access to the credit and are able to finance investment from internal resources. Domestic enterprises as a rule have privatization credits, which do not allow them to undertake strategic investment into the technology.

Set of industries, which recorded significantly higher high investment per assets are as follows: office machinery, radio&TV sets, medical, precision and optical instruments followed by motor vehicle and textile. This might indicate future growth of these industries. Foreign investment enterprises invest a significant share of the total investment in manufacturing, what is significant in case of some selected industries. This can indicate future growth of the industry growth occurs thanks to this past investment. Thus 80% of total investment in car industry comes from foreign investment enterprises, 65% in radio and TV sets, more than half in non-metallic minerals and rubber and plastics as well as in medical, precision and optical instruments manufacturing and almost half in electrical machinery. This will be most probably in the future growing industries.

Another source for productivity growth is new technology or existing level of the endowment of the labor by capital. As for physical capital endowments, two industries sets have been generated: first with higher average endowment in the case of foreign investment enterprises: nonmetallic minerals, chemicals fabricated metals, food products and tobacco, motor vehicles rubber and plastics. This are rather industries, in which scale economies play a role and past investment enabled to invest into the technology and fixed capital (as a rule in these industries are foreign investors active in a medium term already). In textile, leather, shoes, machinery (most of "traditional" industries) domestic firms have higher labor endowment of capital.

Beside technology, source for higher productivity can be labor and its skills. With two exceptions, office machinery and "other transport equipment", all foreign investment enterprises pay in average higher salaries. They are apparently able to attract more skilled labor, what coincidence with higher productivity of labor. Wooden products, food products and tobacco as well as motor vehicle are industries which record the highest difference in average salaries between all and foreign investment enterprises.

In our previous research the higher profitability of foreign investment enterprises has not been proved (Zemplinerova-Benacek, 1997). The reason might be the fact that enterprises did not record profits due to the past investment. In 1996 foreign investment enterprises produced 92% of the total profit before tax in manufacturing.

As show Table 26 in the Statistical appendix, except for "other transport equipment", furniture and recycling, foreign investment enterprises record higher profitability in average than the domestic firms. Highest profitability recorded fabricated metals, radio&TV sets, chemicals and paper products and food products and tobacco. Our research confirmed that foreign firms tend to invest into the industries with higher profitability. Same set of industries, in

which profits are concentrated are at the same time industries that attracted most of the foreign capital.

Table 26: Comparison, Profit per sales, manufacturing, 1996

	ALL	FIEs	DEs
FOODPRODUCTS AND TOBACCO	4.66	9.35	3.12
TEXTILES	-1.95	-3.68	-1.77
WEARING APPAREL, DRESSING	-0.18	2.21	-0.32
TANNING AND DRESSING OF LEATHER	-4.66	7.42	-5.15
WOOD	-2.29	4.28	-3.14
PAPER AND PAPER PRODUCTS	0.92	10.99	-1.13
PUBLISHING, PRINTING	-1.39	-1.96	-1.15
COKE AND PETROLEUM	2.06	x	2.06
CHEMICALS	4.89	11.16	4.09
RUBBER AND PLASTIC	4.22	7.22	1.88
OTHER NON-METALLIC MINERALS	5.03	5.17	4.92
BASIC METALS	-2.66	5.38	-2.92
FABRICATED METALS	4.64	12.59	1.78
MACHINERY AND EQUIPMENT	-2.96	-3.86	-2.88
OFFICE MACHINERY	-0.99	4.92	-1.59
ELECTRICAL MACHINERY AND APP.	3.43	6.93	1.78
RADIO, TV SETS	2.57	12.39	-2.93
MEDICAL,PRECISION,OPTICAL INSTR.	0.79	4.56	-0.25
MOTOR VEHICLES, TRAILERS	-0.25	0.45	-1.67
OTHER TRANSPORT EQUIPMENT	-17.71	-56.72	-16.96
OTHER MANUFACT, (FURNITURE ETC.)	8.38	4.48	9.78
RECYCLING	-3.81	-4.56	-3.37
TOTAL MANUFACTURING	1.23	5.03	0.12

Source: Enterprise data from the Czech Statistical Office, own computations, enterprises with 100 and more employees

Export/Import activity

In 1996 imports of goods and services amounted to 55% of GDP in the Czech Republic. This is relatively high in comparison with Member States of the EU. There are just a few countries in the EU which record a higher share (Luxembourg, Belgium and Ireland). These figures implicate an openness of the Czech economy in 1994-1996 period. During 1994-1996 period the import share has increased from 52.9 till 55. This development is caused by a further internationalization of enterprises.

In exports, the Czech Republic shows a different development for the 1994-1996 period. Exports of goods and services as a percentage of GDP have decreased remarkably from 52.5 in 1994 to 48.1 in 1996. In combination with the increasing import share this leads to the conclusion that Czech enterprises are faced with heavy competition from abroad both on domestic and foreign markets and that it appears difficult to maintain their competitive position. Unfortunately we cannot say in what extend foreign investment enterprises are contributing to the existing situation.

International exposure of manufacturing industries is being examined during the same period of time. For this purpose the custom statistics classification has been matched to the NACE classification. In such a way it was possible reveal comparative advantages although on the relatively rough level. The import penetration calculated as total import for the manufacturing industry divided by sales of enterprises plus imports and export performance calculated as total exports of the manufacturing industry divided by output plus exports.

In 1996 imports represented 40% for the manufacturing as a total. More than one-half of the domestic supply in clothing, chemicals, rubber and plastics business machines and PCs (mostly PCs), electrical machines, communication equipment, and optical and medical instruments. A relatively low level of import penetration (less than one third of domestic supply) existed

in 1996 in foodstuffs, wood products, printing & publishing, oil and coal processing, non-metal products, metal products and other transport vehicles. Import penetration has been increasing with exception of the foodstuffs in all manufacturing industries during last two years.

In 1996 the total export performance has been 58% as compared to 46% in 1995. Export performance has been found to be high in textile, clothing, wooden products, chemicals, rubber and plastics, non-metal products, metal construction and machinery, business machines and PC, communication equipment, cars and trailers and furniture and other industries. Except for foodstuffs and chemicals export performance increased in all industries.

In manufacturing the total trade deficit was 96.5 bn. CZK in 1996 as compared to 62.3 bn. CZK in 1995 using the same methodology, however the trade balance differ significantly according to industries as illustrated by Table 27. We could not trade any significant relation between the degree of foreign penetration and trade balance by manufacturing industries on this level of disaggregation.

Evaluation of FDI performance is often related to the performance of foreign investment enterprises as for exports and imports. It is expected that foreign investment enterprises can contribute to the foreign trade balance surplus while exporting more than importing. This would be the case of the industries oriented on the world markets and not the local markets.

Table 27: Breakdown of export sales, 1996

Industry	TOTAL	FIEs	DEs
FOODPRODUCTS AND TOBACCO	5.18	6.82	4.87
TEXTILES	6.74	2.83	7.48
WEARING APPAREL, DRESSING	1.75	0.35	2.02
TANNING AND DRESSING OF LEATHER	2.14	0.21	2.50
WOOD	2.32	1.44	2.49
PAPER AND PAPER PRODUCTS	3.09	1.78	3.34
PUBLISHING, PRINTING	0.39	0.37	0.39
COKE AND PETROLEUM	4.56	-	5.43
CHEMICALS	8.95	3.69	9.95
RUBBER AND PLASTIC	2.86	9.80	1.55
OTHER NON-METALIC MINERALS	6.90	11.46	6.04
BASIC METALS	15.64	2.81	18.08
FABRICATED METALS	5.58	3.02	6.07
MACHINERY AND EQUIPMENT	11.82	3.20	13.45
OFFICE MACHINERY	0.26	-	0.31
ELECTRICAL MACHINERY AND APP.	3.21	5.14	2.85
RADIO, TV SETS	1.11	0.22	1.28
MEDICAL,PRECISION,OPTICAL INSTR.	0.60	0.69	0.58
MOTOR VEHICLES, TRAILERS	9.54	44.37	2.94
OTHER TRANSPORT EQUIPMENT	2.56	0.39	2.97
OTHER MANUFACT, (FURNITURE ETC.)	3.79	1.40	4.24
RECYCLING	0.97	-	1.16
TOTAL MANUFACTURING	100.00	100.00	100.00

Source: Enterprise data from the Czech Statistical Office, own computations, enterprises with 100 and more employees

From our previous research and computations related to the 1994 year, it can be concluded that export orientation of foreign investment enterprises is relatively high in comparison to domestic enterprises, most manufacturing industries, the shares of foreign investment enterprises on export are

significant. This is the case of cars and trailers, rubber and plastics, foodstuffs and tobacco (tobacco being most probably the most important exporter), further important exporters among the foreign investment enterprises can be found in electrical machines and optical and medical instruments. Especially high export orientation was registered for wooden products, metals, vehicles and other than cars and clothes. The high export orientation of these firms is complemented also with their high material contents of production. Three quarters of foreign investment enterprises' sales in clothing, wooden products and furniture, more than half of sales in leather and shoes, chemicals, metals, optical and medical, cars and trailers, other transport and furniture go to export (Table 27)

Enterprises with foreign participation assist the economic restructuring and speed-up the process of transformation of the whole industries: Foreign investors improve the productivity after the acquisition by investment into the technology. (Damian et. al., 2003). In the long-term with the entry of foreign investors, the potential of economies to scale is increasing and so does the concentration in these industries. That development has an impact on the specialization and the division of labor, and shift from inter-industry to intra-industry patterns. (Zemplinerová, Benacek, (1999) This trend has been confirmed by our analysis – sectors that are export-intensive are import-intensive at the same time. The growth of exports is accompanied by growth in imports.

5.2 FDI and competition

In the 90s Czech economy experienced rapid and deep changes in market structures. Most of manufacturing markets de-concentrated between 1989-1993. Relatively extensive restructuring on the industry level occurred. This restructuring was however not related to any massive investment activity, it was mainly splitting of the large organizationally merged companies into

several economically independent units and shift in the production programs within the existing technology. During last years the tendency towards new concentration can be observed in selected markets as number of mergers increases. (Zemplinerova, 1998)

For the following part which investigates relation between market concentration, foreign trade and foreign direct investment we used in addition to the enterprise data also custom statististic data. For the purpose of the analysis we aggregated individual firm data according to their major activity [25] 101 manufacturing sectors according to 3 digit NACE Two-digit level is more operable, however it is to aggregated as for the "relevant market" and for market concentration computations. Therefore we decided to carry out this part of analysis on 3digit level of „The Branch Classification of Economic Activities" – OKEC (a variant application of NACE), which allows for matching the trade data with industrial statistics.

We computed share of FDI on sales (FDI/S), share of green field (GF) investment on sales (GF/S), share of exports on sales (X/S), share of imports on sales (M/S), market shares of largest producers on the total output of the market without (CR1) and with adjustment for imports (CR1(M), share of mergers on the sales (M&A/S) on 3-digit NACE classification as indicator of the competition on the markets. The results are in the Table 39 and 40 in the Appendix.

From our computations follows that share of largest producers on the total output and market concentration depends on the character of the product. Market concentration is high in the industries in which economies of scale play an important role. The national levels of concentration in domestic supply are often very high if import competition is not considered. For most markets concentration ratio – share of the largest producer on the total supply

25 The enterprise can manufacture products falling into several sectors (groups of products), however its classification is governed by the nature of major part of its output (for industrial defined on 3digit level we use also „sector").

of the market (CR1(M)), imports corrects the levels sufficiently. In a small economy as the Czech one this is especially the case and in many markets competition can be maintained only via imports. [26]

It follows from the relation share of largest producer and share of foreign enterprises on the sales, that foreign direct investment tend to flow into more concentrated industries such as tobacco, car industry or man-fibres. However beside large foreign enterprises there are numerous small and medium sized foreign firms, often green field investment in industries with relatively competitive structure.

As follows last column, in which export performance of the industry is computed (X/S), the concentrated industries with high degree of foreign ownership are as a rule industries with high export performance.

Foreign investors tend to flow not only to industries with monopoly structure No strong correlation between FDI market share and market concentration has been found. Markets or industries, which are composed of one or a few firms instead of many small firms, are as a rule mainly *national* markets. In the *world* markets there are few if any markets where dominance by a single firm exists.

Market structure and market concentration depends on the character of the product and on imports in the market. Monopolistic and oligopolistic structures exist in many markets, especially in small economies. Acquisitions can increase the market power of existing monopolist or oligopolists as it in fact does not enlarge the market capacity contrary to green field foreign investor. There exist only a few markets such as cement, with FDI liberalisation, which is based on the natural sources and where new entry is not possible and import competition is expensive due to the high transport cost. In such industries however antimonopoly policies should be strengthened, as there is higher probability of abusement of monopoly position and collusion.

26 See more Zemplinerová (2010)

From the analysis follows that in some markets foreign trade matters a lot, but foreign trade does not affect some markets. Many goods have markets with national or local boundaries. Depending on the character of product, foreign investors is either aiming in acquiring local market share or in increasing of their share on the world markets. In the first case, exports are minimal. In the latter case, foreign investor exports majority of the output. In the first case it has to compete with domestic producers, in the later with other multinationals on the world markets. In the first case foreign involvement in the market often arrives into the monopoly creation, what can have the host country the above negative consequences. In the second cased it is more probable that foreign investors will expand production, increase capacities and invest into the new technologies, improve the quality and marketing.

5.3 Greenfield investment versus mergers

The data set used in the analysis comprises information on Czech manufacturing firms employing more than 100 employees in the 1993-1998 period. The firm-level data were provided by the Czech Statistical Office (CSO), which in quarterly intervals collects information from the balance sheets and income statements of the enterprises. The information covers the entire manufacturing sector. Beside financial indicators each firms is identified by industry according to three-digit NACE industries, ownership, legal form, and the way of establishment. Ownership categories include domestic private, state, co-operative, mixed, foreign and international ownership. Firms wholly-owned by foreigners are defined as 'foreign', while firms in which foreign capital owns any positive share lower than 100% are classified as 'international'. In the analysis, a firm is called 'foreign' if it is of a foreign or international type of ownership. All the other firms are called 'domestic' firms.

The quarterly data have been aggregated in order to get annual observations on employment, wages, value-added, output, total sales, exports, investment, fixed assets, depreciation, and equity. Consistencies checks have been performed. [27]

After these adjustments a sample comprising 10,396 annual observations for the years 1993-1998 has been established. In terms of the total number of firms with at least one observation, the data set covers 2,483 manufacturing enterprises.

Table 28: The number of Greenfield ventures and acquisitions in the data set, their shares on the total number of firms and output

Year	Number of all firms	Number of GF	Number of M&A	Share on output (GF)	Share on output (M&A)
1993	1,248	20	70	1.1 %	13.3 %
1994	1,694	39	94	1.9 %	11.6 %
1995	1,763	54	98	2.9 %	12.8 %
1996	1,918	84	172	4.4 %	19.6 %
1997	1,971	130	195	6.7 %	22.5 %
1998	1,802	134	188	7.8 %	24.2 %

Source: CSO, own computations, enterprises with 100 and more employees

The code specifying the way of establishment was further used in a combination with ownership categories to determine the mode of FDI. There are essentially four ways in which a multinational firm can invest directly in a foreign market: Invest directly by a Greenfield venture or invest directly by acquiring a local firm, by merging with a local firm or form a joint venture with a local firm.

27 The firm's capital at the end of each year should be positive;Depreciation should be positive; Investment should be non-negative and smaller than end of the year capital stock; Production should be positive; Sales should be non-negative; Average wage should be higher than 2,000 CZK/month (minimum wage).

In the Czech Republic, there was considerable scope for Greenfield ventures and acquisitions of state-owned enterprises as the Czech government liberalized and privatized. Joint ventures, however, were much less feasible and there were no mergers at all, which might be explained by the large gaps between local and foreign firms in size, technology and management.

Out of the group of all foreign firms (367) for which we have at least one observation, there were 141 firms identified as greenfield ventures (newly created enterprises with 100% foreign ownership). The remaining 226 foreign enterprises were created through acquisitions or as joint ventures with local firms. Table 28 gives the evolution of the number of greenfield ventures and acquisitions over time and their share on output. As may be seen, acquisitions have achieved higher absolute shares on the number of firms and output, while the share of greenfield ventures has exhibited the more dynamic pattern in both respects. Acquisitions almost doubled their shares between 1993 and 1998, when their proportion on the total number of firms increased from 5.6 % to 10.4 % and their share on output from 13.3 % to 24.2 %. Greenfield ventures have exhibited more dynamic development. The share on the total number of firms increased almost five times from 1.6 % to 7.4 % and the share on output more than seven times from 1.1 % to 7.8 % between years 1993 and 1998.

The sample thus very well reflects processes in the Czech economy. Acquisitions via privatization were the most common source of FDI in the early stage of the reform, but their number stabilized after the end of the privatization process in 1995. The number of greenfield ventures has risen steadily and in the later stage of the reform they have started to play an important role as a source of FDI. Data also indicate that greenfield ventures are of lower than average size (their share on the total number of firms is almost equal to their share on total output), while acquisitions are larger firms on average (their share on output by far exceeds that on the total number of firms).

Table 29: The number of observations on greenfield ventures and acquisitions in each two-digit NACE manufacturing industry in the period 1993-1998, their shares on the total number of firms (in brackets) and output

Industry (NACE)	NACE	Sample size	GF	M&A	Output share (GF)	Output share (M&A)
Food products	15+16	1,672	33 (2.0 %)	103 (6.2 %)	5.0 %	15.9 %
Textiles	17	671	25 (3.7 %)	46 (6.9 %)	3.0 %	5.6 %
Apparel	18	353	19 (5.4 %)	32 (9.1 %)	1.8 %	5.9 %
Leather	19	297	12 (4.0 %)	10 (3.4 %)	2.3 %	1.4 %
Wood products	20	298	7 (2.3 %)	34 (11.4 %)	0.8 %	10.6 %
Paper products	21	209	12 (5.7 %)	25 (12.0 %)	9.4 %	12.0 %
Printing	22	296	22 (7.4 %)	31 (10.5 %)	10.9 %	15.9 %
Chemicals	24	340	10 (2.9 %)	39 (11.5 %)	0.7 %	7.7 %
Plastics	25	353	23 (6.5 %)	28 (7.9 %)	3.5 %	30.3 %
Non-metallic minerals	26	719	15 (2.1 %)	103 (14.3 %)	1.1 %	30.0 %
Basic metals	27	394	6 (1.5 %)	19 (4.8 %)	1.1 %	2.5 %
Metal products	28	1,040	34 (3.3 %)	79 (7.6 %)	2.4 %	16.9 %
Machinery	29	1,475	46 (3.1 %)	70 (4.7 %)	3.0 %	5.2 %
Office machines	30	21	4 (19.0 %)	0 (0.0 %)	11.4 %	0.0 %
Electronics	31+32	740	98 (13.2 %)	96 (13.0 %)	16.3 %	15.3 %
Scientific instruments	33	260	23 (8.8 %)	17 (6.5 %)	5.0 %	10.2 %
Transport equipment	34+35	547	36 (6.6 %)	48 (8.8 %)	4.4 %	54.9 %
Other manufacturers	36+37	711	36 (5.1 %)	37 (5.2 %)	16.0 %	5.3 %
All sectors		10,396	461 (4.4 %)	817 (7.8 %)	4.4 %	17.7 %

Source: CSO, own computations, enterprises with 100 and more employees

Table 29 gives the distribution of all observations available for the period 1993-1998 across industries. The distribution is quite broad, with 16 % of observations in the food industry, 14 % in the machinery industry, 10 % in the metal product industry, 7 % in the electronic and the processing of non-metallic minerals industries, 6 % in the textile industry, and 5 % in the manufacturing of transport equipment industry. Each of the remaining industry groups has less than 5 % of all observations. Greenfield ventures,

representing 4.4 % of all observations, play an important role in the electronic industry (16.3 % share on the industry output), in the printing industry (10.9 % share), and in the paper product industry (9.4 % share). Acquisitions dominate the manufacturing of transport equipment industry with 54.9 % share on the industry output thanks to the contribution of Škoda-Volkswagen, a major car producer. Furthermore, they keep important shares in the plastic industry (30.3 %), the processing of non-metallic minerals industry (30.0 %), and in the metal product industry (16.9 %).

Higher productivity can be caused simply by the fact that foreign firms tend to flow to firms and industries with initial above average productivity. It is the dynamic analysis, which can give an answer to the question whether foreign firms can be identified as an important micro-foundation of the growth.

To examine potential differences in performance between domestic and foreign firms, indicators measuring labor productivity, outward orientation and investment activity for both groups of firms in each NACE two-digit sector have been computed. Labor productivity is derived from total value added dived by the number of workers, outward orientation is measured as the share of exports on total sales and investment activity as the share of investment expenditures on total sales.

Table 30 reports all performance measures using the ratio of means for foreign and domestic firms in each sector using all observations for the period 1993-1998. In column 1, the value of 1.6 for food products shows that value added per worker for foreign firms was on average 1.6 as high as for domestic firms. The difference in performance is statistically significant at the 5 percent level. Across sectors, the means generally suggest that foreign firms on average invested higher amounts of investment expenditures with respect to their sales, exported a higher share of their sales, and exhibited higher labor productivity. The last column indicates that foreign firms tend to be more than twice larger in terms of total sales than domestic firms.

Another interesting question that arises is whether the impact of foreign ownership on performance of firms differs with the mode of foreign investment. To analyze this issue, performance measures for greenfield ventures and acquisitions across sectors have been compared. The results summarized in Table 31 indicate that acquisitions, which tend to be substantially larger than greenfield ventures, achieve higher levels of labor productivity, but they dominate greenfield ventures only slightly as the relative measure of labor productivity is equal to 1.1. However, greenfield ventures appear to be more active in other two respects as they export and invest significantly higher share of total sales.

Table 30: Comparison of labor productivity, outward orientation, investment activity, and firm size between foreign and domestic enterprises in manufacturing in the period 1993-1998

Industry	Output per worker [a]	Export as percent of sales [a]	Investment as percent of sales [a]	Average sales per firm [a]
Food products	1.6*	2.6*	1.7*	3.0*
Textiles	1.5*	1.8*	3.0*	0.8
Apparel	1.1	1.8*	1.4	0.5
Leather	1.3*	2.5*	0.7	0.5
Wood products	1.7*	2.2*	1.4	0.8
Paper products	1.8*	1.3	2.5*	1.3
Printing	1.3*	0.4	0.9	1.8*
Chemicals	2.6*	2.1*	2.2*	0.5
Plastics	1.9*	1.7*	1.5	3.3*
Non-metallic minerals	2.5*	1.2	2.2*	2.4*
Basic metals	1.7*	2.0*	1.5	0.6
Metal products	1.7*	2.4*	2.7*	1.9*
Machinery	1.4*	1.7*	1.9*	1.0
Office machines	0.8	1.6	6.7*	0.4
Electronics	1.7*	2.0*	1.8*	1.4*
Scientific instruments	1.2*	3.6*	5.5*	1.0
Transport equipment	1.9*	1.7*	2.2*	9.3*
Other manufacturers	1.5*	1.8*	1.2	2.8*
All sectors	1.8*	1.9*	2.2*	2.1*

Source: CSO, own computations, enterprises with 100 and more employees

Table 31: Comparison of labor productivity, outward orientation, investment activity, and firm size between acquisitions and greenfield ventures in manufacturing in the period 1993-1998

Industry	Output per worker [a]	Export as percent of sales [a]	Investment as percent of sales [a]	Average sales per firm [a]
Food products	1.0	0.9	0.8	1.0
Textiles	0.7 *	1.0	0.5	1.0
Apparel	1.0	0.8	1.8	1.8
Leather	0.5	0.7 *	0.4	0.7
Wood products	1.7	0.6 *	1.5	2.6
Paper products	1.2	1.0	1.0	0.7
Printing	1.1	0.5	1.7	1.0
Chemicals	1.2	0.7	0.4 *	3.2 *
Plastics	1.0	0.8	0.5	7.8 *
Non-metallic minerals	1.6	0.7	0.4 *	3.9 *
Basic metals	0.7	0.7	1.1	0.8
Metal products	0.9	0.8	0.6	2.6
Machinery	0.7 *	0.5 *	0.4 *	1.1
Electronics	1.0	0.8	0.9	0.9
Scientific instruments	1.3	0.7 *	0.2 *	2.7 *
Transport equipment	0.8	0.6 *	1.2	8.2 *
Other manufacturers	0.7 *	0.7	0.6	0.3 *
All sectors	1.1 *	0.7 *	0.7 *	2.3 *

Source: CSO, own computations, enterprises with 100 and more employees

a) Ratio of enterprise performance for acquisitions to greenfield ventures. A '*' indicates difference in means is statistically significant at the 5 percent level.

In summary, tables 30 and 31 suggest that there are differences in behaviour and performance between domestic and foreign firms. Foreign firms perform higher levels of labour productivity, export orientation and investment activity. They also achieve larger size, which might partially

explain their superior performance in labour productivity. This confirms our previous findings.

It is interesting to observe that the mode of FDI does not seem to affect performance as much: acquisitions do not perform much differently from greenfield ventures in terms of labour productivity, although on average they are twice larger in terms of total sales. Greenfield ventures dominate in export orientation and investment activity, which suggests that foreign investors prefer the greenfield mode to the acquisition mode if they intend to export their production rather than to sell it on the local Czech market.

5.4 FDI spillovers

As the previous section suggests, foreign presence is associated with higher levels of labor productivity, which is, however, only a partial measure of overall multi-factor productivity. Therefore, it is a natural step to examine the impact of foreign presence on the total factor productivity (TFP), which takes into account the combined productivity of the firm when all inputs are included. One problem with TFP is that the impact of foreign presence on the level of productivity across sectors cannot be measured directly, since the productivity levels are only comparable across firms within the same sector. However, the impact of foreign presence on the rate of TFP growth can be analyzed. If foreign investors transfer knowledge and/or new technology to their subsidiaries in the Czech Republic, one would expect to see evidence in the form of faster growth rates of these firms, but also higher growth rates for domestic firms in sectors with a large foreign presence.

A study by Djankov and Hoekman (1998) represents one of few attempts to analyze the impact of FDI on the total factor productivity growth in transition. Their statistical analysis, based on a database comprising observations on 513 Czech manufacturing firms in the period 1992-1996, revealed that foreign investment does not have a statistically significant positive impact on recipient firm's performance. In addition, there were

strong and statistically significant negative spillover effects on other firms in the industry associated with foreign investment in a sector. These findings contradict expectations about FDI and suggest that FDI did not become a source of technology and knowledge transfers to partner firms.

To examine whether foreign presence affects the rate of productivity growth, the dynamic analysis has been carried out and the methodology developed by Haddad and Harrison (1993) has been applied and assumed a production function, with value-added Y a function of two inputs, labor and capital:

$$Y_{ijt} = A_{ijt} f(L_{ijt}, K_{ijt}) \tag{1}$$

The level of productivity is given by A_{ijt}, which is assumed to vary across firms within each sector j and across time t. Total differentiation, logs, and use the fact that the value of the marginal product for each factor equals its cost, will arrive to the following equation:

$$\Delta \log Y_{ijt} = \Delta A_{ijt} / A_{ijt} + a_l \Delta \log L_{ijt} + a_k \Delta \log K_{ijt} \tag{2}$$

where $\Delta A/A$ is productivity growth, the coefficients on the growth of labor and capital are their shares in value added.

The rate of productivity growth is determined by various factors and its decomposition facilitates to test the impact of foreign presence. The hypothesis is that productivity growth is affected by the share of foreign investment both at the firm and at the sector level. To account for the firm level effect, dummy variables *GREEN* and *ACQ*, have been introduced which represent greenfield ventures and acquisitions, respectively, as explanatory variables of productivity growth. Using this specification it can be examined whether productivity growth rates of foreign and domestic firms differ, and if so, whether the impact of foreign presence depends on the mode of FDI.

At the sector level the test for existence of the spillover effect of FDI have been carried out. Theoretical arguments suggest that a scope of FDI spillovers is directly related to a gap in the level of knowledge and technology between foreign subsidiaries and local firms. Since the level of knowledge and technology embodied in a firm is determined by the firm's cumulative R&D activities, a difference between the weighted averages of foreign and domestic R&D capital stocks in each sector seems to be an appropriate measure of FDI spillovers.[28] Due to unavailability of such data on both foreign and domestic firms, a variable *SPILL* has been introduced as an alternative measure of FDI spillovers. *SPILL* measures the share of fixed assets of foreign firms (i.e. fixed assets of greenfield ventures and acquisitions) on total fixed assets in each sector.[29] If the spillover effect of FDI exists, i.e. if knowledge or new technology embodied in foreign firms is transmitted to domestic firms, one would expect to see higher productivity growth rates for domestic firms in sectors with a large foreign presence.

Besides technology transfer, FDI may raise productivity of domestic firms by providing a significant increase in the market competition. In order to withstand the competitive pressure, domestic incumbents might improve their allocative and technical efficiency, and thus become more productive. To account for the competition effect of FDI on the productivity growth, sector concentration ratio *CR* measuring the share of the largest firm on total sales in each sector was included. A higher value of the index indicates a more concentrated sector and, therefore, one would expect a negative impact of the variable *CR* on the rate of productivity growth. To control for the other sector and time-specific effects, sector dummies *C* and time dummies *D* as explanatory variables of TFP growth have been introduced.

28 The scope of FDI spillovers depends on the other technological factors like promotion or suppression of spillovers by investors, or the ability of potential recipient local firms to absorb and effectively deploy spillable knowledge, and it also has the intellectual property rights constraint. However, data on these factors are either not available, or even non-existent, as it is a very complex issue to quantify some of these factors.

29 Using such a measure of FDI spillovers, it is assumed that the higher is the gap between the R&D capital stocks of foreign and domestic firms, the larger is foreign presence in a sector measured as the share of foreign firms on the sector total fixed assets.

Thus, given the assumptions, productivity can be decomposed into the following components:

$$\Delta A_{ijt} / A_{ijt} = aGREEN_{ijt} + bACQ_{ijt} + cSPILL_{jt} + dCR_{jt} + eC_j + fD_t. \quad (3)$$

Combining (2) and (3) yields:

$$\Delta \log Y_{ijt} = aGREEN_{ijt} + bACQ_{ijt} + cSPILL_{jt} + dCR_{jt} + eC_j + fD_t + a_l \Delta \log L_{ijt} + \\ + a_k \Delta \log K_{ijt}. \quad (4)$$

The presented value of fixed assets is very likely to be not precise due to re-evaluation of fixed assets at the beginning of the transformation process and is more an accounting value, which does not reflect the real value of capital. Especially, fixed assets coming from the pre-transformation period are overvalued and application of such a measure of capital leads to a very low and statistically insignificant coefficient of capital in the production function. Therefore, depreciation of fixed assets as a measure of capital has been applied, which better represents the capital utilisation in the analyzed period.

Estimation results for equation (3) provided by ordinary least squares (OLS) are presented in the first three columns of table 32. The estimates show that the coefficients on *GREEN* and *ACQ* are positive and statistically significant (*GREEN* is statistically significant at 10% level, *ACQ* at 1% significance level) – indicating that firms with both types of foreign investment achieved higher growth rates of productivity. The coefficient on *GREEN* is slightly larger than that on *ACQ* indicating that greenfield enterprises perform higher productivity growth than acquisitions during the analyzed period, but the growth rates do not differ significantly from the statistical point of view. As regards the spillover effect, the coefficient on *SPILL* is positive, but statistically insignificant, which is not enough to confirm the hypothesis that

foreign presence positively affects productivity growth for domestic firms.

To implement the assumption that productivity growth varies across time and sectors, we include time and industry dummies (columns 2 and 3). The results are not significantly affected by the inclusion of time or industry effects. A certain increase in the coefficients on *GREEN* and *ACQ* can be observed, but greenfield enterprises still perform slightly higher productivity growths than acquisitions. The coefficient on *SPILL* remains insignificant, but becomes markedly higher in magnitude when time dummies are included. However, when sector dummies are added into the regression, a drop in magnitude is observed and the coefficient becomes negative, indicating the negative spillover effect. Since the coefficient remains highly insignificant, we are not allowed to make such a conclusion.

Table 32: Testing for the impact of foreign investment on productivity growth (dependent variable: Change in log Y, all firms included).a)

	OLS			Random-Effects		
	(1)	(2)	(3)	(4)	(5)	(6)
d(log *L*)	0.982	0.973	0.976	0.98	0.97	0.973
	(20.983)	(20.867)	(20.926)	(34.733)	(34.206)	(34.294)
d(log *K*)	0.105	0.103	0.102	0.104	0.102	0.101
	(6.226)	(6.12)	(6.1)	(9.143)	(9.006)	(8.892)
GREEN	0.062	0.068	0.065	0.066	0.073	0.068
	(1.72)	(1.875)	(1.78)	(2.106)	(2.309)	(2.176)
ACQ	0.058	0.062	0.06	0.051	0.057	0.055
	(2.705)	(2.9)	(2.774)	(2.209)	(2.431)	(2.383)
SPILL	0.005	0.034	-0.002	-0.004	0.033	-0.003
	(0.166)	(1.033)	(-0.053)	(-0.113)	(0.898)	(-0.058)
CR	-0.007	-0.017	-0.023	-0.01	-0.022	-0.027
	(-0.176)	(-0.395)	(-0.500)	(-0.233)	(-0.498)	(-0.562)
Time Dummies	No	Yes	Yes	No	Yes	Yes
Industry Dummies	No	No	Yes	No	No	Yes
R-square	0.19	0.20	0.21	0.19	0.20	0.20
N	7861	7861	7861	7861	7861	7861

a) t-statistics in parentheses.

b) SPILL = share of foreign fixed assets in each three-digit sector.

c) CR = concentration ration, share of the largest producer for each three-digit sector.

The results in Table 32 indicate that the concentration index has a negative effect on the productivity growth, which would support the hypothesis that competitive pressure in less concentrated industries forces firms to become more productive, but the coefficient is highly insignificant, which is insufficient ground for confirming the hypothesis.

To account for the possible individual fixed effects across firms, the fixed-effects and random-effects models are estimated as well. On the basis of the Hausman specification test, the hypothesis that the coefficients estimated by the fixed-effects estimator and the random-effects estimator statistically differ cannot be rejected. This result implies that the use of fixed-effects estimation is inferior to random-effects because of its lower efficiency. Therefore, the random-effects coefficient estimates (the columns 4, 5, and 6 represent the results) is reported. As one can see, there is no substantial change in the coefficients' estimates. The coefficients *GREEN* and *ACQ* remain positive and significant (at the 5% significance level), but *GREEN* becomes larger in magnitude, while a certain decline in the coefficient *ACQ* is observed. As a result, the gap between the productivity growth rates of greenfield ventures and acquisitions is larger. The spillover effect is still highly insignificant on the basis of the conventional criteria, with a sign varying as we incorporate time and sector dummies into the regression equation.

Mode of entry has difference consequences for market structure. Green field foreign investment increase number of competitors in the market and higher competitive pressure caused by a new foreign enterprise in the market may force domestic firms to operate more efficiently and introduce new technologies earlier than what would otherwise have been the case. In addition green field investments are mainly small and medium sized enterprises.

Our analysis confirmed that greenfield ventures do not perform much differently from acquisitions in terms of labour productivity, although on average they are twice larger in terms of total sales. This is surprising as it would be expected that larger enterprises would have higher productivity thanks to the economies of scale. Greenfield ventures dominate in export orientation and investment activity, which suggests that foreign investors prefer the greenfield mode to the acquisition mode if they intend to export their production rather than to sell it on the local Czech market.

Foreign acquisitions occur in highly concentrated industries, hence there is bigger potential for a conflict with competition policy. The increasing exposure of firms to international competition following the progressive liberalization of international trade was associated with changes in the industrial structure, structural unemployment and surplus capacities. In case of transitional economies the negative consequence of competition is mainly the problem of large monopoly enterprises which remained in the state or domestic investors hands. Such enterprises are lobbying in the government for subsidies.

While foreign investors invested large amounts into the new technology, in the case of domestic sector, structural adjustment occurred rather due to the shifts in the production programs within the existing technology and rationalization of production. There are some traditional sectors in which the country re-established the competitiveness such as glass or weapons. On the other hand the country seems to be losing competitiveness in basic iron, steel and tubes, manufacture of footwear or machinery industries but also oil refinery and some chemical enterprises which were omitted by foreign investors.

5.5 FDI and restructuring

The following part focuses on the role of foreign enterprises in the restructuring of the Czech economy. The analysis is based on the firm-level data during 2002-2007. It shows that role of foreign enterprises in the Czech economy has been growing however with different intensity as for sectors. Foreign firms have on average higher productivity than domestic firms across all sectors of the economy. The results indicate significant differences in allocation patterns between domestic and foreign firms. While domestic firms are mainly represented in marketing driven industries and in mainstream manufacturing industries, foreign enterprises are strongly represented in and capital intensive industries high-tech industries. The share of foreign firms in labor intensive industries is decreasing over time.

Enterprises with foreign participation assist the economic re-structuring and speed-up the process of transformation of the whole industries: Foreign investors improve the productivity after the acquisition by investment into the technology. In the long-term with the entry of foreign investors, the potential of economies to scale is increasing and so does the concentration in these industries. That development has an impact on the specialization and the division of labor, and shift from inter-industry to intra-industry patterns. This trend has been confirmed by our analysis – sectors that are export-intensive are import-intensive at the same time. The growth of exports is accompanied by growth in imports.

During the past decade the world economy experienced an increasing rate of internationalisation, Czech Republic being one the most illustrative examples. As by 2007, about half of all jobs have been provided by foreign enterprises and two thirds of total output are produced by foreign companies in the Czech economy. Companies penetrate foreign markets either by trade or via investment in production abroad - foreign direct investment (FDI). FDI in turn influences the volumes and structure of international trade. Barriers to foreign trade and investment have been removed and their growth rates have been growing faster than production. Recently, in many industries, enterprises compete on larger than domestic markets.

Driving forces of the above processes are among others comparative advantage, privatization of network industries and information technology. The theory of industrial organization assumes that firms which have the resources to operate internationally posses a certain specific asset that gives them technical and organizational advantages over domestic firms. Therefore foreign direct investment (FDI) might have additional effects than the mere import of capital and can assist to the economic growth. In practice however the actual effect of foreign direct investment on the host country might be positive as well as negative depending on the quality and business structure that determine the long-term impact. The objective of the paper is to assess

the role of foreign enterprises in the Czech economy and to compare structure and performance of domestic and foreign enterprises in the Czech economy during 2002-2007.

As a rule, foreign direct investment is recorded by balance of payment statistics. In our analysis we use an alternative proxy of FDI quantification – individual enterprises data. The actual analysis is based on the firm-level data recorded by Czech Statistical Office in the balance sheets and financial statements of enterprises. As each enterprise can be identified by ownership, these data allow for comparison between *foreign (international*) enterprises (FE) and *domestic (indigenous)* enterprises (DE). In addition to these by each individual firm major activity can be identified and firm data can be aggregated according to the one, two or three-digit NACE industries. While our original data are at the firm level, we use data aggregated at the industry level. In the first part of analysis firm's data are aggregated according to their major activity into 1digit NACE, in the second part which is focusing on manufacturing, firm data aggregated 3digit into 101 manufacturing industries. [30]

Variables which are used in our analysis are: output and employment. Output is reported as *„revenues from sales of own products and services"* and characterizes final results of the activity of an enterprises. *Employment* data are consistent with the output data and are taken from the industrial statistic. Employment is the sum of workers in the enterprises, which are involved into the analysis. Average number of registered employees recomputed encompasses all categories of permanent, temporary and seasonal employees contracted for work in the enterprise.

One should pay attention to the following: data presented in the paper result from careful adaptation of the data from the Czech Statistical Office,

30 The enterprise can be engaged in several activitities or manufacture several products falling into different classification, however its classification is governed by the nature of major part of its output.

however are not always fully comparable with the officially published as they are results of own computations however based on the data from the Czech Statistical Office. Thanks to those adaptations and own computations, unique results shedding more light on the position, structure and performance of foreign enterprises and thus foreign direct investment have been obtained.

Table 33: Number of domestic enterprises (DE) and foreign enterprises (FE) 2002 and 2007, Czech Republic

Range	Nace	2002		2007	
		DE	FE	DE	FE
01-05	Agriculture	1426	10		
10-14	Mining	52	20	1094	49
15-37	Manufacturing	4092	1434	3064	1695
40-41	Electricity, Gas and Water Supply	199	25	150	56
45	Construction	1583	78	1475	118
50-52	Trade	1230	391	1453	614
55	Hotels, Restaurants	218	47	267	74
60-64	Telecommunications, Transport	477	107	590	219
70-74	Real Estate, IT, R&D	975	270	1278	519
75-99	Other Services	581	64	745	122
01-99	Total	10833	2446	10116	3466

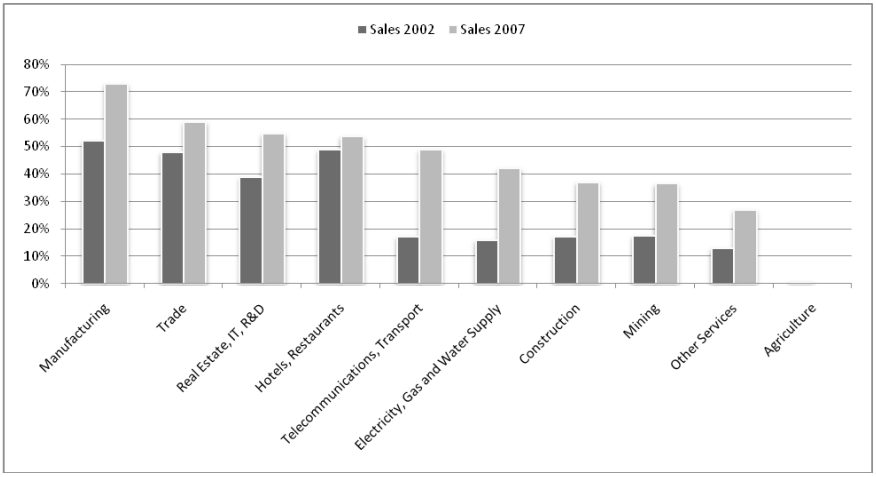
Source: CSO, own computations, enterprises with 20 and more employees

Table 33 shows numbers of enterprises which are involved in the analysis. As by 2007 there were more than 13 thousand enterprises with more than 20 employees operating in the Czech economy of which 34% were controlled by foreign owner in the Czech Republic.

Figure 1 shows that foreign enterprises penetrated to all sectors of the economy, however with different intensity. Shares of foreign sector have been growing in very fast pace between 2002 and 2007, however again with different intensity – more than doubled in mining and construction and tripled in Electricity, Gas and Water supply. Telecommunication is recently almost

100% in hands of multinationals (Telefonica, T-Mobile) but on the graph the sectors is together with transport (railway, municipal mass transport) which is still in state ownership.

Figure 6: Share of foreign companies in sales by sector 2002 and 2007



Source: data CSO, own computations

Highest representation of foreign firms can be found in manufacturing. More than 70% of total manufacturing output is produced by foreign owned enterprises in the Czech Republic. As by 2007 more than half of output was secured by foreign firms in hotels and restaurants, real estate, IT, R&D and trade. Figure 1 shows that FDI was negligible in agriculture, low foreign involvement can be found also in mining, construction and utilities trade, restaurants and hotels as by 2007.

Productivity comparison: foreign and domestic companies

Numerous studies analyze effects of the increasing activities of multinational firms on the host economy. It is expected that intangible productive assets are to be conveyed to subsidiaries in the host country through foreign investment, which in turn are expected to raise the

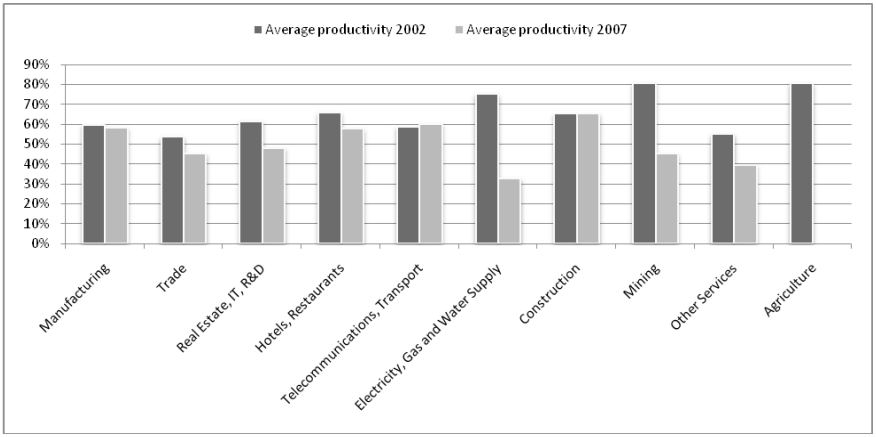
productivity of the receiving firms and industries. The foreign investment can have a form of a green field project, where a new plant is built or in the form of merger and acquisition (M&A) of an existing domestic company. In both cases, foreign companies are typically and on average characterized by higher productivity (Javorcik and Arnold 2005). There is ample evidence of the positive correlation between productivity and internationalization, the direction of causation has been more controversial, however (Greenaway and Kneller, 2007).

The availability of micro level datasets facilitated detailed analysis at the firm level. Enterprises with foreign participation are expected to improve the productivity after the acquisition by investment into the technology. In the long-term with the entry of foreign investors, the potential of economies to scale is increasing and so does the concentration in these industries. That development has an impact on the specialization and the division of labor, and shift from inter-industry to intra-industry patterns. (Zemplinerová and Benacek, 1999)

We compared labor productivity of foreign and domestic firms in 2002 and 2007. In all sectors domestic firms do not reach the level of foreign firms. This is being explained by the fact that firms which have the resources to operate internationally possess certain assets (technology, managerial skills, access to credit, reputation) that give them technical and organizational advantages over domestic firms. Therefore foreign firms might have other characteristics than domestic firms, and foreign direct investment might have additional effects beyond the mere import of capital.

Higher productivity of foreign firms can be explained by the fact that foreign investors have different allocation patterns and tend to flow to firms and industries of initial above average productivity. Moreover as foreign firms can be more efficient due to the economies of scale and scope. Foreign investors have to improve productivity in order to become competitive in world markets.

Figure 7: Productivity comparison: Foreign and Domestic companies (Foreign companies = 100%), Czech Republic in 2002 and 2007



Source: data CSO, own computations

The Figure 7 illustrates that the gap in productivity between domestic and foreign enterprises was growing in most sectors during 2002-2007 and does raise the question about spillovers of foreign enterprises to domestic firms. There are two main motivations that are typically considered driving foreign direct investment. One is to exploit lower production cost abroad, the other one is to access new markets. The first type of investment is called a vertical investment; the second type a horizontal investment. Accordingly, two major types of spillovers or effect can be identified: horizontal spillovers to local competitors in the same industries (intraindustry spillovers) and vertical spillovers to domestic firms that are linked to the foreign firms production chain as suppliers or customers in linked industries (interindustry spillovers).[31]

When a firm invests in a foreign country, it often brings with it technological know-how. On one hand the entry of higher productivity company can encourage other companies within the same industry to improve

31 It can be further distinguish between vertical spillovers that occur through contacts between foreign firms and their local suppliers in upstream industries (backward spillovers) from those that occur through contacts between foreign firms and their downstream customers (forward spillovers).

their performance. That can happen due to the imitating new technologies or by hiring trained workers and managers from foreign-owned companies. On the other hand, those domestic companies that are not able to catch up with the higher performance of other companies within the industry may be force to exit the market (crowded out of the market). As a result there is no clear evidence of aggregate positive horizontal spillovers of FDI. (Görg and Greenaway, 2004). In general studies suggest that spillovers between industries dominate spillovers within industries. As a result some authors conclude that there is no clear evidence of aggregate positive spillovers from FDI. (Javorcik, 2004) There exists some evidence that technology spillovers from horizontal FDI can be proved in high-tech sectors but not in low-tech sectors. Hence FDI can have different spillover potential: low-skilled assembly activity versus R&D intensive activity (Keller and Yeaple 2009).

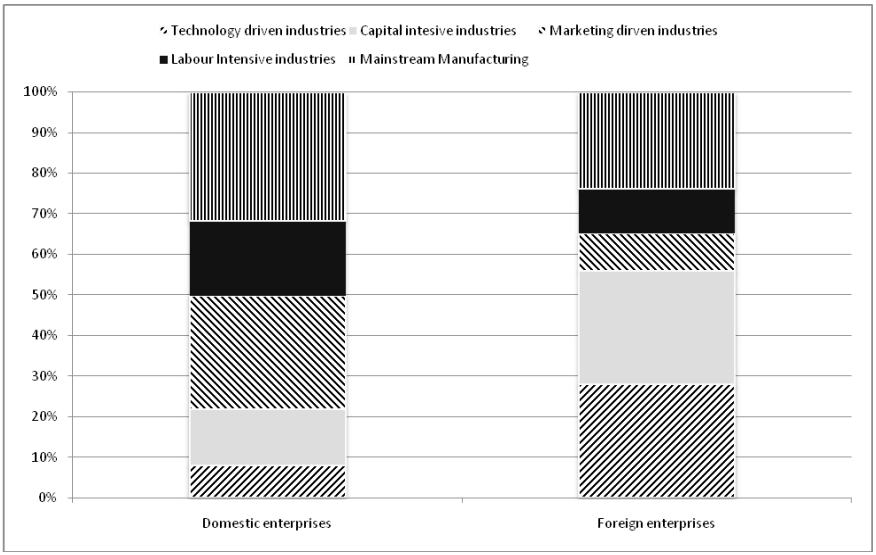
Foreign and domestic firms by factor intensity

For the purpose of factor intensity analysis firms were classified, based on their major activity, into the five following groups: technology driven industries, capital intensive industries, marketing driven industries and mainstream manufacturing.[32] The shares of these five groups in total manufacturing output and direct exports were computed for 2002 and 2007.

The results indicate significant differences in allocation patterns between domestic and foreign firms. While domestic firms are mainly represented in marketing driven industries and in mainstream manufacturing industries, foreign enterprises are strongly represented in and capital intensive industries high-tech industries. The share of foreign firms in labor intensive industries is decreasing over time.

32 The list of industrial sectors characterized by factor intensities is taken from Peneder (1999)

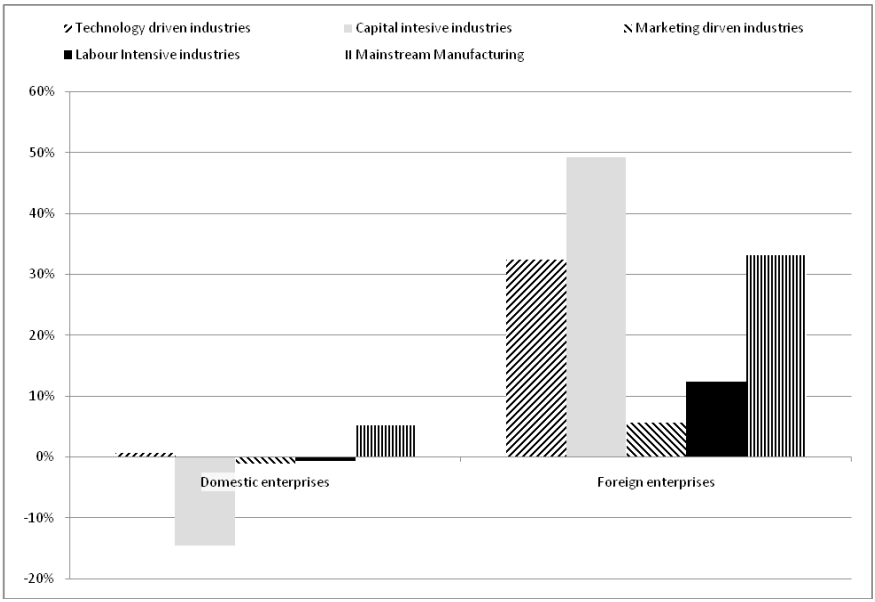
Figure 8: Shares of manufacturing industries by factor intensity 2002 and 2007



Source: data CSO, own computations

Technology diffusion can take place through a variety of channels that involve the transmission of ideas and new technologies. Imports of high-technology products, adoption of foreign technology and acquisition of human capital through various means. Besides these channels, foreign direct investment by multinational corporations (MNCs) is considered to be a major channel for the access to advanced technologies by developing countries. MNCs are among the most technologically advanced firms, accounting for a substantial part of the world's research and development (R and D) investment. Some recent work on economic growth has highlighted the role of foreign direct investment in the technological progress of developing countries.

Figure 9: Change in the structure of output by factor intensity groups 2002 - 2007



Source: data CSO, own computations

As illustrated by Figure 9, FE and DE structures evolved differently. From the analysis of the representation of particular factor intensity groups in output volumes follows that FE shares of high-tech sectors strengthened significantly in the period 2002-2007 whereas the domestic sector shares decreased. Activities with a high content of human capital accounted for increasing shares of output of foreign enterprises. There was a sharp difference in developments in labor-intensive activities where the position of the foreign sector weakened while that of the domestic sector strengthened. Output share of capital-intensive activities dropped in the case of domestic enterprises.

The last two figures shed new light on the different strategies of foreign and domestic enterprises. FEs escaped from the trap of being involved too long in the labor-intensive industries. The escape from labor-intensive

production into high-tech and skill-intensive production in FEs has been evident since 1997 and is accelerating at present. DEs lag when it comes to restructuring strategies, finding themselves trapped in labor-intensive production where the potential for growth and world market penetration is not very encouraging (Zemplinerová 2004).

6 *Outward FDI*

In many industries, enterprises compete on larger than domestic markets. The geographical markets are growing for those who are able to exploit their comparative advantage based on their economies of scale, skills or knowledge. The removal of the barriers to international trade and capital movement along with the development in information and communication technologies has initiated a further internationalization of the markets. In addition, the deregulation and privatization of public utilities contributes to the enlargement of markets in sectors formerly protected and monopolized within national boundaries. One of the strategies of firms in entering a foreign market is direct capital investment. While in the past, Foreign Direct Investment (FDI) has been prevalently flowing *from* developed economies *into* developed and developing countries; recently, FDI has started to flow at a faster pace from emerging economies.

Czech literature and analysis related to outward foreign direct investment (OFDI) is still scarce. Bohata and Zemplinerova (2003) have described the trends and structure of Czech outward foreign direct investment between 1993 and 2002 and evaluated the effects of OFDI on parent companies based on a unique set of data gathered through a sample survey. They have concluded that the main effect of the foreign ventures is the growth of export along with the growth of sales on the domestic market. Foreign investments also contribute to a deeper knowledge of the market and to the ability to make more accurate estimates of its development. The analysis also contradicts the view that outward FDI leads to the export of employment and is thus detrimental to the home economy. It follows from their analysis that motives related to labor costs do not tend to be very important in investing abroad. A considerable share of OFDI aims at avoiding a specific regulation in the home country or takes advantage of financial incentives in host countries. OFDI is often related to a restructuring of the parent company and is a precondition for the maintenance and improvement of competitiveness. The important effects

on the parent company revealed include the additional market shares gained abroad as well as positive effects on the exports of the parent company.

The analysis of the motivations of Czech investment abroad reveals that Czech multinationals have gone abroad not only to exploit their firm specific advantages but also to access new markets. In addition, multinationals invested in countries with a favorable business environment. In general as the most frequent motivation for multinationals to invest abroad can be identified market and efficiency seeking, in a less extend, resources or specific asset seeking. There are as a rule multiple motivations for one investment project is present and the motivations may also change over time.

Recently, Kayam, Saime Suna (2009) have studied home market determinants and the home country factors of FDI outflows from developing and transition economies in 2000–2006. The main hypothesis tested was that the small market size, trade conditions, costs of production and local business conditions are the main drivers of outward FDI. They included proxies for the institutional environment, such as bureaucracy, corruption and investment risk. Their preliminary findings revealed that outward FDI from transitional and developing countries increases with foreign competition in the domestic market augmented by inward FDI.

As shown by Figure 10, Czech economy was rather recipients of inward foreign direct investment (IFDI) as there were multiple opportunities for foreign investors to invest during the privatization and for domestic investors capital was often hardly accessible. Outward foreign direct investment (OFDI) is still relatively scarce in the Czech economy; it however is expected to start to grow in the future. Reason for it is the fact that companies operating in a small open economy in order to maintain and improve their competitiveness in a global world have to expand abroad. Foreign trade has to be augmented by outward investment improving market access, increasing efficiency and strengthening strategic position. For such a small open Czech economy, integration of the domestic economy with the world markets is

vital for survival in competition. Competitive strategy may be based on cost leadership and differentiation, the crucial factor for success in this case being management. This global strategy of new firms is called"born global".

The Czech economy is open not only if measured by export and import but also by FDI stock. According to the Czech National Bank, balance of payment statistics, the FDI stock in the Czech Republic as of 31 December 2010 was 2 409.6 billion CZK (128.5 billion USD, 96.2 bn.EUR).[33] FDI outflow is still relatively marginal but steadily growing as illustrated by following graph. Share of OFDI on IFDI reached 12% as by 2010. OFDI flows out of the Czech Republic accelerated in 2009 and 2010 OFDI stock reached. Stock of domestic direct investment abroad as of 31 December 2010 was 279.8 CZK billion (14.9 USD, 11.2 EUR).

In what follows, the trends, geographical and sectoral structures of Czech OFDI based on the data collected by the central bank for the purpose of the balance of payments are analyzed. In the second part, we will present a case study SKODA AUTO car factory.

In the Czech Republic, both IFDI as well OFDI have been growing steadily during the period 1993–2010, however considerable differences in the outward equity capital flows between years exist that are caused in particular by large deals. In some years, there were individual disinvestments

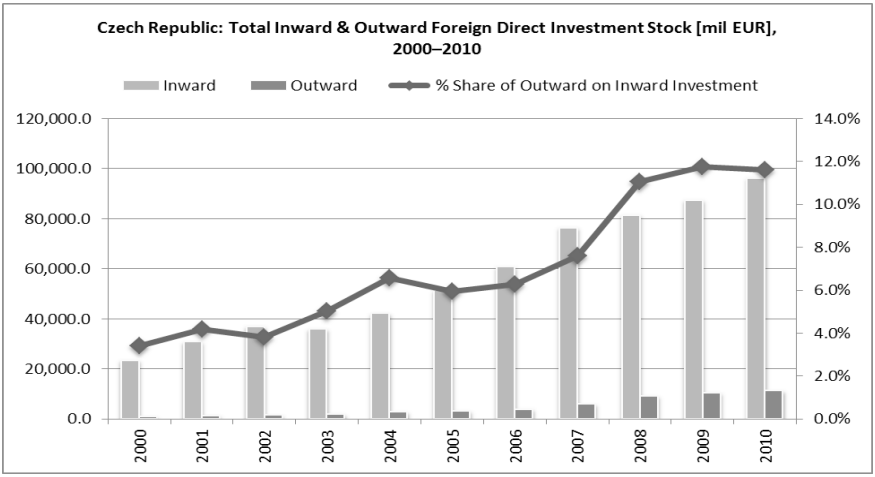
33 The CNB bases its FDI statistics on the **definition of foreign direct investment** set by IMF. This definition specifies that: "Foreign direct investment reflects the objective of obtaining a lasting interest by a resident entity in one economy ("direct investor") in an entity resident in an economy other than that of the investor ("direct investment enterprise"). The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise, and a significant degree of influence on the management of the enterprise. Direct investment involves both the initial transaction between the two entities and all subsequent capital transactions between them and among affiliated enterprises, both incorporated and unincorporated." A direct investment enterprise is defined as "an incorporated or unincorporated enterprise in which a foreign investor owns 10 per cent or more of the ordinary shares or voting power of an incorporated enterprise or the equivalent of an unincorporated enterprise." Direct investment enterprises include directly and indirectly owned affiliates. In addition to shares in equity capital, FDI covers reinvested earnings and other capital, including lending transactions with direct investors. (FDI – annual reports, CNB, 2012)

as well. The positive flows of equity capital and other capital in conjunction with the negative re-invested earnings indicate that OFDI are volatile and react to the restructuring decisions of the parent companies. Some existing foreign affiliations had to be closed or sold as a consequence of the change in the ownership or serious troubles of the parent company

As of 31 December 2004, OFDI was up by CZK 25 billion years on year, the largest Czech investment project was the entry of CEZ into a Bulgarian distribution company. The increase in Czech investment abroad was in large part explained by the activities of domestic financial groups in countries with favorable tax regimes (the Netherlands and Luxembourg) as well as, in particular, Russia, which for the first time was listed among the eight most important target countries for Czech investment.

The largest OFDI to the date has been investment of ZENTIVA in 2007 in Turkish pharmaceutical company Eczacibaşi Generic Pharmaceuticals. For 75 % of the shares, ZENTIVA paid about EUR 460 mil., (about CZK 13 bn.). The second largest investment in the history of Czech OFDI was made by the CEZ Group which invested CZK 11 bn. into two Polish power stations.

Figure 10: Czech Republic: total Inward & Outward FDI Stock [mil EUR] 200-2010



Source: Czech National Bank (2011): PZI [FDI] 2009

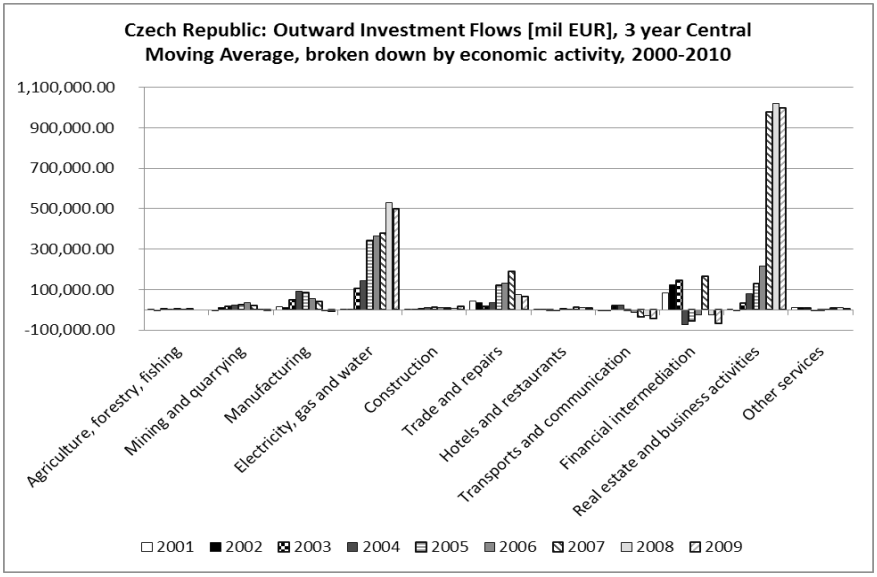
In Figure 10, we examined to what extent the development of inward and outward foreign investment in the Czech Republic is in line with the Investment Development Path (IDP) concept, which argues that a country's net outward direct investment position is related to its economic development and to inward direct investment. At an early stage of economic development direct investment, it is incoming, and, as the economy growths, outward foreign investment is followed by an increase of FDI outflows. Although the share of OFDI on FDI is upward sloping, any predictions about the long-term development of OFDI are difficult, because numerous factors affect OFDI that are connected to both the home and host countries.

The sectoral structure of the outward foreign direct investment flows is shown by Figure 11 for the period 2000-2008. It follows from this figure that during this period the sectoral structure of direct investment of the Czech Republic abroad was dramatically changing. The pattern of domestic investment abroad was shifting from enterprises with production and sales activities to areas such as foreign activity management, the provision of

financial and credit services and tax optimization. The rise in investment in the energy sector since 2004 has been specific. While the volume of investment in the manufacturing sector is falling in comparison with the previous years, the share of the services sector is growing, accounting for more than 80 % of Czech investment abroad at the end of 2008. Domestic investors also set up special purpose entities, which are used, for example, to manage assets or to obtain funds from foreign capital markets.

As of 2008, according to the BoP data, 57 percent of OFDI was channeled into real estate and business activities, activities in the energy sector accounted for 12 percent and about 10 percent of the total volume went to manufacturing which has a decreasing share. In manufacturing, the most internationalized industries are the car and pharmaceutical industries, which also are the industries creating the majority of outward investment

Figure 11: Czech Republic: Outward Investment Flows [mil EUR], 3 year central moving average, broken down by economic activity, 2000 - 2010



Source: CNB, the author's own computations

As Figure 11 shows, OFDI can be found mainly in trade and trade related activities. The major incentive for establishment a subsidiary abroad includes acquirement of market share, lowering the costs or resource seeking. Cultural and historical factors as well as geographical proximity play also an important role in the location of OFDI. Despite the shortcoming and limitations based on the available statistics, it can be concluded that companies investing abroad are more productive and export oriented. Their export propensity growths faster than in the case of non-investing companies. As a rule the investing companies have higher R&D expenses and have more skilled employees.

The sectoral breakdown of OFDI broadened to include energy and services in addition to manufacturing and sales activities. The sectoral break-down is influenced by large deals. Geographically, domestic investors maintained their traditional link with neighboring Slovakia and invested in countries with a favorable business environment, but they also focused on countries with a large market potential. To date, the largest OFDI has been the investment of ZENTIVA in 2007 in the Turkish pharmaceutical company Eczacibaşi Generic Pharmaceuticals. For 75 % of the shares of the Turkish company, ZENTIVA paid about EUR 460 mil. The second largest investment in the history of Czech OFDI was made by the CEZ Group which invested about EUR 270 mil. in two Polish power stations. CEZ is still a majority state-owned company and aims to become a major player on the energy market in Central and Southeast Europe. ZENTIVA has acquired numerous assets in Eastern Europe, and has been massively expanding into foreign markets, has become a market leader not only in the Czech Republic, Turkey, Romania, Poland, Slovakia, Russia but also is growing dynamically in Bulgaria, Ukraine and the Baltic countries before it was recently acquired itself by SANOFI. The third company is SKODA AUTO which was bought by VW already in 1991 and is one of the most important firms in the Czech Republic and is a global player. The daughter companies of SKODA AUTO

include SkodaAuto Deutschland GmbH, Škoda Auto Slovakia s.r.o., Skoda Auto Polska S.A., Skoda Auto India Private Ltd. [34]

The analysis of the targets of Czech investment abroad reveals several types of capital allocation. There are corporations focusing on sales or production activities, other corporations focusing on foreign activity management and tax optimization, a third group of corporations is specializing in the provision of financial and credit services. A special group of investment is those corporations operating in the energy sector.

From a geographic perspective, domestic investors maintained their traditional links with neighboring Slovakia and invested in countries with favorable tax regimes, but they also focused on countries with a large market potential, such as Russia and Bulgaria. In terms of the territorial breakdown of capital under domestic influence abroad, the Netherlands was the most attractive country for foreign investment in 2008 and accounted for 43.5 % of the volume of total direct investment abroad. The capital invested in Slovakia made up 16.6 % of foreign investment, followed by investment in Cyprus which overtook Bulgaria when compared to the previous year. This development indicates the impact of the shift of the managing centers of companies controlled by domestic investors to territories offering a more favorable tax regime. In 2007, the capital invested in Slovakia made up 23 % of foreign investment, while Bulgaria remained in the next position with an 8 % share. In terms of geographical breakdown, the major recipient of domestic investment in 2006 was Slovakia (32%), followed by the Netherlands (almost 22%) and Bulgaria (almost 10% of the volume of investment capital abroad). The regional structure is affected by the existing investment climate and investment opportunities in particular countries.

The fact that Czech OFDI penetrated mainly Slovakia can be explained by previous experience. Also personal and trade links created during the planned economy continue to play an important role. The Czech Republic

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similar to other countries undergoing market reforms used to have high volumes of trade among the COMECON countries and lost those markets overnight. During the transition, some Czech firms were trying to re-enter these markets via OFDI. A comparative advantage in Central Europe seems to be geographical proximity. Most of the countries ranked at the top of outward investment are neighbors. Besides, these countries are the most important trading partners of the Czech Republic and also investors in the Czech Republic.

6.1 The Skoda Auto Company

The company Škoda Auto a. s. has operated on the Czech market for more than a hundred years. It produced its first car in 1905 and in 1907 cars were successfully exported to the whole world. In 1925, Laurin & Klement merged with SKODA heavy-machinery company and in 1945 it was nationalized.

Škoda Mlada Boleslav created a joint venture with Volkswagen AG as of April 16, 1991 in the form of a joint stock company. The Czech government obtained 69 % of the equity of the new enterprise in exchange for the physical assets of Škoda. At the time of the contract's signature, Volkswagen acquired a total of 31 % of the enterprise equity for DM 620 million. According to the contract, Volkswagen acquired another 39 % of the equity in two subsequent payments, namely in 1994 (DM 390 million) and 1995 (DM 390 million). After the final agreement with the government, Volkswagen bought the remaining 30 % of Škoda's shares in 2000 for CZK 13 billion and is presently the exclusive owner of SKODA AUTO a.s. In total Volkswagen paid USD 1.4 billion (CZK 27 billion).

The entry of Škoda into the Volkswagen group provided the company with a link to the global Volkswagen network and, thanks to its well-designed strategy and quick development of a strong market position, it gradually became an important part of this network with special competences for

Central and Eastern Europe. Volkswagen had been incorporated in the global structures of the car industry for a long time and the group as a whole strives to cover the broadest spectrum of car markets.

Using support from the VW group, Škoda has managed to establish a strong presence in many developed markets. Škoda is now fully involved in the whole European and some overseas car markets. Recently, Škoda Auto has been active on more than a hundred markets all over the world, with the EU being the most important one. The company employs more than twenty-four thousand people, of which about 900 people work in foreign countries. It is the most important exporter in the country. Its production technology as well as the way it markets its cars and organizes its suppliers is very similar to the producers of other brands within the VW group.

The expansion of production led to the establishment of several foreign subsidiaries, where Škoda preferred to be the one-hundred-percent equity owner. One exception is the Polish subsidiary, SKODA AUTO Polska S.A., in which SKODA AUTO a.s. has a 51 % equity share. The second exception is SKODA AUTO Udmurtiya, ZAO established in the Russian Federation, where SKODA AUTO a.s. owns 75.1 %.

Other established commercial companies:

- in Germany (Weiterstadt near Darmstadt) in 1996
- in Slovakia (Bratislava) in 1996

Assembly plants:

- in Poland (Poznan) in 1996
- in Bosnia-Herzegovina (Sarajevo) in 1998
- in Russia (Izhevsk) in 1999
- in India (Mahastra in Aurangabad state) in 2000

From the following table, we can see some of the details of Škoda's subsidiaries.

Table 34: A list of the companies in which Škoda owns a share of equity as of 2000

Company Owned	Residence	Share on Equity
Skoda Auto Deutschland, GmbH	Weiterstadt, Germany	100.0%
SKODA AUTO Slovensko, s.r.o.	Bratislava, Slovakia	100.0%
SKODA IMMO, s.r.o.	Mlada Boleslav, CR	100.0%
SKODA AUTO BH, Djl	Sarajevo-Vogosca, Bosnia and Herzegovina	100.0%
SKODA AUTO Udmurtija, ZAO	Izevsk, Russia	75.1%
SKODA AUTO Polska S.A.	Poznan, Poland	51.0%
SKO-ENERGO, s.r.o.	Mlada Boleslav, CR	34.0%
SKO-ENERGO-FIN, s.r.o.	Mlada Boleslav, CR	10.0%
SKODA AUTO INDIA Private Limited	Mumbai, India	100.0%

Source: SKODA AUTO a.s.

Škoda Auto Deutschland, GmbH enjoyed a strong growth in vehicle sales in 2000, reaching 65,219 units (as against 57,123 in 1999), thus continuing the strong growth of the previous year. The sales of Škoda account for approx. 1.3 % of the German car market and Škoda achieved exceptionally good results in East Germany. The market share of Škoda cars there is around 5.5 % while in the former West Germany it is 1.2 %. The aim is to increase the share in the all-German market in 2001 to approximately 2 %.

SKODA AUTO BH, Djl was established in Sarajevo in 1998. In the same year, it sold 645 units and created a pre-tax profit of CZK 1.9 million. In 1999, due to serious political and economic problems in the Balkans, car sales dropped significantly, the company nevertheless finished the year in the black. In 2000, Škoda sold 6,732 cars in Croatia meaning a sales increase of 78 % in comparison with the previous year.

SKODA AUTO Udmurtija, ZAO, a company established in 1998 in the Russian Federation is encountering continuous difficulties caused on the one hand by the consequences of the financial crisis and the drastic devaluation of the currency and on the other hand by the postponement of payments. For this reason, the sales of cars almost stopped after August 1999, but in 2000 Škoda managed to sell 2,924 cars in Russia.

SKODA AUTO INDIA Private Limited was established in India in 2000. The aim for the future is to produce 10,000 units annually. The cars will be assembled at the Mahastra plant in Aurangabad. Škoda will sell cars in India through a newly developed dealer network. The first dealerships will be located in Mumbai, New Delhi and other large Indian towns.

The group of SKODA Auto is created by the parent company and daughter companies of SkodaAuto Deutschland GmbH, Škoda Auto Slovensko s.r.o., Skoda Auto Polska S.A., Skoda Auto India Private Ltd. and VOLKSWAGEN RUS.

In 1993, a daughter company of SKODA AUTO a.s., SKODA AUTO Slovensko, s.r.o., was established. The mother company owns it 100 %. SKODA AUTO Slovensko, s.r.o. recorded a sales volume of 31,309 in 1999. The share of Škoda sales on the Slovak car market was 57.2 % by that time. It not only produces but also trades in cars, part and equipment. On the Slovak market, SKODA Auto defended the position of market leader with its most sold car being Škoda Fabia.

Table 35: Foreign assets of SKODA AUTO in the Slovak Republic

	unit	2006	2007	Index
Cars sold	Ks	21,380	19,358	90.5 %
Sales	CZK mil.	7,904.9	7,600	96.1 %
Profit before tax	CZK mil.	24.7	34,9	141.3 %
Net cash flows	CZK mil.	185.4	208,6	112.5 %

Source: Annual Reports – Škoda Auto a.s., the author's own computations

The daughter company SKODA AUTO Polska S.A. was established in 1994 and SKODA Auto owns 51 %. The major activity is the purchase and sale of cars, original parts and equipment. During 2000, Škoda suffered from a big decline in the Polish market. 25 % less cars were sold in Poland in 2000 (in 1999 car sales had been 44,933 units).

There was a large increase of sales in new cars in 2007 on Polish market, the demand exceeded the supply. It led to a decrease of market share of the Škoda brand in Poland by about 1 % to 11.2 %. Despite this decline, Škoda cars remain the second best-sold brand in Poland.

Table 36: The foreign assets of SKODA AUTO in Poland

	unit	2006	2007	Index
Cars sold	pieces	28,783	33,210	115.4 %
Sales	CZK mil.	10,100	11,300	111.9 %
Profit before tax	CZK mil.	32.4	115.3	355.9 %
Net cash flows	CZK mil.	114.2	-61.5	- 53.9 %

Sources: Annual reports – Škoda Auto a.s., the author's own computations

The automotive industry is the most important production sector of the Czech Republic. It produced 17% of the total Czech manufacturing output. A full 85 % of its production is designed for export and the exports of this

sector alone represent 26 % of the total exports of Czech manufacturing.[35] The industry provides jobs for 130,000 employees. Since 1990, there has been EUR 6.8 billion of investment in the industry. It was one of the first firms to be privatized to a strategic foreign owner. It has to be mentioned that Skoda car factory in Mlada Boleslav had been modernized before 1989.

The automotive industry is the only of traditional industries in the Czech Republic that survived and thrived during the transition. Thanks to the expansion of the final producer, also the sector of suppliers expanded; by 2001, there were about 280 manufacturing companies operating in automotive industry, more than half of which are foreign owned. The car industry is the most successful industry; nevertheless, the dynamics have slowed down because of the continuous recession in the EU car markets, especially in Germany.

The automotive industry is one of the most globalized industries. In order to be competitive not only deep changes in the production, design of components and cars have to occur which include the use of modular units made by first tier suppliers for several vehicle platforms, but also new markets have to be conquered while maintaining the traditional ones.

As the Czech economy is opening to the world economy, Czech firms have begun to invest abroad. In the Czech Republic, outward foreign direct investment has been growing steadily during the period 1993–2010, however considerable differences in the outward equity capital flows between years exist that are caused in particular by large deals. Despite economic recession, the OFDI flows out of the Czech Republic accelerated in 2009 and 2010 as firms learn to use direct investment as a major strategy to access foreign markets.

Geographically, investors maintained their traditional link with neighboring Slovakia but they also focused on countries with a large market

35 Source: Czech Agency for Foreign Investments (www.czechinvest.com) and the author's own calculations

potential such as Russia and China. The past decade has seen a rapid growth of Czech multinationals to invest to the Netherlands and Cyprus where foreign activity management and tax optimization were the major motives for foreign investment. The sectoral breakdown of OFDI broadened over years to include energy and services in addition to sales or production activities. Growing tendency shows a group of corporations which is specialized in the provision of financial and credit services as well as real estate and business activities.

Within manufacturing the most internationalized industries are the car and pharmaceutical industries. A special group of outward foreign investment is those corporations operating in the energy sector. Deregulation of the energy markets and the growing demand for electricity has contributed to the foreign expansion of the Czech Energy company - CEZ Group, strategy of which is to become the number one player on the electricity market in Central and Southeast Europe. To date, the largest OFDI has been the investment of pharmaceutical company ZENTIVA in 2007 in the Turkey. Similarly to energy company, the strategic markets to which flows of foreign investment of ZENTIVA include countries in Central and Eastern Europe, namely Slovakia, Poland, Hungary, Bulgaria, Russia, the Baltic states and Ukraine.

The automotive industry is one of the most globalized industries. The expansion of production led to the establishment of several foreign subsidiaries including Russia and India. In order to be competitive not only deep changes in the production but also design of components and cars had to occur. The Czech carmaker SKODA Auto which became part of the Volkswagen Group expanded its operations in production and assembly plants in Slovakia, Russia, India, Kazakhstan, Ukraine and China.

7 Government policies towards foreign direct investors

In the Czech Republic as in each country there exist certain *generic* environment and conditions for business activity and investors (macroeconomic and political stability, availability and price of resources, skills of labor, level of liberalization, law enforcement, criminality, etc.) In their decisions, investors are further influenced by *special* incentives for investors (tax holidays, subsidies to job creation, etc.) which are provided by many countries and which are the subject of competition between governments. Hungary, Czech Republic and Poland are three countries which often compete for foreign investment intending to establish a hub for export to other parts of Eastern Europe. In this competition, often, the special regional package of FDI incentives can be decisive.

Special incentives can be provided automatically, i.e., for everyone who qualifies under certain criteria or on a case-by-case basis, just for selected investors without any a priori given rules or criteria. Special incentives for investors can be controlled by the state or local government and can be applied to the whole economy or only certain sectors or regions. In the case of large strategic multinational investors during privatization M&A, incentives are negotiated on an individual, case by case basis between multinationals and the government representative. Special incentives are expected to be "sold" for a higher purchase price or future investment promises and to overpower insufficiencies in the generic environment.

The strategic investment of Volkswagen into Skoda car factory in 1991 described in this monograph was negotiated as such on a case by case basis. Skoda car factory was massively financially restructured prior to privatization and received generous government support and protection of the market during first years of operation. VW not only requested protection of the market as for imports but also special treatment and conditions, which would, counterbalance handicaps of the former planned economy in the field of

banking and infrastructure and create conditions usual in market economies. In return, the entry of SKODA into the Volkswagen group provided the company with a link to the global Volkswagen network and thanks to its well-designed strategy and quick development of a strong market position, it gradually became an important part of this network. Later, this strategic foreign investment had impact on the development in the car industry along the whole supplier's chain. On this case it was illustrated that FDI may serve as an initiator of changes which allow for future growth, i.e., that FDI can have extensive positive externalities and impact on restructuring the economy. If a privatization contract is properly and transparently managed (the contract between VW and Skoda has been made public and widely discussed), the investment commitment clearly defined in the contract as for penalties and support limited for a set time, the effects of such strategic foreign investment can be positive in the long-term on the whole sector and economy.

Special incentives have been also automatically provided to green field investment or existing firms in the country during the first years of the transition process. There existed a special program of automatically provided investment incentives to attract FDI *1990-1992*[36] in the Czech Republic. The conservative government, which came to power in the middle of 1992, however abolished most of FDI incentives. Despite all the incentives having been abolished, starting from 1993, foreign sector continued to grow. Support has been provided however on regional level.[37] Some greenfield

36 See for instance Drabek, 1992, for more details.

37 For instance in 1996, the Japanese company Matsushita decided to invest 66 million USD into a plant for the assembly of Panasonic TV sets in Pilsen. Although the Czech government refused to provide special incentives for the Japanese investor, the local government in Pilsen not only sold the land (17 hectares) very cheaply, (11.5 USD per square meter) but also agreed to build infrastructure equipment on this land for about 4 million USD. They provided assistance with the acquiring and training of employees, local transport for employees as well as accommodation for Japanese employees. The Czech domestic production (Tesla TV) controlled at that time about 20% of the domestic market and feel endangered, mainly because of "expected unfair legislative relief conceded to the Japanese". There were also other endangered competitors: Goldstar and Grundig, who assemble TV sets in the Czech Republic and took advantage of the tariffs of 1.6% on electronic parts, against 8.8% on TV sets.

This growth can be attributed to green-field investment thanks to the positive macroeconomics developments during the period 1993-1996. Foreign direct investment is more sensitive to the radical changes in the macroeconomic situation, macroeconomic stability is thus an important assumption for foreign sector development. During 1990-1996, however numerous small foreign firms have appeared on the scene. These numerous small foreign investment, often green-field, were not involved in the official balance of payment statistics, nevertheless they played an important, dynamic role in the economy as proved by our analysis.

This green-field investment occurred despite during the period *1993-1996,* the Czech government had certain reservations about foreign investors (for both political as well as economic reasons), and thus built certain administrative barriers to foreign penetration into domestic markets for a certain period of time, which would allow domestic firms to restructure and withstand competition from abroad. The disincentives for foreign investors included not only exclusion from privatization but also restrictions on the foreign investor's ownership of land and/or ownership of real estate, special approvals, processes, and restrictions on certain sectors or public procurement. Some negative discriminatory measures can be traced in the new legislation: A new regulation was established in 1995 for the procurement of public contracts where the foreign firms can win over the domestic ones only if they offer a lower price by 10%. An amendment has been passed to the Trades Licensing Act in November 1995 where a representative of a foreign company (joint stock, limited liability or subsidiary office) must prove fluency in the Czech language until the end of 1996, and receive Czech residential permit and a work permit. The government, in the approval process of privatization projects, preferred the so-called "Domestic way of Privatization". A supportive argument for this approach was "A Family Silver" argument, which mainly arises from a social-political background rather than an economic one.

The privatization program *1992-1994* has been, however, a mixed blessing. It has created investment opportunities that attracted foreign capital, but it has also thrown up barriers that have slowed or in some cases deterred altogether the involvement of foreign investors. Czech government was not forced by its balance of payment to attract foreign investors during the period 1993-1994. On the contrary, the Czech Republic has been wary of large volumes of foreign investment over the last few years. Since 1993, portfolio investment and credits by foreign banks started to accelerate in the Czech Republic. Because of the threat of high inflation, which could follow after the high influx of foreign exchange into the economy and thus increase the money supply, the government was negatively motivated towards any FDI incentive policy. In residual privatization 1995-2000, the case by case approach towards strategic foreign investors has been applied as well as regional case by case approach to green-field investment mainly for the purpose of solving regional unemployment.

The statistical and econometrical analysis proved that foreign enterprises on average are reaching almost twice as high productivity as domestic enterprises. Although foreign investors tend to flow to firms of initial above average productivity and profitability and to better endowed firms, foreign investment enterprises seem to improve the productivity after the acquisition by massive investment into the technology. Foreign investment enterprises pay as a rule higher salaries and thus are able to attract more skilled labor, which in turn contributes to higher productivity. However the investment activity is the most important indicator, and it shows clearly that foreign investment enterprises are restructuring more intensively than domestic enterprises. It is true that foreign investment enterprises have as a rule better access to credit and are able to finance investment from internal resources. Domestic enterprises as a rule have privatization credits, which do not allow them to undertake strategic investment in technology.

Higher productivity of foreign firms can be explained by the fact that foreign investors have different allocation patterns and tend to flow to firms and industries of initial above average productivity. Moreover as foreign firms can be more efficient due to the economies of scale and scope, foreign investors have to improve productivity in order to become competitive in world markets. There are factors which probably contribute in a major share to the higher productivity and which cannot be captured by our statistical analysis such as managerial skills, which allow for effective investment decisions. As illustrated by case studies, the source of the improvement in productivity is also training the employees and improvement of production organization.

Another source for productivity growth is new technology or an existing level of endowment of labor by capital. In addition, the export orientation of foreign investment enterprises is relatively high in comparison to domestic enterprises, most manufacturing industries; the shares of foreign investment enterprises on export are significant. But it was confirmed by our analysis that sectors that are export-intensive are import-intensive at the same time. In other worlds, the growth of exports is accompanied by growth in imports. The mode of FDI does not seem to affect performance as much: mergers and acquisitions (M&A) do not perform much differently from greenfield ventures in terms of labour productivity, although on average they are twice larger in terms of total sales. Greenfield ventures dominate in export orientation and investment activity, which suggests that foreign investors prefer the greenfield mode to the acquisition mode if they intend to export their production rather than to sell it on the local Czech market.

Two major types of spillovers or effect can be identified: horizontal spillovers to local competitors in the same industries (intraindustry spillovers) and vertical spillovers to domestic firms that are linked to the foreign firms´ production chain as suppliers or customers in linked industries (interindustry spillovers).

The mode of entry however has difference consequences for market structure. Green-field foreign investment increases the number of competitors in the market and higher competitive pressure caused by a new foreign enterprise in the market may force domestic firms to operate more efficiently and introduce new technologies earlier than what would otherwise have been the case. In addition green field investments are mainly small and medium sized enterprises.

When a firm invests in a foreign country, it often brings with it technological know-how. On one hand the entry of a high productivity company can encourage other companies within the same industry to improve their performance. That can happen due to the imitating new technologies or by hiring trained workers and managers from foreign-owned companies. On the other hand, those domestic companies that are not able to catch up with the higher performance of other companies within the industry may be force to exit the market (crowded out of the market). As a result there is no clear evidence of aggregate positive horizontal spillovers of FDI. (Görg and Greenaway, 2004). In general studies suggest that spillovers between industries dominate spillovers within industries. As a result some authors conclude that there is no clear evidence of aggregate positive spillovers from FDI (Javorcik, 2004) .There exists some evidence that technology spillovers from horizontal FDI can be proved in high-tech sectors but not in low-tech sectors. Hence FDI can have different spillover potential: low-skilled assembly activity versus R&D intensive activity (Keller and Yeaple 2009).

It is expected that innovation and know-how are to be conveyed to subsidiaries in the host country through foreign investment, which in turn are expected to raise the productivity of the receiving firms and industries. If the spillover effect of FDI exists, i.e. if knowledge or new technology embodied in foreign firms is transmitted to domestic firms, one would expect to see higher productivity growth rates for domestic firms in sectors

with a large foreign presence. However as regards the spillover effect, although in our analysis the coefficient on spillovers was positive, but statistically insignificant, this is not enough to confirm the hypothesis that foreign presence positively affects productivity growth for domestic firms.

Besides technology transfer, FDI may raise the productivity of domestic firms by providing a significant increase in the market competition. In order to withstand the competitive pressure, domestic incumbents might improve their allocative and technical efficiency and thus become more productive.

Penetration of foreign enterprises varies considerably with the sector showing a markedly different pattern of investment from domestic businesses. On one hand there exist manufacturing industries in which the position of foreign investment enterprises is strong as is the case of motor vehicles or non-metallic minerals, on the other hand there are industries in which foreign penetration via ownership of assets is zero or very low.

Foreign investment enterprises were also more concentrated than manufacturing in total. Foreign investment is concentrated on motor vehicles, food products and non-metallic products. Foreign direct investment tends to flow into more concentrated industries such as tobacco, auto industry or man-made fibres. However beside large foreign enterprises there are numerous small and medium sized foreign firms, often green field investment in industries with a relatively competitive structure.

Our analysis of the industrial structure by factor intensity has shown that while domestic firms are mainly represented in marketing driven industries and in mainstream manufacturing industries, foreign enterprises are strongly represented in capital intensive high-tech industries. The share of foreign firms in labor intensive industries seems to be decreasing over time. Thus enterprises with foreign participation assist the economic re-structuring and speed-up the process of transformation of whole industries.

We can conclude that in their sum foreign investment enterprises contribute to the improvement of productivity and economic growth. The question arises what implication for FDI policy should be drawn, what is the message of the above findings for the policymakers? In general there exists consensus that it is good for an economy to have FDI. Little agreement exists, however, as to how to attract foreign investors and what instruments to employ in order to diminish the costs of the policies and the incentives applied.

In general, on one hand, governments can have certain reservations with *foreign investors* (usually for political or ethical reasons), and can thus build certain administrative barriers to foreign penetration into the domestic markets. The disincentives for foreign investors could include restrictions concerning the foreign investor's ownership of land and/or ownership of real estate, special approvals needed, and restrictions on certain sectors for foreigners, public procurement or exclusion from privatization. On the other hand, mainly for economic reasons based on a similar analysis as done in the empirical part of the monograph or just drawn within the theoretical framework, governments can consider *domestic investors* to be inferior compared to the foreign investors, and therefore provide special investment incentives only for foreign investor, in order to positively influence their decisions to allocate investment in their country.

Government temptation for using FDI incentives is stronger in less stable economies for a variety of reasons. In case of former centrally planned economies more often quoted reasons include the lack of domestic capital and managerial knowledge. Structural changes, modernization and extension of service and infrastructure sectors need capital and know- how, which are more easily available for foreign investors. Recently the re-start of growth is the main issue. The budgetary constraints are discussed and also the effects of special incentives. Although in the former centrally planned economies with negative and long term experience with state intervention, subsidies

and exceptional treatment of investors, lobbies became rather strong and can succeed to approve legislation for further special incentive.

Investment incentives are understood as administrative measures applied by governmental bodies on all levels, over which the governments have direct control. Investment incentives can be divided into "financial" and "non-financial". ***Financial incentives*** are tax holidays, corporate tax and VAT relief or diminishing, accelerated depreciation, customs duties exemptions and deductions of the re-invested profit from the taxable base or loss carry over. Financial incentives are further subsidies for employment, R&D grants, loans, guarantees, and subsidized credits, subsidies for infrastructure and other rebates and subsidies, which are allocated to a concrete enterprise.

Non-financial incentives are such measures which limit competition and decrease uncertainty and risk for the business operation through the provision of monopoly or preferential treatment (market access protection, exclusive licensing, exemption in access to foreign exchange and the like). Weak enforcement of anti-trust law is in fact also a non-financial incentive for investors.

Both financial and non-financial incentives are finally beneficial for the investor. In the case of financial incentives, costs are subsidized directly and the subsidy is quantifiable — non-financial incentives allow for extra (monopoly) costs is difficult to quantify.

Special investment incentives require establishment of an agency to decide whether and which investors qualify for FDI incentives. The official argument for selection in providing incentives is that the government would like a priori to exclude the "bad" and attract only the "good" FDI. The "good" investor is officially considered to be the one who will invest into the new technology, training of labor and quick restructuring (possibly without the creation of further unemployment), making profits and not transferring them abroad, increasing productivity and exporting the major share of output.

Apart from the costs of regulating incentives, any such discretion and need for selection gives power to the bureaucracy and provides opportunity for corruption. The more conditions that have to be fulfilled by the investor, the less the transparency and greater the possibility of manipulation. In addition, selective approaches also delay decisions, and in reality, repeal investors while demonstrating who decides what in the country: is it the market or the bureaucrat? One may attract one investor by special incentive but at the same time lose several other potential investors. Especially due to the EU structural funds more and more local/regional governments execute FDI policies/incentives. While the nation-wide government can refuse to provide FDI incentives, initiatives on lower levels of government (paid from local budgets) can exist. It is supposed that local unemployment or backwardness of the region can be solved from the regional level.

Countries and the regions within the country start to compete for greenfield investment. The reason for this might also be the general shift from acquisitions towards greenfield investment. As the number of state enterprises to be privatized decreases, opportunities for green field investment start to play a more important role. In this case, investors do not bear the restructuring cost as they do in the case of acquisition. Incentives granted to investors promoting the development of various regions and controlled by lower level government can be cumulated. Local government makes an initiative to build industrial zones which would provide all necessary infrastructures and attract investors. However the above case is initiated and supported from the regional level of government rather than from the central government. These initiatives are based on the Developed sites or Business Parks. An increasing number of large international and Czech developers are actively seeking sites to create not only industrial parks but also business park environments and facilities.

Local authorities may extend assistance and support to foreign investors in the form of providing all the necessary infrastructure, e.g., power liners,

gas, water supplies, and telecommunications to the border of the building site. In addition, local government-controlled grants may be available to help firms in the recruiting and re-training of skilled labor. In some regions, primarily those with double the average rate of national unemployment, the investor is entitled to apply for various grants up to a value of CZK 80,000 per new job in cases where an individual is taken off the list of registered unemployed, or in some cases where they attain a specific qualification. All forms of support from local authorities are not mandatory and are negotiable on a case by case basis.

In 1997 and 1998 the Czech economy witnessed a rather sharp downturn with GDP declining 2.7% year on year in 1998. The recession even deepened at the beginning of 1999, with industrial production declining 11.3% year on year in January with a slowdown of inflation. Among causes of this situation was the deficient form of Czech privatization, which in many cases transferred enterprises to owners who lacked long term strategy and capital. The transfer of ownership was further hampered by poor performance of the stock market. Inefficient corporate governance, bad shareholder protection and bad bank loans assisted large Czech firms to survive without restructuring. One of the most pressing issues was the weak enforcement of laws, especially the bankruptcy law, which delayed the necessary reallocation of labor and capital.

Following a long lasting debate in April 1998 the Czech government approved a complex of direct investment incentives including custom relief on high-technology. Imported technologically-advanced and environmentally-friendly investment goods will be custom duty relief from the minimum 25 million USD.[38] Till new legislation on investment incentives, which

38 Incentives are available for both domestic as well as foreign investors. However there exists a minimum amount to be invested: 25 bn USD. The system involves retaining of the tax for first five years (tax holidays if certain conditions are fulfilled), accelerated depreciation of machines and equipment (25%), buildings (4%), free custom zones, custom and VAT relief on import of Hi-tech machinery and equipment, subsidy to the new job creation for the Czech citizen (up to 80 thousand CZK), up to 50% of the total cost for training and requalification and industrial zones with infrastructure for a symbolic price. There will be grants and subsidies to municipalities available up to 60% of the total cost relating to the infrastructure building

was approved in 2000, the allowances had been negotiated and granted on a case by case basis; since 2000 incentives are supposed to be provided automatically upon fulfillment certain criteria.

A new Act on Investment Incentives (Act No. 72/2000 Coll.) came into force on May 2000, and has been subsequently amended in May 2004 and July 2007. It codifies, simplifies and extends the original national incentives scheme. The Act was discussed with the European Commission and is in compliance with European regulations on state aid. As of the end of December 2008, 545 firms had been awarded incentives. According to Czechinvest information, during the years 2001- 2009, the state support amounted to about 170 bn. CZK.[39] With the threat of recession, the pressures to increase the amount of special incentives will probably increase.

Investors' decisions are influenced by both macro as well as micro-economic policies and special investment incentives. What decides are calculation of present costs and the estimation of future revenues. Lower labor costs in a host country, if compared to the country of the foreign investor, are still considered to be main attractions for investors from abroad in the case of the Central European Countries. In fact, the total production cost and the estimated risk are major factors governing the investor's decision. An investor invests abroad if he expects a higher rate of profit than in his home country, and if new markets are easily accessible. The generic environment, infrastructure, services, telecommunications should work, otherwise, costs increase. If however the calculation is same for several countries, the special incentives can influence the investor's decision.

Investors' decisions to expand to another country or relocate production abroad are influenced not only by the situation and incentives in the host country but also by the investment incentives and disincentives in the home country and other countries in which investment comes into consideration.

39 CzechInvest (2010): Investment Incentives

This includes corporate tax, labor costs, time required to set up a company, costs of setting up a company and other conditions for doing business.

One has to be aware that often there exists imperfection in markets for goods or factors created by the governments' regulation and interference. Therefore it is important to analyze the government incentives for adopting certain policies, too. The supportive programmes or projects are subject to research and cost-benefit analysis as FDI incentives, as these incentives can not only support FDI but can have at the same time negative effects on the economy and distortions as any other state subsidy to enterprises (Zemplinerová, 2006 or Bolcha and Zemplinerová 2012).

Instead of calling for investment incentives and discretionary industrial policy actions in support of certain segments of the economy (small, large, domestic, foreign, regional, exporting etc.), the main source of improvement should be seen primarily in the improvements in the effective functioning of the execution of legislation, learning how to do business, and in an educated skilled labor force. A good generic environment and conditions for business activity and investors, i.e macroeconomic and political stability, availability of skills of labor, level of liberalization, law enforcement, low criminality and corruption are the most important factors revealing the natural comparative advantages of the country. Thus creation and maintenance of an environment conductive to business activity which would allow for efficient operation of economic agents and sustainable economic growth is the first condition sine qua non of any economic policy, including the policy that aims to attract FDI. In the Czech Republic, barriers to creating such environment still include non-functional courts, bad enforcement of laws; excessive bureaucracy and interventions into decision-making of the entrepreneurs, high taxation and the complicated system of taxation and corruption have to be removed.

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Appendixes

Table 37: Foreign Enterprises by Size, Czech Republic

selected indices	all foreign enterprises	Foreign enterprises <100 employees	Foreign enterprises <500 employees	foreign enterprises 500 - 1000 employees	Foreign enterprises >1000 employees	Foreign enterprises >5000 employees
number of enterprises	375	243	344	21	10	2
share in total employment in foreign manuf. enterp.	100%	13.1	38.9	16.3	44.8	26.8
share in total output in manufacturing	100%	8.6	30.0	14.3	55.7	42.0
share in total export of foreign manuf. Firms	100%	7.9	25.9	12.2	61.9	41.7
share in total new investment of foreign manuf.firms	100%	12.3	32.9	16.0	51.1	37.6
profit per sales in %	1.9	20.3	8.9	11.5	-4.9	-10.2
export per sales in %	41.3	39.6	35.6	31.4	47.5	46.4
fixed capital per employee in thous. kc	1392	1338	1153	1604	1523	1456
average monthly salary in kc	8109	7148	7503	7872	8720	9032
profit per employee in kc	20492	93363	68057	134663	-70710	-169528
inventories per sales in %	17.6	30.4	19.8	17.0	17.2	12.6
unpaid debts in %	100%	23.3	51.7	20.3	28.0	7.6
new investment per employee in kc	258751	238102	213451	267266	294959	363477
output per employee in thous. kc	1031.3	679.5	794.2	911.8	1280.5	1617.5

Source: Data of Czech Statistical Office 1994, own computations, only enterprises with 25 and more employees

Table 38: Domestic Manufacturing Enterprises by Size, Czech Republic

selected indices	all domestic enterprises	Domestic enterprises <100 employees	Domestic enterprises <500 employees	domestic enterprises 500-1000 enterprises	Domestic enterprises >1000 employees	Domestic enterprises >5000 employees
number of enterprises	3933	2046	3448	260	225	12
share in total empl. in manufacturing	100%	9.4	37.9	16.7	45.4	10.5
share in total output in manufacturing	100%	8.0	34.9	16.5	48.6	15.4
share in total export of manufacturing	100%	4.4	21.2	15.2	63.6	23.3
share in total new investment in manuf.	100%	20.8	42.3	15.6	42.1	11.1
profit per sales in %	14.1	26.6	16.9	13.6	12.2	10.8
export per sales in %	30.0	15.8	17.7	27.6	40.0	48.3
fixed capital per employee in th.kc	989.5	1542	917.8	956.4	1061	1369
average monthly salary in kc	6514	6239	6155	6448	6838	7863
profit per employee in kc	88543	87210	87693	92046	88127	102061
inventories per sales in %	28.3	43.4	27.5	30.6	28.0	20.2
unpaid debts in %	100%	15.2	37.3	16.0	46.7	13.1
new investment per employee in kc	63014	144794	70373	58508	58528	66115
output per employee in thous. kc	600.2	531.8	552.2	591.6	643.4	877.9

Source: Czech Statistical Office 1994, own computations, only enterprises with 25 and more employees

Table 39: Manufacturing industries by share of largest producer (not adjusted for imports and adjusted for imports), share of mergers and acquisitions on sales and share of imports on sales

		CR1	CR1(M)	M&A/S
355	Other transport equipment n.e.c.	100.0	78.9	0.0
351	Ships and boats	100.0	35.7	0.0
247	Man-made fibers	100.0	42.6	100.0
323	Television and radio receivers, sound or	92.8	35.7	0.0
160	Tobacco products	90.9	67.4	95.5
341	Motor vehicles	88.6	51.7	88.6
176	Knitted or crocheted fabrics	85.0	22.7	0.0
152	Processed and preserved fish and fish pr	84.3	71.0	0.0
183	Furs; articles of fur	82.8	14.1	0.0
245	Glycerol; soap and detergents, cleaning	73.6	37.6	0.0
364	Sports goods	72.0	24.6	0.0
283	Steam generators (except central heating	70.6	64.3	0.0
293	Agricultural and forestry machinery	55.9	31.6	1.5
273	Other iron and steel and non-ECSC ferro-	51.6	32.4	0.0
251	Rubber products	51.1	27.2	54.9
315	Lighting equipment and electric lamps	47.5	27.8	3.5
311	Electric motors, generators and transfor.	46.7	19.5	0.5
244	Pharmaceuticals, medicinal chemicals and	46.4	27.3	26.5
362	Jewellery and related articles	43.9	21.2	0.0
154	Animal and vegetable oils and fats	41.8	34.4	0.0
361	Furniture	41.6	18.1	2.1
263	Ceramic tiles and flags	40.7	28.8	28.2
314	Accumulators, primary cells and primary	40.0	12.4	50.5
322	Television and radio transmitters, appar.	39.5	30.6	39.5
297	Domestic appliances n.e.c.	39.3	21.0	0.0
272	Tubes	39.3	17.0	2.1
264	Bricks, tiles and construction products,	37.7	29.1	20.8
363	Musical instruments	37.1	18.8	0.0
300	PC	37.0	1.2	11.7
205	Other products of wood; articles of cork	36.3	13.9	36.3
265	Cement, lime and plaster	36.1	30.1	94.3
177	Knitted and crocheted articles	34.5	18.5	18.6
203	Builders‘ joinery and carpentry, of wood	33.2	19.4	19.5
193	Footwear	32.9	15.9	3.0

271	Basic iron and steel and ferro-alloys (E	32.8	24.4	0.5
333	Optical instruments and photographic eq.	31.3	12.1	0.0
241	Basic chemicals	30.7	18.4	11.8
331	Medical and surgical equipment and ortho	30.7	13.0	27.5
296	Weapons and ammunition	30.4	17.4	0.0
274	Basic precious metals and metals clad wi	30.3	14.2	23.4
246	Other chemical products	29.3	16.5	7.3
174	Made-up textile articles, except apparel	28.9	3.0	6.0
365	Games and toys	28.9	3.8	0.0
211	Pulp, paper and paperboard	27.9	17.8	12.7
366	Miscellaneous manufactured goods n.e.c.	27.7	15.6	13.7
282	Tanks, reservoirs and containers of meta	27.5	15.3	14.7
352	Railway and tramway locomotives and roll	27.5	14.3	0.0
321	Electronic valves and tubes and other el	26.8	7.3	15.7
316	Electrical equipment n.e.c.	26.0	12.7	17.6
158	Other food products	24.6	20.1	43.0
312	Electricity distribution and control app	24.0	11.0	8.6
332	Instruments and appliances for measuring	23.8	9.6	0.0
156	Grain mill products, starches and starch	23.5	18.2	0.0
175	Other textiles	23.4	13.7	11.5
281	Structural metal products	23.3	9.5	10.4
313	Insulated wire and cable	22.8	11.4	40.1
353	Aircraft and spacecraft	22.4	4.8	0.0
334	Watches and clocks	22.3	14.7	0.0
192	Luggage, handbags and the like; saddlery	21.4	10.1	4.3
342	Bodies (coachwork) for motor vehicles; t	21.2	7.7	20.6
261	Glass and glass products	21.2	11.1	36.2
201	Wood, sawn, planed or impregnated	21.1	7.5	7.8
291	Machinery for the production and use of	21.0	9.7	5.6
182	Other wearing apparel and accessories	20.4	5.9	12.8
354	Motorcycles and bicycles	20.2	7.4	0.0
191	Leather	20.2	11.4	0.0
268	Other non-metallic mineral products	19.4	11.3	28.7
202	Veneer sheets; plywood, laminboard, part	19.1	12.2	13.3
294	Machine-tools and parts thereof	18.8	8.7	15.9
155	Dairy products and ice cream	18.6	15.7	8.5
262	Non-refractory ceramic goods other than	17.3	8.4	23.0

222	Printing services and services related t	16.4	10.4	19.8
159	Beverages	16.2	13.8	11.6
252	Plastic products	15.8	8.7	26.4
212	Articles of paper and paperboard	15.6	10.5	42.1
172	Textile fabrics	14.0	7.7	4.8
153	Prepared and preserved fruit and vegetab	14.0	9.8	20.3
171	Textile yarn and thread	13.8	8.4	24.0
292	Other general purpose machinery	13.6	6.3	21.7
221	Books, newspapers and other printed matt	11.4	9.2	15.2
343	Parts and accessories for motor vehicles	10.9	5.7	27.6
151	Meat and meat products	9.7	8.9	4.9
295	Other special purpose machinery	9.5	4.7	1.2
286	Cutlery, tools and general hardware	9.2	5.2	20.1
266	Articles of concrete, plaster and cement	8.3	6.7	23.5
157	Prepared animal feeds	6.1	5.9	1.2
287	Other fabricated metal products	5.8	2.0	18.0

Source: Data CSO, 1998, own computations

Table 40: Manufacturing industries according to share of TNCs in sales

		Share of FDI on sales	of which green fields	Export per sales	Imports per sales
247	Man-made fibres	100.0	0.0	35.3	50.2
314	Accumulators, primary cells and primary	100.0	49.5	67.0	52.2
160	Tobacco products	95.5	0.0	45.9	61.5
265	Cement, lime and plaster	94.3	0.0	19.0	7.3
323	Television and radio receivers, sound or	92.8	92.8	88.3	78.3
341	Motor vehicles	88.6	0.0	78.0	49.6
364	Sports goods	72.0	72.0	88.7	37.2
343	Parts and accessories for motor vehicles	68.6	41.0	58.7	45.2
316	Electrical equipment n.e.c.	67.5	49.8	44.9	39.3
203	Builders‘ joinery and carpentry, of wood	65.2	45.7	70.0	14.8
212	Articles of paper and paperboard	63.0	20.9	34.1	43.5
205	Other products of wood; articles of cork	55.5	19.2	32.4	10.5
251	Rubber products	55.4	0.5	60.3	32.4
361	Furniture	51.8	49.7	46.2	29.9
322	Television and radio transmitters	51.1	11.6	28.8	29.3
315	Lighting equipment and electric lamps	51.1	47.5	50.0	30.9
158	Other food products	51.0	7.9	16.4	22.4
300	PC	48.7	37.0	84.1	12.8
313	Insulated wire and cable	48.5	8.4	29.9	47.6
321	Electronic valves and tubes and other el.	46.7	31.0	41.1	14.8
175	Other textiles	45.9	34.4	51.7	36.5
331	Medical and surgical equipment	45.8	18.4	47.4	26.5
221	Books, newspapers and other printed	43.2	28.0	5.8	18.2
312	Electricity distribution and control app	40.2	31.6	32.8	33.3
266	Articles of concrete, plaster and cement	39.1	15.6	14.1	16.4
261	Glass and glass products	38.4	2.2	56.4	24.6
292	Other general purpose machinery	38.4	16.7	42.5	16.2
252	Plastic products	38.1	11.7	37.5	28.3
334	Watches and clocks	36.8	36.8	62.8	32.0
154	Animal and vegetable oils and fats	34.7	34.7	19.1	13.0
264	Bricks, tiles and construction products,	34.0	13.2	19.9	11.9
244	Pharmaceuticals, medicinal chemicals and	33.3	6.8	45.6	19.1
202	Veneer sheets; plywood, laminboard, part	33.1	19.7	40.2	29.7

262	Non-refractory ceramic goods other than	31.0	8.0	49.6	18.8
222	Printing services and services related t	30.9	11.1	10.8	19.8
286	Cutlery, tools and general hardware	29.2	9.2	46.0	20.3
268	Other non-metallic mineral products	28.7	0.0	31.1	23.5
263	Ceramic tiles and flags	28.2	0.0	47.3	12.8
174	Made-up textile articles, except apparel	27.9	21.9	60.1	24.3
287	Other fabricated metal products	27.2	9.2	52.1	27.7
171	Textile yarn and thread	26.1	2.1	42.4	32.2
153	Prepared and preserved fruit and veget.	25.8	5.5	9.5	46.4
366	Miscellaneous manufactured goods n.e.c.	24.2	10.5	54.8	17.7
274	Basic precious metals	23.4	0.0	36.6	19.7
159	Beverages	22.6	11.0	12.1	17.5
354	Motorcycles and bicycles	22.4	22.4	62.6	17.3
246	Other chemical products	22.1	14.8	48.6	30.6
177	Knitted and crocheted articles	20.7	2.1	40.6	28.5
342	Bodies (coachwork) for motor vehicles; t	20.6	0.0	44.7	48.8
311	Electric motors, generators and transf.	17.6	17.1	63.1	33.4
182	Other wearing apparel and accessories	17.6	4.8	72.8	19.9
294	Machine-tools and parts thereof	17.0	1.1	69.4	13.9
282	Tanks, reservoirs and containers of metal	15.5	0.9	38.8	17.0
272	Tubes	14.5	12.4	21.5	16.3
155	Dairy products and ice cream	14.5	6.0	8.2	6.3
211	Pulp, paper and paperboard	14.2	1.5	52.4	22.1
241	Basic chemicals	12.0	0.2	38.2	16.0
281	Structural metal products	11.4	1.0	28.7	11.0
201	Wood, sawn, planed or impregnated	11.3	3.6	37.7	3.4
172	Textile fabrics	10.5	5.7	46.0	31.0
295	Other special purpose machinery	10.3	9.1	44.4	11.7
291	Machinery for the production and use of	10.3	4.7	85.6	14.3
192	Luggage, handbags and the like; saddlery	7.9	3.5	64.1	26.3
193	Footwear	7.8	4.8	45.7	18.4
151	Meat and meat products	4.9	0.0	1.4	2.8
332	Instruments and appliances for measuring	4.8	4.8	43.6	27.7
245	Glycerol; soap and detergents, cleaning	2.1	2.1	68.5	17.1
293	Agricultural and forestry machinery	1.5	0.0	53.0	13.5
157	Prepared animal feeds	1.2	0.0	3.1	5.7
297	Domestic appliances n.e.c.	0.6	0.6	55.7	29.5

271	Basic iron and steel and ferro-alloys (E	0.5	0.0	14.1	16.7
152	Processed and preserved fish and fish pr	0.0	0.0	0.9	24.2
156	Grain mill products, starches and starch	0.0	0.0	3.6	2.8
176	Knitted or crocheted fabrics	0.0	0.0	42.6	6.3
183	Furs; articles of fur	0.0	0.0	20.8	0.9
191	Leather	0.0	0.0	26.6	18.5
273	Other iron and steel and non-ECSC ferro-	0.0	0.0	54.5	16.2
283	Steam generators (except central heating	0.0	0.0	12.2	22.4
296	Weapons and ammunition	0.0	0.0	60.2	8.0
333	Optical instruments and photographic equ	0.0	0.0	13.4	17.0
351	Ships and boats	0.0	0.0	90.0	15.9
352	Railway and tramway locomotives and roll	0.0	0.0	52.8	17.2
353	Aircraft and spacecraft	0.0	0.0	32.7	63.3
355	Other transport equipment n.e.c.	0.0	0.0	25.6	7.5
362	Jewellery and related articles	0.0	0.0	35.3	17.8
363	Musical instruments	0.0	0.0	80.0	13.7
365	Games and toys	0.0	0.0	32.6	8.3

Source: Data CSO, 1998, own computations

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the case of the Czech economy

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