



ESTRATEGIAS DE LOS INVERSORES EN LOS NUEVOS MIEMBROS DE LA UE: ASPECTOS MICROECONÓMICOS, MACROECONÓMICOS Y SECTORIALES¹.

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RESUMEN

Desde los últimos años 90 los inversores han tenido que enfrentarse a nuevos desafíos debido a las cambiantes características de ubicación en los países en transición de Europa Central. La demanda de exportaciones se convirtió en el principal motor de la IDE en manufacturas, en contraposición a la captura del mercado nacional en años anteriores. Además, unos costes de producción en aumento llevaron a los inversores a deslocalizar o modernizar sus filiales.

La modernización estructural se puede rastrear combinando varios enfoques y fuentes de información: microeconómico, sectorial y macroeconómico. En el

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enfoque microeconómico contamos con aportaciones de estudios de caso que muestran la fuerte relación entre la competitividad de una filial y sus oportunidades para modernizarse. En el nivel macro, se analizan los cambios en la distribución industrial del stock de IDE. Para otras características industriales contamos con una base de datos que compara la eficiencia de empresas con inversión extranjera y empresas de propiedad nacional.

Los cambios en la distribución por industrias del capital extranjero y el empleo confirman que en los años 90 las compañías transnacionales ubicaron las filiales orientadas a la exportación en los países en transición de Europa Central con bajos costes. Posteriormente trasladaron las producciones simples y de baja tecnología, como textiles y confección, más al este y sólo en raras ocasiones modernizaron su actividad en los países más avanzados. La IDE en manufacturas en los nuevos miembros se concentró rápidamente en las industrias más internacionalizadas como la industria de automoción y la ingeniería eléctrica, que ofrecen oportunidades para modernizarse y establecer redes.

Palabras clave: inversión directa extranjera, empresa con inversión extranjera, reestructuración de la industria manufacturera, nuevos estados miembros de la UE.

INVESTORS STRATEGIES IN NEW EU MEMBERS: MICROECONOMIC, MACROECONOMIC AND SECTORAL ASPECTS

ABSTRACT

Since the late 1990s investors have been faced with new challenges due to changing locational characteristics in the Central European transition countries. Export demand became the main driving force of manufacturing FDI as opposed to local market capturing in earlier years. In addition, increasing production costs drove investors to relocate or upgrade their subsidiaries.

Structural upgrading can be traced by blending various approaches and sources of information: microeconomic, sectoral and macro-economic. In the micro-economic approach we rely on findings of case studies showing the close connection between the competence of a subsidiary and its chances for upgrading. At the macro level, changes in the industrial distribution of FDI stocks is analysed. For further

industrial characteristics we rely on a database comparing the performance of foreign investment enterprises and domestically owned enterprises.

Changing distribution of foreign capital and employment by industry confirms that transnational companies located export oriented subsidiaries into low-cost central European transition countries during the 1990s. Later on they moved simple and low-tech production, e.g. textile and clothing, further to the East and rarely upgraded their activity in the more advanced countries. Manufacturing FDI in the new members increasingly concentrated in the most internationalized industries like the automotive industry and electrical engineering which provide opportunity for upgrading and networking.

Key words: foreign direct investment, foreign investment enterprise, restructuring of manufacturing industry, new EU member states

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INVESTORS STRATEGIES IN NEW EU MEMBERS: MICROECONOMIC, MACROECONOMIC AND SECTORAL ASPECTS²

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INTRODUCTION

This paper traces the changing motivation of FDI location in the manufacturing sector of the Central European new EU member states (NMS)⁴ and candidate countries (CC)⁵ over the period 1998-2002. In this period a change in the motivation of investors took place due to new global strategies and changing locational characteristics. Internationalization of production became a major driving force of FDI in the NMS as opposed to local market capturing in earlier years. Shifts took place in the industry composition of FDI and in the industrial specialization of individual countries. Changing production costs compared with other regions drove investors to relocate or upgrade their subsidiaries. Upgrading was supported by improving institutional circumstances and a by and large positive experience gained by investors.

FDI research has been using several paths of analysis in economics and international business. The main sources of information and related approaches can be grouped into three categories:

(i) The microeconomic approach collects and processes firm level information. This is done either by processing press reports on foreign investment projects⁶, or by carrying out case studies and surveys for research purposes.

(ii) The sectoral approach relies on aggregate company balance sheet data. These are available from the statistical offices, partly reported partly collected for the purpose of a research project⁷.

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⁴ Czech Republic, Hungary, Poland, Slovak Republic, Slovenia, NMS-5 plus the three Baltic countries.

⁵ Bulgaria and Romania.

⁶ See e.g. Locomonitor, www.locomonitor.com This approach provides the most up-to-date information.

⁷ The wiiw has collected these data for seven CEECs. The latest available year for such data is 2001, in some cases 2002. See an analysis of the wiiw sectoral data in Damjan, J. and Rojec, M. (2004). International sources of similar data are: OECD "Measuring Globalization database" and Eurostat "foreign affiliates database".

(iii) The macroeconomic approach is based on FDI data taken from the balance of payments⁸. This is the most general analysis of direct capital inflows and outflows also regarding their distribution by investing country and targeted industry.

Only a blending of the three approaches can comprehensively present the movements in FDI. The approach of the paper is therefore an eclectic one, combining micro- and macroeconomic sources of information, various methods of analysis as well as the approaches of economics and international business. First it looks into the results of the microeconomic approach. We discuss the locational and the firm-specific driving forces of recent FDI movements in the NMS-5. Case studies and press reports reveal what kind of change is in its inception and why investors change their behaviour (chapter 1). While the motivation of changes can best be shown by this approach, it does not reveal the real size of changes. We come to the evidence of industry shifts in the composition of manufacturing FDI in chapter 2. In chapter 3 we present the trends in foreign penetration showing the industry characteristics in terms of foreign capital, employment, investment activity, as well as by export-oriented and domestic market oriented sectors. An outlook and conclusions are included in chapter 4.

1. Microeconomic evidence for location shifts of foreign subsidiaries in NMS-5

1.1 Determinants of location choice

The size and specialization of FDI in a host country depends basically on two bunches of factors: the characteristics of the host economy – locational factors, and the behaviour of transnationally active firms (transnational corporations, TNCs) – investor-specific factors (Bellak, C. 2004b). Both factors are imbedded in and thus influenced by developments in the world economy and by technological change. It is expected that, over time, locational characteristics of host economies change and so do the company specific characteristics and strategies of TNCs. As a consequence, new types of activities move into a location (country, region) while others move out. In mature FDI locations a further question is whether TNCs re-invest their profits there or shift elsewhere. Expansion and modernization FDI become more important than attracting new investors.

Locational factors include those host economy advantages that influence the costs of investment, production and market access. In the transition countries during

⁸ The main international source of data are the IMF Balance of Payments Yearbook and the UNCTAD World Investment Report. For Eastern countries a main source is Hunya, G. and Stankovsky, J., "Wiiw-wifo database on FDI". In these sources the most recent sectoral FDI data available in mid-2004 refer to the 2002 year-end stock.

the 1990s the advance of transformation to a market economy, the proximity to the main EU markets, cheap production assets and low wage costs had been the main location specific determinants of FDI. Within the region, a West-East difference emerged in all these respects which by and large showed up in higher per capita FDI in the more western, NMS countries compared to the East and South-East European countries. Differences within the NMS in terms of the size, sequence and specialization of FDI are smaller than compared to the other regions. The difference between the larger regions in terms of per capita FDI inflows grew during the 1990s, but it started to diminish after 2000. East and SE-European countries embarked on higher rates of economic growth, made progress in transformation and as a consequence, also started to attract more FDI than before (Hunya 2004). Countries opening up for foreign capital and reducing investment risk below a certain threshold always receive FDI up to a certain extent in their local market oriented industries and services. After the local market has been captured, FDI can grow only together with that market, further large FDI is possible only in export oriented projects. NMS enter into competition with each other for these export oriented investment projects based on their locational characteristics.

The firm specific factors are the assets and knowledge of the TNCs that make them specific, in some respect superior to other firms. This superior knowledge is necessary also to compensate against extra costs and risks of operating in a foreign environment. Host country FDI policy may diminish some of the entry and operational costs by providing information, support location search or by giving investment subsidies. All in all, TNCs can combine production factors available at a certain location with higher rate of return than local firms. They may also split production globally to make best use of advantages at different locations.

TNCs are either vertically integrated export oriented companies or horizontally integrated market seeking ones. Export-oriented subsidiaries are set up by a vertically integrated multinational company in a host country with the aim to lower production costs as well as seeking, securing and diversifying resources (Narula and Dunning, 2000). Export-oriented FDI involves fragmenting the production process geographically according to comparative advantages of the foreign location. The important location factors that influence this type of FDI include labour costs, physical resources abundance, infrastructure, trade barriers, exchange restriction, and FDI policies. Local market-oriented FDI is set up by horizontally integrated multinationals to penetrate a market, increasing market share, and minimizing competition risk (Zhang and Markusen, 1999). The determinants of this type of FDI include local market size, the level of human capital, infrastructure, political stability, FDI policy, and cultural barriers. The two types of FDI react differently to the changes in location specific characteristics.

Export-oriented FDI is more footloose, because the locational requirements are less specific. Competition arises among the countries that can provide the same resource at the same cost for the same production stage. New EU members have similar location advantages for export-oriented FDI, but not exactly the same. Consequently, competition for this type of FDI exists and will be discussed in the following chapter. NMS do not only compete with each other, but also with EU-15 locations, the home countries of the most important investors. In global terms they may be in competition with Asian and Latin American production sites. But much of the production is to serve regional markets and there is relatively little trade between the main regions of the World (the Triad). Thus FDI in the NMS mainly depends on the demand growth in a wider Europe. China attracts FDI as a growing market and low-cost production-site simultaneously. If the European economy gets more dynamism, search for new production sites will intensify and NEM may attract more FDI. Local market oriented FDI, on the other hand, is more imbedded in the host economy, but markets can also be served from abroad and imports can be an alternative for FDI.

The behaviour of investors in a host country changes due either to their own situation and overall market position or to changes in the characteristics of the host economy. For investors, location factors are externally given. Changes are perceived as external shocks and their reaction, keeping or leaving a location, depends of firm specific strategies.

The international migration of capital became more intensive during the 1990s and suffered a temporary and limited setback after 2000. These developments have been mirrored with some delay in the new EU members⁹. Their transformation process in 1990s took place in a period of accelerated international capital movements when TNCs were active in shifting production to new locations. First only some transition countries (Hungary and Estonia), later most of them conducted pro-FDI policies of privatization and promoting green-field investments. As a result, NMS have become open to and highly penetrated by foreign capital. Their economies have become dependent of the development of TNCs and their main export markets. The pattern of further economic growth is connected with their ability to attract further FDI and the strategy of TNCs.

⁹ For recent developments of FDI see Hunya and Stankovsky, 2004

1.2 Changes in location specific characteristics

One and a half decade after the start of economic transformation and the establishment of the first FDI projects, location factors in NMS look much different than before. Four changes took place in about the year 2000 that has had lasting impact on the amount and characteristics of export oriented FDI.

- Privatization started to come to an end;
- Wages increased and currencies appreciated;
- Competition for green-field FDI increased using economic policy tools;
- EU accession became a reality, its impact foreseeable.

By the year 2000, the share of private sector in GDP surpassed 70 percent in the NMS which meant full privatization in the traditional competitive economic sectors. Green-field FDI and follow-up investments in foreign subsidiaries have become the main sources of FDI in manufacturing. Subsequent investments and restructuring changed the production structure and competence of privatized firms. With the maturity of subsidiaries, the entry mode, privatization or green-field, loses importance.

Privatization and foreign takeover in the services sector has also advanced. The financial sector and telecoms went private and became mostly foreign owned. Utilities privatization has started later attracting record amounts of privatization related FDI. E.g. the Czech Republic sold the transit gas pipeline for USD 8 billion in 2002. This horizontal, market-seeking FDI was the largest single project in the region. The investor will benefit from predictably high revenues from transit fees.

While the advance of transformation reduced transaction costs, production costs increased in several countries. Data show considerable decline in the wage related competitive position of some central European countries in 2000-2002. Wage growth and appreciation was especially fast in this period in Hungary where average monthly wages in euro increased by 49%. In the Czech Republic euro wages went up by 35% and in Poland 25%. Average monthly wages in 2002 reached over EUR 1000 in Slovenia, about 500 in the Czech Republic, Hungary and Poland, 300 in Slovakia. Back in the mid 1990s when foreign investors settled in Hungary, average monthly wages in this country were 15% lower than in the Czech Republic and two times higher than in Romania. In 2002 Hungarian wages equalled the Czech and the lead of both countries over Romania and Bulgaria increased to three times. This change must be related to the productivity in individual countries and industries.

Hungary stood out in the second half of 1990s with very high growth of labour productivity. This was mainly due to the restructuring and efficiency effect of

foreign investors. Industrial productivity increased by two digit annual rates between 1995 and 2000. But in the following two years by less than 5% p.a. This means that wage cost increase could not been compensated by rising labour productivity. Unit labour cost in euro terms increased in NMS-5 by about 15% in two years, but in Hungary by 30%. A clear loss of wage related competitiveness occurred compared to the countries further east. One could expect rapid relocation of labour intensive production from the higher wage countries to lower wage locations, but the stay or leave decision is a complex one, depending also of investors specific considerations.

The textile and clothing industry can be considered an example for the behaviour of low-tech industries (see section 4). Location shifts follow shifts in wage costs rather rapidly which helps to avoid costly upgrading. Investors are mainly interested in low wages and produce standardized goods. But some high-value production also in this sector may stay near the main markets. More sophisticated industries provide more opportunity for production differentiation and networking. In their case agglomeration advantages may be more important than wage cost. High-tech industries may stay in locations where they are imbedded in the research and production networks that allow productivity increases beyond wage increase.

Further among the novelties after 2000, FDI policy also underwent important changes. In the first half of the 1990s policy tried to compensate for some of the risks and costs related to transition to a market economy. Hungary was the protagonist with establishing tax free zones, later industrial parks and providing ten years of tax holidays (see details in Sass, 2004). In the second half of the 1990s more countries offered tax cuts and location related subsidies, and established business parks to attract greenfield FDI. The Czech Republic and Slovakia became successful in attracting green-field investors. In Hungary promotion policy lost its earlier momentum and the country lost out in several races for large investment projects. The levelling out of FDI policy and promotion efforts between the major players of the region contributed to a fairly even distribution of new FDI projects between countries.

As pointed out in the next section, locally embedded subsidiaries have more chance for being upgraded and develop. Some countries realized that not only the attraction of new investments, but keeping existing investors and generating spillovers is the main issue. The Hungarian government launched a programme in 1998 (redefined it in 2000) with the aim to support potential local suppliers with technical and financial help to improve their technical, financial and knowledge background. Similar programmes were later initiated also in the Czech Republic. Such programmes were well intended if not always been very efficient. As the car industry was the main target, supplier programmes could not influence TNC decisions in the more mobile industries like clothing and electronics.

1.3 Firm-specific characteristics and TNC – subsidiary relationship

Changes that affect the development of foreign subsidiaries beyond the situation in the host country include global and home country changes, as well as firm-specific conditions. Global changes in the early 2000s comprised the electronics industry bubble and the stock exchange boom and bust having a large impact on the financial ability of TNCs. Another novelty was the start of the outsourcing or relocation of services. Conditions more closely related to the subsidiary but not part of the locational conditions were related to the maturing of FDI projects, the competence of subsidiaries and the development of networking.

Most of the research analysing the motivation of foreign investors has looked at their entrance strategy, not the consecutive development strategies. Studying follow-up strategies have become more and more relevant when some of the subsidiaries in NMS got ten years old. Initial investments have amortized, factors that had prompted investors to move into a location may have vanished. Investors were put to develop new strategies, either stay at the given location or move to a more advantageous one. Either new competences are created at, or shifted to the subsidiary, or the investment is phased out, sold or moved to another location. The decision does not depend of the TNC only, but also the subsidiary will have its own local strategy, assets and interests.

There is literature showing that the answer on the stay or leave question depends on the position of the subsidiary in the TNC international network, its mandate and competence. The competences acquired or developed by the subsidiary will determine how valuable it is for the TNC. We also have to refer to the fact that local market oriented subsidiaries may more easily be upgrade than footless export oriented subsidiaries.

Established competencies of a firm allow more or less room to respond to shocks with local means. Dörrenbächer (2002a) based on Schmid et al. (1998) presents a five-grade scale of competencies from “marketing satellite” through “miniature replica”, “rationalized manufacture” and “product specialist” to “strategically independent subsidiary”. Initially, subsidiaries are usually set up with a lower level of competence and close control by the mother company. Higher level competence, more independence in decision-making may follow later. The higher the local competence and freedom of the subsidiary, the more it can develop positive responses to outside shocks. The development of new competences, moving the firm upwards on the competence ladder is a primary objective of subsidiary managers. They may even go in conflict with the headquarters on important issues. The following case-studies and surveys illustrate this concept and suggest conclusions for NMS.

Dörrenbächer (2002b) reports on a survey German investors in Hungary. 70% of the investors were small and medium size companies, for half of the investors the Hungarian subsidiary was the only foreign location. Their characteristics are in striking opposition to the general perception of the big and powerful TNC. The typical German investor either bought a Hungarian company and changed some of the machinery there or transferred used production lines from Germany to Hungary. Building new, state-of-the-art factories was rare, just like relying on local innovation. The investors transferred technology, production and organization as a package and sent the managerial staff to operate the subsidiary. The technology transferred to Hungary was mostly not the latest but still efficient at the wage cost level of 1992 or 1996. Modernization of the transferred technology was rare. Some investors that had more than one production sites in Hungary modernized only one of the subsidiaries. Non of the subsidiaries established in the beginning of the 1990s failed until 1998. But in the following years all assembly-type operations in the sample were closed down or sold.

New competences can be developed in subsidiaries but most of them get stuck at a low competence level. The integration of the NMS subsidiaries with TNCs is usually narrow, limited to one or the other corporate function and their integration in national networks is even loser. Low competence means vulnerability and closure is possible if locational circumstances require. Dörrenbächer (2002a) shows examples of German investors in Hungary that developed or streamlined subsidiaries according to local competences. The shoe-maker Salamander came under severe pressure when wages went up and the Hungarian forint appreciated after the year 2000 and closed down all production locations in 2003.

As to FDI entering by privatization, Rojec et al. (1995) showed that the competences of the subsidiary were already laid down in the privatization contract. The role of the acquired company in the TNC's international network was established in advance and there was little possibility to get out of a given position. This may also be true in case of green field investments. The investor set up the subsidiary for a certain task and shifting new tasks is always the matter of new evaluations and negotiations. Still, local market oriented, privatization related FDI is exposed to more gradual changes (Harvard Business School 2001). As location factors hardly change and competences can be improved in the subsidiary, its stability is ensured (Yoruk, 2002a). Success of the local market can also support an export strategy. Rapidly expanding domestic demand allowed Polish clothing firms to diversify their market strategy, while Romanian firms active in a stagnating domestic market remained dependent of outward processing contracts (Yoruk, 2002b).

All the above cases highlight those strategies where the investor seeks stability and either avoids drastic changes or closes down the subsidiary when location factors change. Another strategy is linked to continuous upgrading and learning at the subsidiary¹⁰. Familiarity with the local competences can lead to an optimization of the role of a subsidiary. New products can be added and local knowledge and networking utilized. Larger and more integrated investors tend to be of this type. Although one finds more passive investors which do not seek to diversify competences, than investors with an upgrading strategy, larger investors more often give a longer perspective to their locations.

Song (2001) sees the integration into the host country economy as the most important factor that decides the mobility of the investment. Companies with a wide range of local links, suppliers, customers and service networks can more often preserve their location than simple assembly lines processing mainly imported components and exporting their products. Locally integrated firms may be given new competences in case of a shock. The TNC will see the location valuable and shift higher value added production and more productive processes to the subsidiary to counterbalance cost increases. This was the case with some of the Japanese electronics firms when Asian currencies appreciated. Integrated subsidiaries received higher value and more complex tasks. The availability of local competences were decisive. Subsidiaries not integrated locally moved out from Taiwan to Malaysia or even the Philippines.

A project lead by Jen Gristock (2003) set the target to map the 'emerging industrial networks' in CEECs relying on case studies (see e.g. Yoruk, 2002). In the summery of case study findings Radosevic (2002) points out that CEE companies have made progress over the last ten years improving their marketing, finance and organizational capacities. But their capabilities have rarely allowed to go beyond the networking role they were imposed by their main foreign customers, owners or network providers. Clothing firms are to a large extent locked in an outward processing function. The profits earned on processing is very limited, it provides employment but not enough investment means. Own brands, new products can increase profit margin, but the freedom to do develop it may be limited. Polish firms more than Romanian have been partially successful to build their own trademark and organize domestic suppliers and retailers. Hungarian examples show, that even if the company becomes foreign owned, its role may still be confined to simple processing.

The electronics industry in NMS, mostly located in Hungary, underwent rapid growth through FDI in the 1990s but problems emerged later linked with the global crisis. Foreign investors established state of the art production subsidiaries, in

¹⁰ The concept of globally networked subsidiaries is described by Bartlett and Ghosal (1986). The evolution of affiliates in CEECs is presented in Manea and Pearce (2004).

case of takeovers they restructured the acquired firm. FDI facilitated a rapid initial upgrading of firms and products. But the benefits of this change has been consumed and deeper integration, higher standard production mandates became necessary. Radosevic (2002) argues that more investment of the same type can lead to a critical mass of investments beyond which clustering and developing a local supplier network becomes inevitable. Subsidiaries would also undergo a differentiation process with some up them achieving higher competences and production mandates. But the global crisis of the electronics industry interrupted the upgrading and differentiation process. Flextronics and IBM streamlined production in Hungary by closing down some large production lines. As a positive development, shrinking of production in component and assembly subsidiaries did not effect the expansion of the few existing R&D facilities. An optimistic scenario is outlined by Kalotai (2003) claiming that the global recovery of electronics will soon have positive effects on the industry in Hungary and attract more FDI in the future albeit less in production lines more in related services. In fact, both Erikson and IBN have expanded IT services in Hungary other firms expanded in the Czech Republic and Poland.

The automotive industry has developed a regionally more integrated network than the electronics industry. McKinsey's report (2003) points out that there are large cost saving possibilities for car producers by locating into CEECs. Still there has been no massive relocation of production, only the enlargement investments were based in the NMS. National policies usually supported FDI in the motor industry but the success depended more of the global standing of the investing TNC than of the national environment. The Volkswagen group, including Škoda in the Czech Republic, VW Bratislava and Audi Győr is the most successful among the investors. But Daewoo having subsidiaries in Poland and Romania faced problems as a result of financial problems at its Korean parent company. Also Fiat had problems in Italy and was forced to cut production in Poland. Troubles in the latter case were not attributable to the CEEC location. Meanwhile also other investors are moving into the region with an eye of producing cheap for the European market. Toyota and Hyundai are new investors in the Czech Republic and Slovakia. The car parts manufacturers have usually followed the main assembly investments, local sourcing increased and clustering developed.

In 2004 German companies announced that they would relocate production to NMS on a larger scale, had the costs in Germany not be curtailed by government measures. They envisage shifting production and moving more complex and technologically more sophisticated processes into existing subsidiaries¹¹. But it seems

¹¹ In a Spring 2004 survey carried out by Roland Berger Strategy Consultants (Rolandberger.de) among 70 companies in the industrial systems, automotive component supply and electrical engineering industries. They found that 69% have already located parts of their operation out of Germany but only 13 per cent have gone

that due to the low investment level of many German companies, this relocation of production is more a threat than a real process. Different is the Swedish white goods manufacturer Electrolux which has closed several West European production sites and moved complete factories to Hungary and Romania.

This chapter gave some characteristic examples of FDI movements recorded on the micro-economic level. We saw increasing activity in terms of location movement after the year 2000. While inflows dominated, outflows, not properly captured by macro-level and sectoral statistics, appeared. FDI projects were closed down in the wake of at least three different processes: change in the locational characteristics, mainly due to increasing labour cost in NMS, and changes in the TNCs' strategy due to at least two factors, the global crisis of the electronics industry and the aging of initial investment projects. As to the labour cost increase, several studies concluded that the deeper the integration of a subsidiary into the TNC network and the higher its competence, the better the chance of its survival and development. It is more difficult to identify the impact of further two location specific changes, EU integration and new promotion policy tools. These factors have certainly contributed to FDI growth in the region but other factors weakened their impact. The following chapter traces the shifts in the size and industrial composition of manufacturing FDI. Such statistics do not reflect the rapid company level movements but draw attention to the overall FDI inflow increase in the 1998-2002 period.

2 FDI patterns in manufacturing in 1998-2002

As manufacturing sector FDI increased less rapidly than services sector FDI, its share in FDI stocks fell in most countries (See Appendix 1). The exception was Hungary where manufacturing FDI recovered after services sector privatization related FDI came to an early end. In absolute terms, manufacturing FDI stocks more than doubled in the Czech Republic, Hungary, Poland, Slovakia and Romania in four years (table 1). As of 2002, highest amount was invested in the Polish manufacturing, EUR 16 billion, followed by the Czech Republic and Hungary both with EUR 13 billion. Romania follows with a distance, close to EUR 4 billion, then Slovakia almost 3 billion. The other countries are small in size thus the international significance of FDI there is limited. The leading countries in per capita manufacturing FDI are also the Czech Republic and Hungary. Most of the new manufacturing sector FDI went into medium-high technology industries (Table 2 and Appendix 2) with significant differences country-wise.

beyond simple offshoring but 33 percent already search for the most suitable location for every corporate function.

Table 1

Share and amount of manufacturing FDI inward stock (total stock=100)

	1998 share	2002 share	Stock EUR mn 1998	Stock EUR bn 2002
Czech R.	46	36	5.6	13.1
Hungary	38	46	5.7(excl. reinvestment and loans)	13.6 (excl. loans)
Poland	39	36	7.5	16.4
Slovakia	49	36	0.9	2.7 (excl. loans)
Slovenia	53	43	1.5	1.7
Bulgaria	52 (1999)	33	1.1 (1999)	1.7
Romania (industry)	41	53	1.8 (estimated)	3.8 (excl. loans)

Source: wiiw FDI database

Table 2

FDI inward stock in main manufacturing industries in 2002

	Czech R.	Hungary	Poland
DM Transport equipment EUR bn	2.3	3.2	2.3
Share in manufacturing, %	17	24	14
DL Electric and optical eq. EUR bn	1.9	2.7	0.5
Share in manufacturing, %	14	20	3
DK machinery n.e.c. EUR bn	0.7	0.8	0.5
Share in manufacturing, %	6	6	3
DF+DG+DH Chemicals, EUR bn	2.0	2.4	3.1
Share in manufacturing, %	16	18	19

Source: wiiw FDI database

In the Czech Republic FDI reached record high levels due to privatization related sales to foreign investors and new greenfield projects. Takeovers in the banking sector, transport and telecommunication as well as greenfield investments in real estate and trade triggered the decline in the share of manufacturing in the FDI stock from 46% in 1998 to 36% in 2002. The amount of manufacturing FDI was EUR 2 billion in 1999 and still remarkable EUR 1.1-1.7 billion p.a. in each of the following four years. The industry distribution of manufacturing FDI shows a strengthening of the position of medium-tech industries and losses for low-tech industries. The highest amounts were invested in the production of motor vehicles, metals and food. Very low inflow was recorded for the leather and shoe production.

Total FDI stocks doubled in Hungary in 2002 compared to 1998. The share of manufacturing increased and became higher than in other countries of the region (46% in 2002). In the services sector, real estate and other business activities became the most important destination followed by trade and financial services, but in electricity as well as transport and telecom the invested amount shrank showing that after initial investments in acquisition and modernization no further investments were made. Manufacturing FDI boomed both in new projects and by reinvested earnings in foreign subsidiaries. Within manufacturing, the transport equipment industry held 24%, the electrical and optical equipment 21% and the food industry 16% of the FDI stocks in 2002. These shares changed little over the time period under discussion. But there was a general shift towards the sectors with higher technology. The most remarkable increase took place in the manufacturing of transport equipment, further rapidly increasing industries were the rubber and plastic as well as the machinery industry, while growth was moderate in the textile, clothing and leather industries.

In Poland the peak years of FDI were 1998-2000. Inflows have been on the decline in more recent years due not only to less privatization revenues but also to low FDI in the manufacturing sector. In 2000-2001 only 20% of the inflow went into manufacturing, in 2002 over 30%. Out of EUR 1.2 billion manufacturing FDI inflow in 2002, 28% went into the transport equipment industry and 36% into the chemical industry. In the office machinery and electronics industry, there was a net capital withdrawal following high investments in the previous years.

In two of the three main FDI target countries presented above, transport equipment production is the industry with the highest share of FDI (Table 2). Hungary is ahead of the others concerning the amount invested. This may change due to ongoing new green-field investments in the Czech Republic and Slovakia. Also the electric and optical equipment industry has its main production hub in Hungary while the Czech Republic is strong second. Poland is different from the other two countries. It has much stronger position in the chemical industry and less FDI in the machinery industries. While industries at higher technology level have higher growth rates in all these countries than industries in the low-tech sectors, specific country characteristics of technological composition do not change rapidly. The impact of the global decline of the electronics industry in 2002 has been an end to structural upgrading of manufacturing. As at the same time a boom of the metal industry set in, industrial structure shifted towards lower value added branches.

3 Foreign penetration in CEEC manufacturing 1998-2001

3.1 The role of foreign investment enterprises

Foreign direct investment (FDI) penetrated CEEC manufacturing and foreign subsidiaries became dominant producers and employers in many industries. What is the size of this penetration and what is its impact on home economies? These are the question to be answered in this section. It also looks at changes in foreign penetration over time and gives a more divers picture of structural change than FDI stock data.

Foreign affiliates/subsidiaries are special firms the characteristics of which influence economic growth, specialization and a lot of other features of a host economy. Subsidiaries usually have higher technological level than domestic companies and can benefit from the technological advance of transnational companies (TNC). Their integration into the economy of the host country is usually lower than of domestic owned companies, they rely more on imports of components and services. (For a survey of the foreign-domestic gap in firms' performance see Bellak, 2004b.)

Foreign penetration has been unavoidable and on the whole advantageous in transition countries. Superior technology and knowledge incorporated in foreign affiliates have speeded up the transformation of former centrally planned economies. Corporate integration into international structures has been necessary for transition country firms to survive under market competition. Restructuring usually speeded up after privatization to foreign owners. Inefficient companies preserved under state ownership usually did not manage to become viable, they had to be liquidated and their assets sold to new ventures. Many domestic private firms created by privatization or anew found at some stage necessary to involve a stronger foreign owner. (For the role of FDI in the transition process see Hunya, 2000.)

Foreign penetration has changed the decision-making in firms and brought new challenges to economic policy. Integration into international corporate structures resulted in increasing specialization of production companies and limited their competence. Strategic decision-making has been transferred to headquarters abroad. Subsidiaries got exposed to external shocks from the TNC headquarters. Corporate re-organizations following external decisions may negatively hit otherwise viable subsidiaries. Economic policy has been exposed by unforeseen capital movements, hiring and firing of labour and increased foreign lobbying. Policy has to adjust to the increasing international imbeddedness of the national economies while it also gave up some competencies in the process of EU accession.

Understanding shifts of international production specialization is possible by looking at the changes in foreign penetration of countries and at the industry specialization of foreign affiliates in comparison with domestic firms. Data for foreign penetration i.e. the share of foreign investment enterprises (FIEs) in CEE manufacturing industry is available for the most recent year of 2001 or 2002. Earlier works compared 1996-1999 data (Hunya 2000 and 2001) this paper compares 2001 with 1998 data¹². The highest level of foreign penetration in terms of available indicators on employment, sales, exports etc. has been reached in Hungary. (Table 3) In 1998, foreign penetration in Hungary was much higher than in the other countries which caught up lately without reaching the Hungarian level in 2001.

Table 3

Share of foreign investment enterprises (FIEs) in main indicators of manufacturing companies in selected countries in 1998, 2000 and 2001, in per cent

	Equity capital ¹		Employment		Investments		Sales		Export sales	
	1998	2001	1998	2001	1998	2001	1998	2001	1998	2001
Estonia	36.8	46.3	20.8	30.8	.	.	28.2	36.7	35.2	48.5
Czech R.	28,4	54,5	19,2	34,1	41,6	69,3	31,6	53,3	47,5	69,3
Hungary	72.7	67,6	44,9	45,2	78,7	77,9	70,0	72,5	85,9	87,9
Poland	43,2	53,1	26,0	32,9	51,0	64,0	40,0	52,0	52,3	66,2
Slovakia	35,2	55,9	18,5	36,4	50,1	73,1	36,2	59,3	59,0	74,9
Slovenia	21,6	24,6	13,1	17,6	24,3	22,4	24,4	29,3	32,9	36,8
Romania	19,8	54.2	13,7	30.7	35.6	57.8	24,2	48.9	22,4	23.9 ²

Notes: 1) Estonia: own capital; Hungary 1998: own capital; Romania: nominal capital. 2) year 2000

Size coverage: Hungary, Romania, Slovenia: all firms; Estonia and Czech Republic: firms with more than 20 employees; Poland: firms with more than 5 employees.

¹² *Foreign investment enterprise(FIE)/domestic enterprise(DE) dataset:* This database relies on aggregate balance sheet data of companies. It separates companies with foreign share in equity above 10% (foreign investment enterprise) and the rest of the companies (domestically owned enterprises). This size limit coincides with the standard definition of FDI, and covers mostly enterprises under foreign control. Estonia: majority foreign owned firms. *Source of data:* Statistical offices or tax authorities of CEECs.

Countries and company size coverage: Hungary, Romania, Slovenia: all firms; Estonia and Czech Republic: firms with more than 20 employees; Poland: firms with more than 5 employees.

Years covered: 1993-2001, for Estonia 1995-2001, for Romania 1998-2002

Indicators included in the database are: equity capital, sales, value added, employment, wages, export sales, profits, investment outlays. May slightly vary by country and year according to availability.

Sectors: ISIC 2-digit manufacturing industries (codes 15 to 37).

FIE – Foreign Investment Enterprise: companies with at least 10% foreign equity ownership. Hungary from 2000: companies with at least 10% foreign equity of at least one foreign owner. Estonia: majority foreign owned firms.

Source: WIIW Database on foreign investment enterprises relying on national sources.

The high early inflow of FDI into the manufacturing sector of Hungary materialized in high shares of foreign affiliates by all indicators well before such a process in other countries started. When during the first part of the 1990s domestic companies, mainly state-owned, went out of business on a massive scale the position of foreign affiliates became strong but hardly increased in later years.

In the Czech Republic, Poland and Slovakia foreign penetration underwent more rapid increase after 1998 than before. Later than in Hungary, domestic companies had to restructure and many of them ended up in foreign ownership. The more productive, export oriented companies have become foreign owned and their high shares in investment suggest that the trend will continue. Shrinking domestic sector production and employment contributed to the increase of the share of foreign affiliates. If the increase in foreign penetration continues at the same speed as in the 1998-2001, the level of 2001 Hungary can be reached in Slovakia and the Czech Republic in 2004-2005, in Poland a few years later. If this takes place, the latter countries prove to be just latecomers and not principally different. But things can develop differently. It is not yet clear at what point of time and at what level of foreign penetration the saturation observed in case of Hungary would set in.

Three other countries included in table 3 show clearly different features than the four discussed above. Estonia has unique features as it had higher rates of foreign penetration in 1996 than the Czech Republic and Slovakia, but the increase in later years was slower. In 2001 the rate of foreign penetration was below of those but still ahead of Slovenia and Romania. Low and slowly increasing foreign penetration is characteristic of the Slovenian manufacturing. Slovenia did not invite foreign investors and privatized to insiders or domestic owners. FDI was not very necessary as Slovenian companies had been integrated internationally and had low competitiveness deficit which made a foreign takeover dispensable. It can be easily argued that in very small open economies like Estonia and Slovenia a dominant position of foreign TNCs is just a matter of time. Just the handful of new high-tech subsidiaries being set up in Estonia can offset statistical picture. Slovenia on the other hand does not have locational advantages which may attract green-field investments on a larger scale. At the same time local medium size companies go international and build competitive positions.

Romania is a relatively less developed country compared with the new EU members. It started to privatize and attracting FDI relatively late. In 1998 it had lower or similar rate of foreign penetration as Slovenia, but a more dynamic increase

later. As FDI inflows accelerated in the last three years, penetration rates can now be similar to Poland two years earlier. It seems that this country is slowly joining the club of countries with high foreign penetration in manufacturing.

Foreign affiliates in all the seven countries for which data are available and presented in table 3 have superior performance indicators to domestic companies in terms of labour productivity, export propensity and investment propensity. This is partly due to their better capital equipment and access to foreign multinationals' management, know-how and market position. On the other hand, higher productivity is also due to narrower specialization on assembly and component production using economies of scale. Headquarter functions, R&D and production related services are rarely found in these subsidiaries. In the following sections, foreign penetration will be measured by the employment share of foreign affiliates. Finally we turn to export specialization and the role of foreign affiliates in exports.

3.2 Foreign sector employment

This section compares the position of industries in respect of foreign penetration in four countries for which the same detailed foreign penetration data are available (Appendix 3). Data refer to 2001 except for Romania for which 2002 data are available. At this point of time, the Czech Republic, Poland and Romania had all about one third of the manufacturing labour force employed in the foreign sector, Hungary 45%. The difference from the country average was calculated for each industry and the result presented in table 4 to show the role of foreign employment. It turns out that the same industries are below or above the average rate of foreign penetration in almost all countries. There is a kind of uniformity among the countries of similar level of development and with similar transformation history. Romania is the only country diverging from the overall trend having clearly more foreign employment in the lower technology industries.

The countries under survey have high foreign penetration (measured by the share of FIEs in the employment of the industry) in medium-high and high-tech industries: electrical machinery, radio and TV sets production and the motor vehicles industry (table 4). But they have low foreign penetration in other higher technology industries like office machinery as well as medical and other instruments (except the Czech Republic). It must be noted however, that overall employment, thus also foreign employment is very small in high tech industries in all four countries. This is not only due to high productivity in this sector but FDI is rather low in this industry.

Lower than average foreign penetration can be found in the food industry, fabricated metals, machinery n.e.c. and other transport equipment. These are industries which used to have large overcapacities in each country. Production and

especially employment has been shrinking due to narrowing demand and import competition. Foreign investors came into these industries only to the share that they saw the market potential interesting. Also low tech industries, like textile, clothing and leather are less than average penetrated by foreign investors except in Romania.

Table 4
Share of FIEs in employment, difference from the manufacturing average

<i>Industry</i>	<i>Description of foreign penetration rate</i>
15 Food products, beverages	Below average
<i>16 Tobacco</i>	<i>Above average, except Romania</i>
17 Textiles	Below average except Romania
18 Wearing apparel, dressing	Below average except Romania
19 Tanning and dressing of leather	Below average except Romania
20 Wood	Below average except Poland
<i>21 Paper and paper products</i>	<i>Above average except Hungary</i>
22 Publishing, printing	Below average except Poland
<i>23 Coke and petroleum</i>	<i>Above average except Czech R.</i>
24 Chemicals	Below average except Hungary
<i>25 Rubber and plastic</i>	<i>Above average</i>
<i>26 Other non-metallic minerals</i>	<i>CZ and PI above, H and R below</i>
27 Basic metals	Below average except Romania
28 Fabricated metals	Below average
29 Machinery and equipment n.e.	Below average
30 Office machinery	Below average except Czech R.
<i>31 Electrical machinery and app</i>	<i>Above average</i>
<i>32 Radio, TV sets</i>	<i>Above average</i>
33 Medical, precision, opt. ins	Below average except Czech R.
<i>34 Motor vehicles, trailers</i>	<i>Above average</i>
35 Other transport equipment	Below average
36 Furniture, manufacturing n.e.c.	Below average except Poland
37 Recycling	Below average

Source: Based on Appendix 4

There are also exceptions to the general trend. Exceptionally high FIE shares in the employment of an industry shows that the country specializes on that sector due to tradition and export-orientedness. E.g. Poland specialized in the wood and furniture sector which is supported by a high presence of foreign affiliates. Exceptionally low FIE share in employment of an industry indicates the opposite case, that the country does not specialize on this industry internationally. E.g. in the non-metallic minerals sectors, specialization and foreign penetration are significant

only in the Czech Republic and Poland but not in the other two countries. A further reason for low foreign penetration can be incomplete or insider privatization, like in the case of the Romanian tobacco industry.

The analysis of employment movements in 1998-2001 reveals important country differences (table 5). In the typical transition economy the foreign sector employment increases while the domestic sector employment decreases more rapidly thus overall employment declines. Most countries were like this in the mid-1990s, but in the period under discussion only Slovakia, Romania and to some extent Poland where the restructuring process and labour shedding of the domestic sector is still going on¹³.

Table 5
Employment change 1998-2001

	Total	Foreign	Domestic
Estonia	0	+	-
Czech Republic	+	+	-
Hungary	+	+	+
Poland	-	0	-
Slovak Republic	-	+	-
Slovenia	0	+	-
Romania	-	+	-

Source: wiiw FIE database

Hungary is the only one among these countries, where employment expanded in both the foreign and the domestic sectors. Employment increased in 1998-2001 mainly in the high and high-medium-tech industries like office machinery, electric machinery, radio and TV sets production. Cheap labour light industries started to lose jobs in both the foreign and the domestic sectors.

The Czech Republic underwent later than Hungary the transformation related restructuring simultaneously building a more modern industry. There was even room for light industries using low-cost labour to expand employment in 1998-2001. Also Slovakia was in the process of transformational restructuring and foreign takeover. But overall employment in manufacturing fell, the foreign sector replaced only two thirds of the lost domestic sector jobs. This is in sharp contrast with Poland, where the domestic sector lost employment on a massive scale and the foreign sector did

¹³ In our database of manufacturing companies overall employment increased also in countries show a decrease according to the national labour statistics. The latter may use different size limits and classifying activities instead of companies.

not create new ones. As discussed earlier, Poland received relatively little FDI compared to its size. Estonia and Slovenia had the smallest degree of foreign penetration among the countries under survey, overall employment increased marginally also here only due to the expansion of the foreign sector. Romania is at a relatively early stage of restructuring when the manufacturing sector massively loses employment. The foreign sector substitutes only half of the jobs lost in the domestic sector.

By the time of EU accession, new members have basically passed over the period of rapid restructuring of the formerly state-owned economy and adaptation to market economy circumstances. The processes described above for Hungary, may now characterize also other countries. This means that the foreign sector no longer grows via privatization, but by new investments and to some degree by taking over private domestic firms. With economic growth consolidating overall employment may also start growing in manufacturing, but the main source of growth remains the improvement of productivity.

3.3 Export demand, the main driving force of manufacturing FDI in recent years

In this chapter we seek answers for three questions:

1. Is there a difference between the domestic owned industries and the foreign investment enterprises (FIEs) in terms of export propensity? The question can be answered relying on the indicator “export sales per sales” comparing the two sectors.
2. Does FDI grow more in domestic market oriented industries or in export oriented industries? We put industries into two categories. In the category called “domestic market oriented industries” the indicator export sales per sales is below 30%; in the export oriented industries this indicator is above 70%. The rest of the industries produce both for exports and for the domestic market. We look at the amount and change of the amount of FDI in both categories of industries in the period 1998-2002.
3. How does employment feature in the two categories of industries? We compare the employment in the domestic and the foreign owned sectors for the two types of industries.

In Hungary (Appendix 5) domestic owned manufacturing companies (DEs) exported 22-23% of their production both in 1998 and 2001. FIEs’ export share was much higher than of DEs and also increased from 56% in 1998 to 64% in 2001. Among the new EU members the Hungarian industry has the highest share of

foreign affiliates in manufacturing production and exports. It also shows the largest gap in terms of export orientation between the domestic and the foreign sectors. This duality developed during the last decade mainly owing to new FDI coming to the country¹⁴.

Turning to the two types of industries in Hungary, export oriented industries (where FIEs exported more than 70% of their sales in 2001) were the following: wearing apparel, leather, office machinery, electrical machinery, radio and TV sets, motor vehicles, furniture and other manufacturing. Export oriented industries can thus be found mainly in the final finished goods producing sectors. This does not mean that subsidiaries are only of the assembly type, they can also be component producers. In the industries with more complex products the production process can be highly segmented between locations and generate more international trade. Labour cost must have been an important factor forming this specialization as we can find labour intensive industries here both in the clothing and the electronics sectors.

The domestic market oriented FIE industries in Hungary (which had below 30% export share in sales in 2001) were the following: food and beverages, tobacco, publishing and printing, coke and petroleum, other non-metallic minerals. This list has been stable over many years. There is also no surprise in this list, as in fact these are really products that require closeness to markets, are usually organized on a national basis, have high transport cost or were affected by some kind of trade restriction.

The question is which of the two groups of industries were more targeted by FDI in the 1998-2002 period? The amount of FDI in the domestic market oriented segment of manufacturing (broadly calculated as DA+DE+DF+DI) was EUR 1.8 billion in 1998 or 31% of the total manufacturing sector FDI¹⁵. Although the FDI stock of this sector doubled over four years, its share shrank to 26% in 2002. The share of the export oriented industries (in a broader sense comprising DB+DC+DL+DM+DN) was 42% in 1998 amounting to EUR 2.4 billion FDI stock; in 2002 its share increased to 47%, the amount of FDI stock to EUR 6.4 billion. Already in the former year, FDI was higher in the export oriented industries than in the domestic oriented ones and the difference between the two sectors

¹⁴ Back in 1994 the export propensity of FIEs was much lower, only 30% of the manufacturing production in FIEs was exported, half of the share of 2001. At that time the capturing of the domestic market and the available capacities was the main driving force of FDI. But foreign investors also captured some of the larger, and more export oriented local capacities thus their export propensity was higher than of domestic owned companies which exported only 20% of their output. With time passing, the original entry mode and the original product mandate mattered less and less.

¹⁵ Stock calculation by industry in Hungary is incomplete for years before 1999 (subscribed capital), and comprise only the owners' equity for 2002.

increased in the following four years. Export oriented FDI expanded at the same rate as the domestic oriented FDI shrank, while the industries serving both markets maintained their position.

Foreign affiliates employed 45% of the manufacturing workforce in Hungary both in 1998 and 2001, their number increased from 355 thousand 370 thousand. The domestic market oriented industries employed 27% of the FIE workforce in 1998 and 21 per cent in 2001. The share of those employed in domestic market oriented DEs was 28% and 27% in the two years, respectively. Thus while the foreign sector was reducing labour in the domestic market oriented industries, the domestic sector maintained it. In the foreign market oriented industries FIEs employed 36 per cent of their workforce in 1998, and in 2001 already 46%. There were two export oriented industries, electrical machinery and radio and TV sets where most of the new foreign sector jobs were created, 20,000 in each. The other export industries saw no significant employment change. In fact, these two industries are responsible for the whole foreign employment change increase between the two years, other industries usually lost employment.

In the Czech Republic there is a more balanced foreign domestic structure in manufacturing than in Hungary. Domestic companies exported 31% of their sales in 2001 (1998: 30%), more than in Hungary; FIEs exported 61% (1998: 58%), almost two times more than DEs, but less than in Hungary. The gap between the domestic and the foreign sectors increased also less over the last few years in the Czech Republic than in Hungary.

Domestic market oriented FDI in the Czech Republic can be found in the following industries: food products, tobacco, publishing and printing, coke and petroleum, the same as in Hungary. These industries attracted EUR 1,3 billion FDI by 1998, that is 23% of the manufacturing FDI, by 2002 stocks increased to EUR 2.1 billion, equalling 16% of the manufacturing total. The decreasing share points to the limited growth prospects of industries that are predominantly serving the local market.

Export oriented industries in the Czech foreign sector are: textiles, wearing apparel, leather, fabricated metals, general machinery, office machinery, motor vehicles, other transport equipment. This is a higher number of branches than in Hungary, comprising also more of the metalworking-machinery activities as well as textiles. Diversified industrial and export structure is a tradition in the Czech Republic and foreign investors seem to have found good opportunities to keep up export oriented manufacturing on a wide base. In 1998 these export oriented industries had an FDI stock of EUR 1.5 billion, 27% of the manufacturing total. In 2002 the amount was already EUR 4.3 billion and the share increased to 33%.

Regarding the distribution of employment between the two categories of industries in the Czech Republic in 1998 there was hardly any difference between the

domestic and the foreign sectors. In the domestic market oriented industries both ownership sectors had 14% of the labour force, in the export oriented industries the foreign sector had 43%, less than the domestic sector. As of 2001, employment in the foreign sector increased in the domestic market oriented industries but its share declined marginally. In the domestic sector both the number of employed and their share increased in the domestic oriented industries. Especially the food and beverages industry boomed bringing to the market more sophisticated products and in a wider range. In the export oriented industries in 2001 the foreign sector employed 42% of its workforce a little less than three years before, the domestic sector 44% worked in the export industries in both years. Not much movement especially if compared with Hungary. The lack of difference in the structure of the domestic and the foreign owned sectors in the share of the export oriented and the domestic market oriented industries is a striking feature of the Czech Republic. Foreign direct investment did not establish new export oriented industries but penetrated those where the local firms had been export-oriented utilizing the available technical skills and production capacities. The main difference between the foreign and the domestic companies is that the export share of output in export oriented industries in DEs is lower than in the FIEs.

Poland is a different case altogether if compared with Hungary and the Czech Republic. Domestic market orientation prevails in the foreign sector and it is hard to find typically export oriented industries. Being a relatively large country with a diversified industry, the export shares in sales are small: in 1998 manufacturing DEs exported 17% of their production, FIEs 28%, the gap widened to 18% and 32% in 2001. Even in the latter year, the export share of SOEs was as small as of Czech domestic firms.

At the branch level, there were only two export oriented industries, leather and furniture in 2001 with more than 70% of the FIEs' production sold abroad. Seven industries were domestic market oriented. Considering those industries predominantly export oriented that sold more than 60% of the production abroad (instead of 70%) the list is wider, including also textile, wearing apparel, electrical machinery, radio and TV sets, motor vehicles. Some of these industries are new in terms of export orientation. In 1998 the motor vehicle industry sold only less than 30% of the production abroad, doubling the share in three years.

The amount of FDI in the domestic market oriented industries (confined in statistics to DA+DF+DG, while DI is not included in the statistics and some other industries are parts of more aggregate groups) was 38% in 1998, and 34% in 2002. Export oriented industries (DB+DL+DM, no data are available for DC and DN)

had 22% in 1998 and 19% in 2002¹⁶. Uniquely among the countries surveyed here, the industries with the highest export shares attracted relatively less FDI than domestic market oriented industries and also that both groups lost weight between 1998 and 2002. The industries that gained importance as FDI target were the wood and paper industry which exported half of its production in 2001, the metalworking industries with 33% export share. Thus the export orientation of FDI in case of Poland is not confirmed in the way it was for Hungary and the Czech Republic.

The export oriented industries employed 38 per cent, domestic market oriented industries 23% of the FIE workforce of Poland in 2001 less than in 1998. Chemicals, rubber and plastic, general machinery and electric machinery were the main foreign industries that gained employment in the three years, industries that sold both abroad and domestically. But most of them became more export oriented, thus increasing export orientation drove the increase of employment in the foreign sector. Certainly not enough as the overall number of people employed in manufacturing FIEs decreased slightly.

5 Conclusions

Rapid and deep penetration of NMS by FDI in the 1990s is the result coinciding favourable investor specific and location specific conditions. On the one hand, global FDI grew much more rapidly than global GDP and exports, TNCs were eager to use opportunities provided by the opening up of new markets and investment opportunities. On the other hand, the transformation strategy in Central Europe followed the mainstream approach with rapid opening up for international capital flows and joining the globalization process.

Due to these mutually supporting processes in the 1990s, capturing new markets, privatization and low-cost production attracted investors to NMS. Later on, export demand became the major driving force of manufacturing FDI and local market capturing attracted FDI to services. Manufacturing FDI increasingly concentrated in the more internationalized industries like the automotive industry and electrical engineering. This supported an upgrading of industrial structures and improved competitiveness. But the global decline of the electronics industry and a boom in metallurgy shifted recently the industrial composition of output and FDI to lower value added industries. Some FDI projects have been terminated lately in the wake of at least three different processes: increasing labour cost in the more advanced NMS, the global crisis of the electronics industry, and the aging of investment projects. Recently TNCs moved into the NMS also more complex and

¹⁶ The relevance of Polish statistics is weakened by the fact that several industries, both domestic market and export oriented ones are included in an aggregate residual sector the share of which in the FDI stocks increased from 18% to 20%.

technologically more sophisticated production processes and services and also some R&D facilities.

The time of mass-scale entry of TNCs is over, follow-up investments are more important than new entries. Case study literature identifies at least two types of TNC strategies. The one creates low competence subsidiary networks where changing location factors can easily lead to the closure of subsidiaries. The other strategy is that of the learning subsidiary where technological upgrading, networking and local competences allow a dynamic adaptation to new circumstances. The deeper the integration of a subsidiary into the TNC network and the higher its competence, the better the chance of its survival and development. Policy may support those TNC strategies which aim at utilizing local competence and networks upgrading the mandate of subsidiaries.

There is a big room for further export oriented ventures, deeper networking, service sector outsourcing and headquarter functions. These opportunities can only be utilized when TNCs start investing again on a more massive scale. EU accession provides better opportunities for investors but this cannot by itself lead to an upswing of FDI.

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Appendix 1

FDI inward stock by major economic activities, in per cent of total

NACE Code/Activity	Czech R. 2002	Hungary 2002	Poland 2002	Slovakia 2003	Slovenia 2002
A,B Agriculture, forestry, fishing	0.1	1.3	0.4	0.2	0.0
C Mining and quarrying	1.4	0.3	0.3	0.8	0.0
D Manufacturing	35.5	45.8	35.8	37.5	43.3
E Electricity, gas, water supply	6.9	4.6	2.6	11.7	1.0
F Construction	1.9	1.1	2.6	0.7	0.1
G Trade, repair of motor vehicles, etc.	11.9	11.1	17.1	11.2	14.5
H Hotels and restaurants	1.2	1.1	0.6	0.5	0.4
I Transport, storage, communications	13.6	10.1	10.4	10.0	4.4
J Financial intermediation	15.9	10.3	21.3	23.5	18.8
K Real estate, renting & business act.	9.3	11.7	7.5	3.2	15.2
L Public administr., defence, social sec.	0.0
M Education	0.01	.	.	.	0.01
N Health and social work	0.2	.	.	0.4	0.1
O Other community, social & pers. activ.	2.4	.	.	0.3	0.5
Other not classified activities	0.0	1.0	1.4	.	1.7
Purchase of real estate by foreigners	.	1.5	.	.	.
Total	100.0	100.0	100.0	100.0	100.0
Total, EUR mn	36,884	29,653	45,738	8,409	3,918
Total according to IIP, if different, EUR mn		36,297			

Remarks:

Czech Republic: equity capital, reinvested earnings, loans.

Hungary: equity capital and reinvested earnings.

Poland: equity capital, reinvested earnings, loans.

Slovak Republic: equity capital, reinvested earnings - in the corporate sector.

Slovenia: equity capital, reinvested earnings, loans.

Source: National banks of respective countries according to international investment position (IIP).

Appendix 2

Inward FDI stock in the manufacturing industry, EUR million

NACE CODE/Industry	Czech R. Hungary		Poland	Slovak R.	Slovenia
	2002	2002	2002	2003	2002
DA Food products; beverages and tobacco	1557.1	2187.5	3577.6	376.1	74.1
DB Textiles and textile products	399.1	253.2	231.1	36.6	39.8
DC Leather and leather products	100.9	80.3	.	25.5	35.8
DD Wood and wood products	170.4	144.9	1904.8	30.1	8.3
DE Pulp, paper & paper products, publishing & printing	791.8	467.1	.	138.0	258.9
DF Coke, refined petroleum products & nuclear fuel	253.2	217.9	41.4	351.1	.
DG Chemicals, chemical products and man-made fibres	948.2	1698.6	2025.1	283.2	544.2
DH Rubber and plastic products	839.9	511.8	1069.2	94.4	200.9
DI Other non-metallic mineral products	1675.2	601.9	.	161.0	85.7
DJ Basic metals and fabricated metal products	1191.7	644.2	874.8	1108.2	105.0
DK Machinery and equipment n.e.c.	725.9	752.3	495.8	158.5	159.4
DL Electrical and optical equipment	1857.5	2704.1	539.0	182.8	125.8
DM Transport equipment	2272.3	3230.0	2280.3	160.4	53.5
DN Manufacturing n.e.c.	303.3	91.7	.	47.3	4.8
Other non-classified industries	.	.	3339.6	.	.
D Manufacturing	13086.5	13585.5	16378.7	3153.2	1696.2
FDI total	36883.8	29653.1	45738.4	8409.0	3918.1

Remarks:

Czech Republic: equity capital, reinvested earnings, loans.

Hungary: equity capital and reinvested earnings.

Poland: equity capital, reinvested earnings, loans.

Slovak Republic: equity capital, reinvested earnings - in the corporate sector.

Slovenia: equity capital, reinvested earnings, loans.

Source: National banks of respective countries according to international investment position (IIP).

Appendix 3

Share of FIEs in employment by industry in 2001, per cent

	Czech R	Hungary	Poland	Romania, 2002
15 Food products, beverages	22	38	30	27
16 Tobacco	97	95	79	25
17 Textiles	24	33	20	40
18 Wearing apparel, dressing	21	36	33	38
19 Tanning and dressing of leat	17	52	26	45
20 Wood	25	22	34	28
21 Paper and paper products	45	44	53	35
22 Publishing, printing	33	20	45	20
23 Coke and petroleum	31	100	41	56
24 Chemicals	27	58	29	20
25 Rubber and plastic	47	49	47	59
26 Other non-metallic minerals	37	37	40	27
27 Basic metals	28	42	10	54
28 Fabricated metals	30	25	20	20
29 Machinery and equipment n.e.	21	41	18	15
30 Office machinery	86	33	25	31
31 Electrical machinery and app	58	76	54	53
32 Radio, TV sets	66	83	58	54
33 Medical, precision, opt. ins	38	41	26	18
34 Motor vehicles, trailers	70	69	68	36
35 Other transport equipment	8	22	14	31
36 Furniture, manufacturing n.e	23	26	47	17
37 Recycling	18	37	26	24
D Manufacturing	34	45	33	33

Size coverage: Hungary, Slovenia: all firms; Estonia: more than 20 employees.

Foreign Investment Enterprise (FIE): companies with at least 10% foreign equity ownership, for Estonia 50%. Hungary 2001: companies with at least 10% foreign equity of at least one foreign owner.

Source: WIIW Database on foreign investment enterprises

Appendix 4

Share of FIEs in employment, difference from the manufacturing average, percentage point, 2001

	Czech R	Hungary	Poland	Romania, 2002
15 Food products, beverages	-13	-7	-3	-6
16 Tobacco	63	50	46	-8
17 Textiles	-10	-12	-13	7
18 Wearing apparel, dressing	-13	-10	0	5
19 Tanning and dressing of leather	-17	7	-7	12
20 Wood	-9	-24	1	-5
21 Paper and paper products	11	-1	20	2
22 Publishing, printing	-1	-25	12	-12
23 Coke and petroleum	-3	54	8	23
24 Chemicals	-7	13	-4	-13
25 Rubber and plastic	13	4	14	26
26 Other non-metallic minerals	3	-9	7	-6
27 Basic metals	-6	-3	-23	21
28 Fabricated metals	-5	-20	-13	-13
29 Machinery and equipment n.e.c.	-13	-4	-15	-18
30 Office machinery	52	-13	-8	-2
31 Electrical machinery and app	24	30	21	20
32 Radio, TV sets	32	37	25	21
33 Medical, precision, opt. ins	4	-4	-7	-15
34 Motor vehicles, trailers	36	24	35	3
35 Other transport equipment	-26	-24	-19	-2
36 Furniture, manufacturing n.e.c.	-11	-20	15	-16
37 Recycling	-16	-8	-7	-9

Size coverage: Hungary, Slovenia: all firms; Estonia: more than 20 employees.

Foreign Investment Enterprise (FIE): companies with at least 10% foreign equity ownership, for Estonia 50%. Hungary 2001: companies with at least 10% foreign equity of at least one foreign owner.

Source: WIIW Database on foreign investment enterprises

Appendix 5

Domestic market and export oriented industries in Hungary: the role of foreign affiliates (FIEs)

HUNGARY		FDI stock EUR mn		FDI stock	Exp sale	Exp sale of FIE	Exp FIE share	Exp/sale FIE	Employment	FIE employment
		1998	2002	2002%	2001%	2001%	2001%	2001%	2001%	2001%
Domestic market oriented industries										
DA	Food products; beverages and tobacco	1170.1	2187.5	16.1	6.1	4.4	65	20	15.4	13.5
DE	Paper and paper products; publishing and printing	292.1	467.1	3.4	1.5	1.3	65	25	5.3	3
DF	Coke, refined petroleum products and nuclear fuel	1.9	217.9	1.6	2.2	2.5	100	16	1.4	3.1
DI	Other non-metallic mineral products	306.4	601.9	4.4	1.2	0.9	62	24	3.9	3.1
		1770.4	3474.3	25.6	11.0	9.1			26	22.7
Export oriented industries										
DB	Textiles and textile products	159.5	253.2	1.9	3.5	3.0	75	80	12.8	9.8
DC	Leather and leather products	43.1	80.3	0.6	0.8	0.7	80	81	2.9	3.4
DL	Electrical and optical equipment	1298.0	2704.1	19.9	42.7	47.1	96	90	18.3	28.2
DM	Transport equipment	825.3	3230.0	23.8	20.9	22.9	90	90	5.6	7.5
DN	Manufacturing not elsewhere classified	44.4	91.7	0.7	1.0	0.8	73	70	3.8	2.2
		2370.3	6359.3	46.8	68.9	74.5			43.4	51.1
D	Total manufacturing	5706.6	13585.5	100.0	100	100	88.0	64	100	100