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Research Report

International Competitiveness Impacts of FDI in CEECs

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Executive summary

This paper follows the definition of international competitiveness of countries (nations) as defined by Trabold (1995) including the ability to sell, the ability to attract FDI and the ability to adjust – all these leading to the ability to earn. These components can be measured by specific economic indicators and brought into relationship with FDI and the performance of foreign affiliates in a country. The analysis focuses on five transition countries: Estonia, the Czech Republic, Hungary, Poland and Slovenia (CEEC-5). These are the most advanced among the transition countries in terms of per capita GDP, FDI penetration and economic transformation. This paper contributes to the discussion on competitiveness by going through a number of industry competitiveness indicators: attracting FDI, foreign penetration of industries, productivity levels and development, market shares in the EU.

In order to measure the influence of FDI on the competitiveness in manufacturing, a unique database was set up based on company balance sheets in the five countries. The economic performance of the foreign affiliates could be compared with that of domestic enterprises. The highest share of FIEs (foreign investment enterprises) by all indicators was reached by Hungary in each year between 1993 and 1998. 70% of manufacturing sales came from FIEs, which employed 45% of the manufacturing labour force in 1998. The second place is occupied by Poland with 41% of sales and 26% of employment. The Czech Republic ranks third, with 32% and 20% respectively. The difference between Hungary on the one hand and the Czech Republic and Poland on the other was three times in 1994 and narrowed to two times in 1998. The most dynamic increase was recorded in the Czech Republic. In Slovenia and Estonia, foreign penetration is lower and increased more slowly than in the other countries.

The positive link between foreign penetration and various components of international competitiveness holds true both at the aggregate and the sectoral levels. It is obvious that the activity of a strong foreign sector in manufacturing increases international competitiveness. In 1994-1998 GDP growth, productivity growth, structural change and profit rates were higher in countries with a stronger presence of FDI.

The deeper the foreign penetration, the faster was the speed of structural change: Hungary was first, followed by the Czech Republic and Poland in the period 1996-1998. This is relevant both for the change in the output structure and the country's exports to the EU. The size and industry distribution of foreign penetration depends on industry-specific features and on the characteristics of the privatization policy. The foreign presence remained relatively small in branches with great structural difficulties and oversized capacities, such as the steel industry. Privatization is not

enough to set restructuring of these industries in motion. Sectoral policy and financial restructuring is necessary to make companies attractive for foreign take-overs.

A duality between foreign- and domestic-dominated industries appeared in all countries and has been growing over time. It can be observed between modern, foreign-dominated industries on the one hand and traditional industries with both domestic and foreign companies on the other. It is also present as a foreign–domestic gap within the industries with both foreign and domestic companies. The dichotomy of productivity and profit rates between the foreign- and the domestic-owned companies in one and the same industry is largest in Hungary and smallest in Slovenia. In Slovenia the balanced relationship between the domestic and the foreign sector is coupled with a low average rate of foreign penetration and a relatively low presence of technology-intensive industries. The small gap between the foreign and the domestic sector may indicate a slow rate of technological progress and not spill-overs.

Keywords: foreign direct investment; competitiveness; CEECs; manufacturing; economic policy

JEL classification: D200, L500, L600, F200, F400

Gábor Hunya

Impact of foreign direct investment on the international competitiveness in CEE manufacturing*

1 Introduction

The competitiveness issue discussed in this paper is industry-level competitiveness on international markets. We shall refer to the international competitiveness of countries, which depends on the performance of industries and firms on world markets. We shall not enter into the general debate on the competitiveness of countries (see Krugman, 1996). The broad concepts of Trabold (1995), Porter (1990) and Fagerberg (1996) on the international competitiveness of industries are applied. Competitiveness will be related to foreign direct investment (FDI) as discussed by Dunning (1993). The aim is to find out how the inflow of FDI and the performance of foreign affiliates influence the international competitiveness of industries in central European EU-accession countries.

This paper follows the components of competitiveness outlined in section 2 based on Trabold (1995). Country competitiveness is discussed by looking at the ability to attract FDI (section 3). Section 4 on the policy towards FDI shows why countries differ in terms of attractiveness towards foreign investment. A comparison of the foreign and the domestic sector in manufacturing is made to show the intensity of foreign penetration (section 5) and structural change (section 6) in manufacturing. The superior productivity of the foreign sector is analysed in section 7. International competitiveness is discussed by looking at market shares in the European Union (section 8). The contribution of FDI to earnings is shows by the different profit rates in the foreign and the domestic sector (section 9). Section 10 provides some policy conclusions.

The analysis focuses on five transition countries: Estonia, the Czech Republic, Hungary, Poland and Slovenia (CEEC-5). These are the most advanced among the transition countries in terms of per capita GDP, FDI penetration and economic transformation. They have association agreements with the EU which means basically free trade for non-food manufactured goods and the possibility to join the EU. They started accession negotiations with the EU in April 1998, ahead of other candidate countries. Although the term 'first-wave accession candidates' is no longer used since negotiations have started also with the other associated countries, the gap between the two groups persists. As negotiations with the former 'first wavers' are at an advanced stage, even if the former 'second wavers' were to display better economic performance or greater readiness to introduce institutional reforms

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and stipulations of the *acquis communautaire*, this may not make up for the delay in starting the negotiations. But second-tier countries are generally slow and backward in terms of reforms and adjustment. Consequently, the division between the two groups will persist, even if only tacitly. This is recognized by investors who generally consider the CEEC-5 already members of the single market institutions.

Economic growth in the CEECs over the past ten years has fluctuated mainly due to the shocks of economic transformation. In terms of per capita GDP and the speed of GDP growth, the 'first-wave' countries are ahead of the 'second-wave' countries. As an exception, the best performing country in the second group – the Slovak Republic – is more similar to the first group than is Estonia. Estonia is weaker than other first-group countries and ahead of the second group but Slovakia. A comparison of the per capita GDP level in 1999 with 1990 reveals that three of the first-group countries – Poland, Hungary and Slovenia – surpassed their 1990 GDP levels, thus overcoming the shock of transformation. The other two countries are still below the 1990 level. The Czech Republic experienced a setback of economic growth in 1997-1999 following higher growth rates in the mid-1990s. Estonia suffered from a strong transformational recession in the early 1990s due to the separation from the Soviet economic system. While it showed a strong performance in 1995-1998, the Russian crisis put it into recession in 1999. This however seems to be but a short intermezzo, and recovery is under way in Estonia with lower trade dependence on Russia. Economic prospects for 2000 and 2001 are positive for all five countries, but the Czech Republic will continue to stay behind the others because of protracted structural problems. Estonia and Poland will continue to face problems with excessive current account deficits. In their case both the reduction of the deficit and its financing by FDI can be primary policy targets.

Hungary, Poland and Slovenia, the three countries with stable economic growth for the last few years and good prospects as well, show very different attractiveness to FDI. In Hungary growth has been primarily due to the success of export-oriented foreign investment projects. In Slovenia growth was related to a high degree of integration into European networks, mainly not through FDI. Polish growth was mainly domestic-demand-led, generating increasing imports but less exports, the trade gap being financed by both FDI and loans.

Also first-tier countries face a big challenge on becoming members of the single market. Their ability to withstand competitive pressure is a key issue, and also one of the official accession conditions. This paper contributes to the discussion on competitiveness by going through a number of industry competitiveness indicators and looking at the level at which CEEC-5 industries are already integrated into European corporate structures by FDI.

2 Competitiveness of industries and countries – the role of FDI

Competitiveness of countries (nations) as defined by Trabold (1995, p. 182) includes the ability to sell, the ability to attract and the ability to adjust – all these leading to the ability to earn. These components can be measured by specific economic indicators and brought into relationship with FDI and the performance of foreign affiliates in a country.

– The ability to sell in terms of international competitiveness means the ability to export. The market shares on the main export markets and their development can be taken as the basic indicators of international competitiveness.

– The ability to attract refers to attracting activities and investments from abroad. Attractiveness for foreign investment is the summary effect of location factors in the country. Although other forms of international capital flows can also be important, a basic indicator of attractiveness can be the size of annual FDI inflows and FDI stocks. The share of the foreign sector shows the degree of foreign penetration, the importance of the foreign sector in the economy. In this paper this will be measured by various indicators, such as assets, employment, sales, exports and investments.

– The ability to adjust can be measured by the speed of structural change. Through structural change the country changes its product and export specialization in order to increase its capacity to earn. Structural upgrading means a shift to higher value added, higher technology products which generally allow for higher earnings.

– The ability to earn is shown by the per capita level and increase of GDP. GDP growth compared to other countries expresses whether a country is catching up or falling behind. The ability to earn is less specified at the industry or company level. Value added does not function as a real success indicator. It is rather the profit rate of the industry or of the company that can be used as a success indicator. In a longer time perspective, both country-level GDP and industry- or firm-level profits can be increased by innovation, adaptation and learning. These skills can also be imported, most rapidly through foreign direct investment.

The link between firm-level and country-level competitiveness has been established by Porter (1990). He argues that industries and companies can be competitive if the national environment and government policy supports companies' profit-earning and innovative efforts. Firm-level competitiveness depends on production factor costs, demand conditions, firm strategy and firm networking (clusters). The environment in which the firm operates is shaped by government policies, chances / opportunities and the international business environment. Internationalization of markets opens up new opportunities for firms and leads to alliances, among them FDI. It demands from governments to set policy targets and use policy tools in an internationally competitive environment partially regulated by multinational agreements.

Foreign direct investment can be understood as a competitiveness factor in two senses – as an indicator and as a factor of competitiveness. The approach of Trabold (1995) is limited to the indicator function: the level of FDI in a country expresses its competitiveness as a business location. In the approach of Porter (1990) and Dunning (1993), international production itself appears as a primary factor of international competitiveness.

Direct investments increase a country's competitiveness in several ways. The impact appears primarily at the company level and can be identified also at the industry level. Foreign investors bring knowledge, technology, investment and access to new markets and thus upgrade the competitive advantage of companies and industries. Foreign multinationals integrate host country firms into international networks where companies join efforts to support their competitive positions. FDI is thus increasing the ability to sell. The specialization of foreign affiliates can be different of the domestic ones and thus shifts the production structure. Through technology inflow and market access, FDI increases the ability to adjust to market developments and technological change.

A country has either absolute cost advantage and / or relative factor cost endowment advantage, which can be brought to effective use (in internationally competitive terms) through FDI. FDI can increase the allocative efficiency in a country by improving the distribution of production and investment among industries. It can be of a comparative-advantage-augmenting type pointing out that cost-advantage-seeking FDI goes into those manufacturing industries for which the target country has superior factor endowments and thus upgrades the host country's comparative advantage (Ozawa, 1992, Meyer, 1995). At the microeconomic level the industrial efficiency impact of FDI can be proven. The targeted firm gets access to the technological, organizational and managerial skills concentrated in multinational enterprises. Future economic growth will be influenced by the pace and scope of technology transfer of foreign investors and by spill-over effects of FDI to the domestic firms of the target country. Both depend to a large extent on the capabilities of the host country. Countries with little foreign penetration may fall back in economic development if domestic firms are too weak. Spill-over is the spread of knowledge from superior foreign companies to domestic companies. The speed and intensity of spill-over can be increased by networking and other forms of learning.

3 Competitiveness of the CEEC-5 in terms of attracting FDI

The CEEC-5 have been net direct capital importers like other medium-developed countries. They have been the most important targets of FDI in CEECs. They use the inflow of investment means, technology and skills as a vehicle of economic modernization. The volume of FDI in a transition country is an expression of a country's advance made in terms of transformation. Foreign firms reinforce economic behaviour patterns in conformity with international, most notably with EU standards. Multinational enterprises have

integrated CEE economies into the EU at the microeconomic level to various degrees. The process of ownership-based integration is most advanced in Hungary, followed by Estonia and the Czech Republic, while Poland is catching up. Slovenian companies are less integrated in terms of capital ownership but have close links through company networks. The competitive position of accession countries will be influenced by further FDI flows during the accession negotiations.

Table 1

Foreign direct investment flows in CEECs, 1992-1999

as recorded in the balance of payments, USD million

	1992	1993	1994	1995	1996	1997	1998	1999	1999 Inflow per gfcf, %	1999 Inflow per cap, USD
Czech Republic	1004	654	869	2562	1428	1300	2720	5108	36.2	497
Estonia	82	162	215	202	151	267	581	306	.	212
Hungary	1471	2339	1147	4453	2275	2173	2036	1944	16.6	194
Poland	.	1715	1875	3659	4498	4908	6365	6500	16.3	168
Slovenia	111	113	128	176	186	321	165	83	1.6	42
Total (5)	.	4983	4234	11052	8538	8969	11867	13941		
Bulgaria	42	40	105	90	109	505	537	739	43.5	90
Latvia	29	44	213	178	382	522	356	300	.	124
Lithuania	10	31	31	73	152	355	926	486	.	132
Romania	77	94	341	419	263	1215	2031	961	20.0	43
Slovak R.	.	168	250	202	330	177	566	330	5.0	61
Total (10)	.	5360	5174	12014	9774	11743	16283	16757		

Remarks:
Estonia: equity capital cash + reinvested earnings + loans
Czech Republic: equity capital cash + in kind + reinvested earnings from 1998.
Hungary: equity capital cash + loans from 1996.
Poland : equity capital cash + in kind + reinvested earnings + loans - on a transaction basis.
Slovenia: equity capital cash + in kind from 1997.
Bulgaria: equity capital cash + loans from 1997.
Latvia: equity capital cash + reinvested earnings from 1996 + loans from 1996.
Lithuania: equity capital cash + reinvested earnings from 1995 + loans from 1997.
Romania: equity capital cash + in kind.
Slovak Republic: equity capital cash + reinvested earnings from 1997 + loans from 1997; banking sector included from 1996.
Infl per gfcf = inflow in 1999 as a percentage of gross fixed capital formation
Infl per cap = inflow in 1999 per number of population in USD

Source: National banks of respective countries.

Table 2

Foreign direct investment stock in CEECs, 1992-1999 year-end

balance of payments, USD million

	1992	1993	1994	1995	1996	1997	1998	1999	1999 Stock/ GDP %	1999 Stock per cap.
Czech Republic	2889	3423	4547	7350	8572	9234	14375	17000	31.8	1653
Estonia	.	419	696	955	1026	1148	1822	2441	35.0	1692
Hungary	3435	5585	7095	11926	14958	16086	18517	19276	39.4	1919
Poland	1370	2307	3789	7843	11463	14587	22479	28000	18.3	724
Slovenia	.	954	1326	1759	2069	2297	2907	3000	15.3	1511
Total (5)	.	12688	17453	29833	38088	43352	60154	69717		
Bulgaria	101	141	247	337	446	951	1488	2228	18.6	271
Latvia	43	75	309	616	936	1272	1558	3900	16.7	1609
Lithuania	20	153	310	352	700	1041	1625	2100	24.3	568
Romania	117	211	552	971	1234	2449	4480	5441	15.2	242
Slovak R.	.	459	770	1079	1379	1580	1938	2000	10.8	371
Total (10)	.	13727	19641	33188	42783	50645	71243	85286		

Remarks:
Estonia: equity capital + reinvested earnings + loans.
Czech Republic: equity capital cash + in kind + reinvested earnings from 1997 + loans from 1997; excluding privatization revenues.
Hungary: equity capital cash + loans from 1996.
Poland: equity capital cash + in kind + reinvested earnings + loans - on a transaction basis.
Slovenia: equity capital + reinvested earnings + loans.
Bulgaria: equity capital cash + loans from 1997.
Latvia: equity capital + reinvested earnings from 1996 + loans from 1996.
Lithuania: equity capital + reinvested earnings + loans.
Romania: equity capital cash + in kind.
Slovak Republic: equity capital (corporate and banking sector).

Source: National banks of respective countries.

The inflow of FDI to the CEEC-5 was USD 11.8 billion in 1998, a substantial 3 billion increase over the previous years. It increased further to USD 13.9 billion in 1999 due to higher inflows in the Czech Republic (Tables 1 and 2). The per capita or per gross fixed capital formation amounts of FDI in most of these countries are similar to large FDI receiver emerging markets in Latin America and south-east Asia. The second group of accession countries have much lower FDI inflows per capita, but due to low domestic investments, FDI can be significant compared to the level of gross fixed capital formation. The latter indicator does not show the contribution of FDI to investments as most of the FDI is take-over and not new capital formation.

FDI stocks above 30% of GDP in Hungary, Estonia and the Czech Republic are significantly high in international comparison. The foreign sector is a decisive factor in forming economic development. Poland and Slovenia have about half that amount which makes them similar to the second group of accession countries.

Manufacturing is the most important target of foreign investors except for Estonia where it comes only third. But only in Poland and Slovenia could manufacturing attract more than 50% of the FDI stock because the privatization in the tertiary sector is slow. In the Czech Republic manufacturing attracted 46% of the FDI and also trade and banking were significant investment targets. Hungary stands out with high FDI in the electricity and gas distribution as well as real estate and business services investments. The more even spread of FDI targets is undoubtedly due to the general advance in privatization. But there is no explanation why real estate and other business services have such a high share in Hungary and such a low one in Poland. In the case of Estonia, the low share of manufacturing FDI reflects both the weakness of this sector in the Estonian economy and the strength of the country as a regional transport and financial centre. The following analysis in this paper focuses on the manufacturing sector, which is by no means representative for the processes in FDI as a whole. The prominent position of manufacturing FDI can be seen in its role as a means of technology transfer and producer of export goods.

The common primary investor and trading partners of the CEEC-5 is the European Union. Companies from Germany, neighbouring EU countries, together with USA-based multinational enterprises (MNEs), are the most important investors with significant differences among countries. Germany is in the first place in the Czech Republic, Hungary and Poland, the USA second in Hungary and Poland. Austria is a prominent trading partner and investor for the smaller central European countries – Slovenia, Hungary and the Czech Republic. Estonia has intensive regional links to Sweden and Finland. The CEECs' proximity to the European Union has stimulated market-seeking investments of EU-based multinationals, more recently also efficiency-seeking greenfield investments. The ongoing corporate-level integration of CEE companies into European corporate networks provides a stimulus for EU enlargement.

In the *World Competitiveness Yearbook* (International Institute for Management Development, 2000) competitiveness is measured by economic indicators, technology indicators and executive surveys. Internet technology, mobile phone availability, investment in research and in education as well as a liberal economic environment are seen as indicators of growing competitiveness. It is maintained that information technology allows for countries with a geographic disadvantage to participate in the global economy and compete more successfully than before. In the year 2000 the USA ranks first, Finland comes third and the Netherlands fourth, Switzerland fifth and Ireland seventh after being

eleventh in 1999. The CEEC-5 are well down the list but have the most competitive countries among their primary foreign investors. This is a distinctive feature of these more attractive FDI target countries if compared to second-tier Romania and Bulgaria, where countries and companies of lower technological levels have high shares in FDI inflows.

4 Government policies related to FDI

In Dunning's theory (1993), FDI flows are 'shaped' by three sets of factors. First, the ownership advantages, second, the locational advantages, and third, the internationalization advantages. Locational advantages represent those advantages that make production in the given place more profitable / advantageous from the point of view of the investor than exporting the product from a foreign production unit to the given market, or locating new production capacities to a third country. The economic policy of a given FDI-recipient country can influence the relative locational advantages. Once foreign firms are present in a country, they have a distinctive impact on the host country's economy in the field of sourcing, competition, ownership relations and economic policy.

Locational characteristics appear in the form of general and FDI-specific conditions. General conditions involve the overall stability and development pattern of the economy, the skills of the labour force as well as the general regulatory framework such as the tax system. General conditions were partly outlined in the two previous sections, a more detailed analysis goes beyond the scope of this paper. Investment and FDI policies and investment incentives will be outlined under section 4.1 below. There is a further incentive specific to CEECs – privatization – which is unique in its scope and substance for transformation economies (section 4.2).

4.1 General investment incentives

National treatment and almost no direct FDI incentive is the basic rule of law in CEECs (Table 3). Three of the countries are already OECD members and all of them prepare for EU accession. These international treaties restrict discriminatory policies and demand equal rights for domestic and foreign firms.

Even if the tax and incentive system is the same for domestic and foreign investors, there can be a difference between the capacity of firms to make use of the incentives. As will be shown later in this paper, the differences between foreign and domestic firms are huge in terms of size, efficiency, access to financing, etc. Small and medium-size domestic firms cannot meet the minimum investment and employment requirements to become eligible for tax breaks or to receive direct investment incentives. It is mainly large foreign investors who benefit. The result can be illustrated by the indicators for the Hungarian manufacturing

industry: foreign affiliates produce 86% of the pre-tax profit but pay only 59% of the corporate tax. This is partly the result of the policy preference provided to large investors, partly the result of tax holidays provided to foreign investors before 1996. The gap between domestic and foreign companies can widen due to unequal access to incentives.

Table 3

Review of measures for the support of the inflow of foreign direct investment in four CEECs, as of early 2000[1)]

	Hungary	Czech Republic	Poland	Slovenia
Taxes	- 18% corporate tax - 20% dividend tax	- 31% corporate tax	- 32% corporate tax	- 25% corporate tax - 1.5% withheld tax
Incentives	- Corporate tax relief for up to 10 years for investment of at least USD 40 million and more than 500 employees. - Corporate tax relief for up to 5-10 years for investment in production, hotels	- Corporate tax relief for up to 10 years - Criteria – investment of USD 10 million, at least 50% goes to production sector, 40% of the investment goes to new machinery	- Tax deduction up to 30% of investment amount from the tax base: conditions e.g. revenue from export is over 50%, buying patents, ISO 9000, pharmaceutical industry	- Job creation support scheme - Possible negotiation about financial support of the government
Special incentives	- For regions with more than 15% unemployment - Corporate tax relief for up to 5 years for investment in production - Establishment of innovation centres - up 30%, industrial parks: - up 50% of recognized costs - Investments connected with local business development up 40% of recognized costs	- Location in a customs-free zone - Job-creation grants (up to USD 3000 per each new job) - Training grants (up to 50% of the costs) - Provision of low-cost building land and / or infrastructure (government assistance up to 60% of preparing land and infrastructure)	- Full tax allowances in selected regions for investment projects of at least ECU 0.4 million	- 10% corporate tax in free zones (also some other benefits – e.g. another reduction of the tax base by investment, for job creation or training)
Customs regime, **Free zones**	- Customs-free zone status for export-oriented companies	- Duty-free imports of new machinery related to projects exceeding CZK 10 million - Customs clearance – drawback system	- Duty-free import of machinery under OECD list 84 and 85 - Duty-free import of the fixed assets as a contribution to the share capital - Duty-free special zones	- Duty-free import of the new machinery under OECD list 84 and 85 - Customs-free trade zones

1) Estonia does not have special incentives but also no corporate tax and customs.

Countries differ widely in terms of their governments' attitude towards foreign investors, the general level of corporate income tax, the system of tax and customs allowances as well as in terms of direct investment promotion. Labour market policy and regional policy offer further investment incentives. Economic policy in several CEECs has recently shifted from stabilization to growth promotion including FDI incentives. A major stimulus for the introduction of lower taxes and of investment incentives is the international competition for FDI. International investors compare locations looking at the cost of entry and the cost of production more than before, as their mobility increases. Hungary has the most complex incentive scheme, ranging from tax and customs allowances to R&D- and infrastructure-related subsidies (Table 3). Corporate tax has been low in Hungary, has been lowered this year in the Czech Republic and Poland, and completely abolished in Estonia. Countries long suffering from low FDI levels, such as Slovenia, have introduced attractive incentive schemes.

Despite the wide range of incentive schemes in the various countries, the efficiency of these policy tools are not properly investigated. The effects of incentives cannot be separated from other locational factors. The specific field of FDI policy in CEECs relates to privatization and is elaborated in more detail.

4.2 The role of privatization policy in generating FDI[1]

Privatization is a primary aspect of economic transformation. The economic performance differences between the Central and East European countries (CEECs) are to a large extent due to different speeds and ways of privatization (Table 4). Overall, it seems economically desirable to privatize rather fast – by selling the state-owned firms to investors who would restructure, capitalize and run them efficiently. Conducting such sales is just one and often not a popular or feasible policy option. This is so because privatization is also a political process fraught with conflicts between various policy objectives and vested interests which result in time-consuming searches for legal and political compromises. All the same, privatization can be analysed in purely economic terms, considering its impact on overall capital formation, budget revenues, balance of payments, as well as on microeconomic performance (restructuring, efficiency improvement and upgrading management practices etc.). Economic and political constraints in the first years of transformation, such as shortage of domestic capital and vested interest of workers and managers, curtailed the possibility of privatization by sale. The free distribution of property was considered an easy, fast and just way of privatization.

[1] This chapter summarizes the findings of Hunya (2000a).

Table 4

Share of the private sector in value added, CEEC-5, 1990 and 1998, per cent

	Czech Republic		Estonia		Hungary		Poland		Slovenia	
	1990	1998	1990	1998	1990	1998	1990	1998	1990	1998
Total (GDP)	12.3	77.3	10	70	25	85	30.9	69.9	15	50
Industry	.	83.3	.	.	.	87.7	18.3	69.1	.	.

Remark: Private sector means majority private ownership.

Source: National statistics and EBRD.

There is a marked difference between fast privatizers – the Czech Republic, Estonia and Hungary – and slow privatizers – Poland and Slovenia. In the Czech Republic, a period of intensive privatization and FDI in 1991-1995 was followed by two less intensive years. FDI and privatization picked up again in 1998 and 1999. While privatization is nearing its end now, foreign acquisitions in the private sector become more important. In Hungary, FDI and privatization went hand in hand until 1997, but in the last two years FDI was almost exclusively unrelated to privatization. The example of Hungary indicates that FDI inflow can continue after privatization is over. In Poland and Slovenia, privatization was slow until 1996 and so was FDI. After 1996, FDI inflows accelerated and the share of FDI revenues in privatization also grew significantly (Table 5).

Table 5

Privatization and FDI

	1990-1996		1997-1999	
	Forex rev. in total privatization rev., %	Forex priv. revenue in FDI, %	Forex rev. in total privatization rev., %	Forex priv. revenue in FDI, %
Czech Republic	15	80	80	50
Estonia	60	33	60	70
Hungary	63	47	40	20
Poland	low	20	medium	40
Slovenia	low	low	low	low

Remarks: Estonia first period: 1993-1996. – Foreign exchange (forex) revenue in total privatization revenue could not be calculated for Poland in the first period as the value of non-cash privatization could not be measured. Based on the relative role of various modes of privatization, a very rough estimation could be made: 'low' means less than one quarter, 'medium' means between one quarter and one half, and 'high' means above one half. – In Slovenia the way of privatization does not allow for a calculation of foreign shares.

Source: Own calculation and estimation based on data from: Zemplínerová and Martin (2000) (for the Czech Republic); Estonian National Bank (for Estonia); ÁPVRT – Hungarian Privatization and State Holding Company (for Hungary); Durka (1999) (for Poland).

The economic aspects of privatization became increasingly important in the second half of the 1990s. This followed from the realization of the drawbacks of slow privatization and of

voucher schemes. Also, privatization by sales was discovered as an important source of budget revenues, foreign currency inflows and as an essential ingredient of corporate restructuring. Current account deficits became a significant problem starting in different years for the individual countries: Hungary in 1993, the Czech Republic and Romania in 1996, Poland in 1998. The earlier the deficit problems surfaced, the sooner the country opted for revenue-generating modes of privatization and FDI-friendly policies. Generally, sale to foreign strategic investors has proved to be the most efficient way of privatization. This lesson was learned by CEECs which, until recently, have tested also other methods or delayed privatization, like the Czech Republic, Slovenia and a number of second-tier accession countries.

Privatization contracts can be seen as FDI policy tools. They not only envisage to maximize state revenues but may also ensure that the new owner is a respected international investor interested in the long-term development of the acquired firm.

4.3 Companies' position after foreign take-over

Companies turned into subsidiaries of multinational corporations (MNCs) may prosper provided they are assigned a proper position in the international corporate network and given access to new technology and capital. Their success depends on three important conditions:

– The subsidiary's initial position in the network of the MNC. This is determined by the privatization contract and the intention of the investor. The scope of decision-making in the subsidiary, brand name and product specialization are determined at this initial point.

– Own efforts of the subsidiary to upgrade its position in the MNC and to acquire new technologies and skills. The subsidiary must improve its competitive position on a restricted but very competitive market within the MNC.

– The long-term attractiveness of the business location. The target country must maintain economic stability and growth, as well as adhere to investor-friendly economic policies in order to keep investors even when labour costs increase.

Government policies can have a role in promoting R&D, attracting headquarter functions and supporting education and learning. Such policies can affect the type of activities assigned to the affiliates: either technology-based or assembly-based. The latter predominate in CEECs, especially among greenfield investments. Affiliates originating in privatization acquisitions may be different as they often retain some local suppliers and market shares. But they may stay at lower technology level than new greenfield investments. In addition, locally integrated affiliates are less footless than globally integrated ones and can have a more secure future. The difference between the two types

of firms may diminish with time. Both of them have to become more technology-based to compensate for diminishing labour cost advantages.

5 Characteristics of FDI penetration in the CEEC-5

The size of foreign penetration is shown by the share of foreign investment enterprises (FIEs) in nominal capital, assets, value added, employment, sales, export sales, investment outlays and profits derived from the income statements / tax declarations of companies. The indicators – nominal or own capital, sales or output, employment and investment outlays – are available for all countries (Table 6). The role of FIEs has increased for all five countries and by almost all indicators over the period 1996-1998. As capital indicators are not unified, the most widespread common indicators – sales and employment – are discussed in more detail below. A comparison of the development of foreign penetration over time can be made for 1994-1998, keeping in mind the distortions caused by shifts from the domestic to the foreign sector.

Table 6

Share of foreign investment enterprises (FIEs) in main indicators of manufacturing companies, 1996 and 1998, in per cent

	Equity capital	Employment	Investments	Sales	Export sales
	1996; 1998	*1996; 1998*	*1996; 1998*	*1996; 1998*	*1996; 1998*
Czech Republic	21.5[1]; 27.9	13.1; 19.6	33.5; 41.6	22.6; 31.5	15.9; 47.0
Czech Republic adjusted				*18; 25*	
Estonia	43.5[1]; 40.1[1]	16.8; 20.8	41.8; 32.9	26.6; 28.2	32.5; 35.2
Hungary	67.4[2]; 72.7[2]	36.1; 44.9	82.5; 78.7	61.4; 70.0	77.5; 85.9
Poland	29.3; 43.2	12.0; 26.0	30.6; 51.0	17.4; 40.6	26.3; 52.4
Poland, adjusted				*14; 32*	.
Slovenia	15.6; 21.6	10.1; 13.1	20.3; 24.3	19.6; 24.4	25.8; 32.9

1) Czech Republic 1996 and Estonia: Own capital. – 2) Hungary: Nominal capital in cash.
Adjusted: Czech Republic and Poland adjusted for size limit by increasing the indicators for DEs by 20%.
Source: Hunya (2000b).

The highest share of FIEs by all indicators was reached by Hungary in each year since 1993. 70% of manufacturing sales come from FIEs, which employed 45% of the manufacturing labour force in 1998. The second place is occupied by Poland with 41% of sales and 26% of employment. The Czech Republic comes next, with 32% and 20% respectively. The difference between Hungary on the one hand and the Czech Republic and Poland on the other was three times in 1994 and narrowed to two times in 1998. The

most dynamic increase has been recorded in the Czech Republic. In Slovenia and Estonia foreign penetration was lower and increased more slowly than in the other countries.

Table 7

Sales, share of FIEs in manufacturing, per cent

	1993	1994	1995	1996	1997	*1998*	*1998/1994*
Czech Republic	11.5	12.5	16.8	22.6	27.2	32.1	325
Estonia	.	.	20.1	26.6	27.1	28.2	140
Hungary	41.3	55.4	56.1	61.4	66.1	70.0	126
Poland	14.5	17.4	23.6	31.9	36.0	40.6	233
Slovenia	.	16.9	17.6	19.6	21.1	24.4	144

Source: Hunya 2000b

Foreign penetration in the Czech Republic almost doubled between 1994 and 1996 by most indicators and expanded dynamically also in the following two years. The foreign sector showed a rapid expansion not only in terms of capital and sales but also in terms of employment. Fifty-thousand new manufacturing jobs were created in, or shifted to the foreign sector, while the domestic sector lost 85 thousand in 1994-1996. By 1998 the share of foreign subsidiaries in total manufacturing employment reached one fifth. The sales shares of FIEs increased in the period of overall recovery in Czech manufacturing following the first transformational recession. Sales of FIEs increased by 130%, while of domestic enterprises by 14% (in current USD terms) in 1994-1996. Although ownership shifts cannot be sorted out, it seems that the foreign sector was an important driving force of the recovery in the mid-1990s. The upswing of car sales due to the success of the car manufacturer Škoda after being acquired by Volkswagen has been the most important single case. In the period 1996-1998 the Czech economy underwent a second transformational recession. The causes were linked to the overvaluation of the exchange rate and slow progress of restructuring. The reactions of the domestic and the foreign sectors to the stabilization measures were completely different. In this period the production of domestic companies increased only 6.5% in nominal terms, i.e. a decline in real terms. Foreign companies' sales however increased 73% in the same period. The foreign sector maintained its dynamism, relied more on foreign markets and replaced domestic enterprises on the Czech market. The competitiveness problem due to the overvalued exchange rate affected domestic companies more than FIEs which had more opportunities to increase prices. The expansion of the foreign sector by number, size and sales of companies was very dynamic in the 1996-1998 period, replacing and outperforming domestic companies. But M&As, meaning a shift from the domestic to the foreign sector, were not very frequent.

Foreign penetration indicators for Estonia reached, by 1996, the second highest level among the countries under discussion. This was mainly the result of the fast opening and

privatization after the introduction of the currency board in 1993. But the performance increase of FIEs after 1996 was slow. The country remained behind Poland and was overtaken by the Czech Republic. The foreign sector in Estonia did not grow much by adding new companies but by the expansion of existing FIEs. The small country with little experience with modern industries has not become a base for export processing.

Foreign penetration in Hungary's manufacturing took place already before 1994, when the FIEs' share in nominal capital reached 60%, and has increased only slightly since then. The same applies to the employment share of FIEs, which has stagnated at 37% since 1994, partly due to the changes of computing the number of employees. The investment share of FIEs came close to 80% in 1994 and increased only slightly in the subsequent years. It seems that foreign penetration in Hungarian manufacturing has already reached a level where any further increase cannot be very dynamic. There is nevertheless still very intensive FDI activity in the form of capital increase in existing FIEs, and the number of important greenfield projects is growing. Sales and especially export sales were the indicators by which the share of FIEs increased fastest between 1994 and 1998. This indicates that the intensive investment activity of the first half of the 1990s established competitive production capacities which can increase sales both in Hungary and abroad more rapidly than Hungarian-owned companies, lagging behind in terms of restructuring.

Foreign penetration in Poland reached the second highest level among the five countries in 1998 by all indicators. Employment, sales and export shares of FIEs doubled between 1996 and 1998 – the most rapid expansion of the foreign sector among the five countries. An upswing of privatization stimulated foreign take-overs. Greenfield investments were attracted by the rapidly growing domestic market. While economic growth on the whole was strong, its main driving force changed from newly established domestic SMEs to foreign affiliates.

Slovenia had the lowest foreign penetration by all indicators among the CEEC-5 in 1998. The gap in comparison to the other four countries grew between 1996 and 1998. Still, the shares of FIEs have increased constantly since 1994. The Slovenian economy has maintained a strong international competitive position mainly by successful domestic-owned companies.

6 Competitiveness of the CEEC-5 in terms of structural change and its relationship to FDI

Data on foreign penetration are available for 23 industries and a number of indicators. The most important common indicator available for all CEEC-5 is revenues from sales (Table 8). This is preferred to the less widely available equity capital to express foreign

Table 8

Industries with significant above-average shares of FIEs in sales, 1994, 1996, 1998, per cent

Czech Republic	**1994**	**1996**	**1998**	
	.	.	94.6	Tobacco
	60.0	66.9	82.1	Motor vehicles
	37.2	43.8	45.2	Rubber and plastic
	23.7	45.6	44.5	Non-metallic minerals
	13.2	32.0	48.1	Electrical machinery
	(4.8)	35.9	57.8	Radio and TV sets
	3.3	26.5	38.3	Manufacturing n.e.c.
	12.5	*22.6*	*31.5*	*Manufacturing total*
Estonia	**1994**	**1996**	**1998**	
	.	62.5	77.5	Paper, paper products
	.	78.4	70.5	Textiles
	.	53.5	61.0	Non-metallic minerals
	.	43.5	45.5	Leather
	.	37.0	44.4	Oil and chemicals
	.	45.4	42.7	Office+electric+radio+med
	.	*26.6*	*27.2*	*Manufacturing total*
Hungary	**1994**	**1996**	**1998**	
	99.6	99.2	100	Coke and petroleum
	99.5	98.7	95.7	Tobacco
	78.4	82.7	79.9	Electrical machinery
	72.0	84.8	96.9	Motor vehicles
	70.0	71.8	48.6	Other transport equipment
	61.0	79.0	82.8	Radio and TV sets
	(53.7)	78.7	83.6	Chemicals
	55.4	*61.4*	*70.0*	*Manufacturing total*
Poland	**1994**	**1996**	**1998**	
	86.9	94.1	96.7	Paper, paper products
	8.4	90.7	95.3	Tobacco
	49.9	82.5	89.9	Motor vehicles
	52.4	66.7	81.8	Radio, TV sets
	46.0	55.6	60.4	Manufacturing n.e.c.
	26.7	54.6	56.7	Rubber and plastic
	17.4	*31.9*	*40.6*	*Manufacturing total*
Slovenia	**1994**	**1996**	**1998**	
	100.0	100.0	100.0	Tobacco
	64.5	82.3	83.1	Transport equipment
	42.9	35.4	48.1	Paper
	.	40.4	42.6	Radio, TV sets
	.	21.3	26.1	Machinery n.e.c.
	16.9	*19.6*	*24.4*	*Manufacturing total*

Source: Hunya (2000b).

penetration by industries. Comparing the industry distribution of foreign penetration by equity and sales, the trends indicated by the two sets of data are the same. In general, some industries are under total foreign control while there are common industries where domestic firms dominate. The difference between industries in terms of foreign penetration tends to grow over time.

In the Czech Republic only the tobacco industry and the production of motor vehicles have absolute foreign control with over 80% of sales produced by FIEs. There is no other industry with majority foreign control over sales except for the production of TV sets. In a few other industries with intensive foreign investment activity, DEs are still in the majority: electrical machinery, non-metallic minerals, rubber & plastic. FIEs have a very low share in several industries: other transport equipment, coke & petroleum, basic metals, and leather (below 10% of sales). While most of the foreign capital is concentrated in a few successful industries and companies, the major part of the Czech economy is still plagued by slow restructuring in domestic-owned companies that emerged from voucher privatization.

In the *Czech Republic* foreign penetration is over 50% only in three industries: tobacco manufacturing, motor vehicles, and radio and TV sets. The tobacco monopoly was sold to a foreign investor who is thus almost the only producer. In the motor industry this is the result of the Škoda–Volkswagen deal that was followed by a number of takeovers and greenfield investments of supplier firms. There are another six industries above the manufacturing average of 31.5% in 1998. (Office machinery was not listed in Table 8; it has a 48% foreign share in sales, but the sales volume is extremely small.) In most industries foreign penetration is low, and it is mainly the performance of domestic firms that accounts for the development of output and of other indicators.

In *Estonia* the foreign presence is strong in the paper industry (77.5% of sales) and textiles (70.5% of sales) as well as non-metallic minerals (61%). These foreign-dominated industries provide about 7% of the manufacturing sales, but 32% of the FIEs' sales. Medium foreign penetration (40-45%) can be found in the leather industry, petrol and chemicals and the group of office machinery, electrical machinery and instruments. Except for the latter one, foreign presence is stronger in low-tech manufacturing than in more sophisticated industries. The Estonian industrial structure is still dominated by the food industry (30% of all sales and 20% of FIEs' sales), which is however declining slowly, while the shares of textiles and wood increase. Domestic companies are more dynamic than foreign ones in textiles while structural change is driven by FIEs in the wood industry.

In *Hungary* industries fall under three categories in terms of FIEs' shares in sales. Low foreign shares are below 50%; medium shares range from 50% to 70%, with 70% being the average in 1998; high shares are above the average. The lowest foreign share in an

industry is 33% (furniture, manufacturing n.e.c.) – a share that would be above-average in other countries. Industries where the majority of the production in the sector comes from domestic-owned companies are: wearing apparel, wood, publishing and printing, basic metals, fabricated metals, medical instruments, other transport equipment, furniture and manufacturing n.e.c., and recycling. Light industries and metal industries are declining industries with poor market prospects both in Hungary and abroad, therefor they are avoided by investors. These are also low-knowledge industries where the presence of FDI is usually low. The two more sophisticated industries, instruments and other vehicles, have certain problems connected to the less successful privatization of main companies.

There is no industry with a foreign share in sales between 57.3% and 70.2%. With lower shares, a number of medium-foreign-penetrated industries show up where foreign and domestic companies have almost equal shares. These are first of all the food, textiles, leather, rubber and plastic, machinery and equipment n.e.c. industries. These are also mostly declining and low-knowledge industries very similar to the low-share branches.

The industries with high, above 70%, foreign shares in sales are tobacco, paper, coke & petroleum, chemicals, other non-metallic minerals, office machinery, electrical machinery, radio and TV sets, and motor vehicles. In these industries domestic firms' production is negligible and comparisons between the foreign and the domestic sectors may lose sense. Among these branches we find some low-technology branches which have stable domestic markets, and high-technology, knowledge-based industries which were set up by foreign investors.

The distribution of manufacturing sales between industries in Hungary shows a concentration of sales in the food industry, accounting for 19.1% of total sales and 15.2% of FIEs' sales, as well as the motor vehicle industry, with 13.4% of total sales and 18.5% of FIEs' sales. While the share of the food industry in both total and foreign-sector sales declined, the motor industry is the main winner of structural change.

Coke and petroleum as well as chemicals have had high but declining significance in the industrial structure since 1996. Industries that gained shares in FIEs' sales were, beyond motor vehicles, office machinery, radio and TV sets, and – to a lesser extent – apparel and basic metals. Out of 22 industries, only these five (of which three more significantly) gained, the others lost relative significance in the sales structure of FIEs. This is true also for the total manufacturing sector as domestic enterprises have had a low share and lower dynamics than FIEs, except for other transport equipment. A radical shift of the Hungarian industrial structure took place in favour of the more knowledge-intensive industries. The change was driven by FDI. In the early privatization and domestic-market-driven period the penetration of foreign capital occurred in all industries. In the later stage export-oriented greenfield investments dominated and FDI concentrated in a few industries.

In *Poland* more than 40% of the manufacturing sales in 1998 originated from FIEs. There are large differences of FIE shares by industries. Industries form groups with significant discontinuity in their FIE shares. High penetration (similar to Hungary, over 70%) was registered in the paper industry, tobacco industry, motor vehicles, radio and TV sets. These are industries where domestic companies are almost non-existent. The main difference compared to Hungary lies in the absence of FDI in coke & petroleum – a result of different privatization policies – and in the more prominent presence of the wood industry – a natural assets-based advantage of Poland.

FIE sales ratios in Poland between 50% and 60% can be found in manufacturing n.e.c., rubber and plastic, publishing and printing, and electrical machinery. These are the industries where the foreign and the domestic sectors are in real competition and the higher productivity and profitability of FIEs matter the most. The superiority of FIEs is proven by data in all these industries. The next group consists of industries with FIE sales ratios between 45% and 30%, which includes among others the food industry. Here the position of FIEs deviates even stronger from DEs. There is a typical cherry picking situation as the rate of profit in domestic food companies is close to nil and rather high among FIEs. The last group of industries has a below 20% foreign share, i.e. with insignificant foreign presence.

In *Slovenia*, foreign penetration patterns are similar to those in the Czech Republic and Poland. The tobacco industry, the production of motor vehicles as well as radio and TV sets are among the almost totally foreign controlled industries. The majority of industries lack foreign investment.

The main common branch with above-average foreign penetration in the CEEC-5 is the manufacturing of motor vehicles. Except for Estonia, this industry has over 80% foreign penetration. The car industry was attracted both by unsatisfied domestic demand and by favourable conditions for low-cost production. Also tobacco manufacturing is usually foreign-owned as only big international companies can cope with the brand names and promotion costs of this industry. Electrical machinery has a high rate of foreign presence in the Czech Republic and Hungary. In the other three countries, where the paper industry is a major export industry, this has become a foreign-controlled branch. High foreign penetration in the chemical industry is specific to Hungary, due most probably to the pharmaceutical industry which is one of the most internationalized activities world-wide.

The size of foreign penetration in the CEEC-5 depends on industry-specific features and on the characteristics of the privatization policy. FDI in CEECs follows world-wide characteristics in the corporate integration of industries; technology-intensive electrical machinery and car production are the main targets. Foreign capital also penetrated activities with relatively stable domestic markets, e.g. in the beverages and tobacco

industries. Privatization by sales attracted FDI to all industries in Hungary, but only to few in other countries. Foreign presence remained relatively small in branches with great structural difficulties and oversized capacities, such as the steel industry.

7 Productivity growth in the foreign and the domestic sectors

Labour productivity in FIEs is on average as much as two times higher than in DEs. In this respect there was no significant difference among the CEEC-5 in the mid-1990s. But countries diverged in terms of productivity dynamics in the 1994-1998 period (Table 9). The gap between FIEs and DEs increased fast in Hungary until 1996; then it stabilized. In 1998 FIEs were 2.9 times more productive than DEs. In Poland the productivity gap increased from 1.5 to 1.9 in the 1994-1998 period. A stable 1.9 times gap was characteristic of the Czech Republic all through 1995-1998. A decrease of the productivity difference to below 2 took place in Slovenia. The productivity gap is now very similar in the Czech Republic, Poland and Slovenia. The rapidly decreasing productivity gap in Estonia led to an only 1.5 times difference in 1998.

Table 9

Sales per employee, FIEs in per cent of DEs in manufacturing, 1993-1998

	1993	**1994**	**1995**	**1996**	**1997**	**1998**	***1998/1994***
Czech Republic	209.1	186.3	190.5	193.7	188.8	189.0	101
Estonia	.	.	240.7	188.1	160.1	150.2	62
Hungary	151.4	209.0	259.9	281.8	278.9	286.7	137
Poland	158.7	154.5	156.9	185.1	184.5	194.4	126
Slovenia	.	240.9	228.0	217.8	198	197	82

Source: Hunya (2000b).

The extremely high productivity gap in Hungary shows, on the one hand, the gain foreign ownership means to the economy, on the other hand it demonstrates an unhealthy duality between the booming foreign sector and the stagnating domestic sector. But the gap did not grow much after 1996 when the second transformational recession came to an end. As will be shown in the analysis by industrial branches, most of the gap is due to the different sectoral distribution of DEs and FIEs. In many industries the domestic sector is so small that it makes little sense to compare it with the overwhelming foreign sector.

The convergence of labour productivity between DEs and FIEs in Slovenia and especially in Estonia may indicate some spill-over effects coming from foreign firms. In Estonia this process is very fast and can be related both to the very liberal conditions in the economy and the absence of highly productive advanced industries both in the foreign and in the domestic sectors.

The lead of FIEs in terms of labour productivity is not specific to the CEEC-5, but its especially large size is. In OECD countries the productivity advantage of FIEs compared to the average productivity of the manufacturing industry is only 30%. The smaller and more specialized the FIE sector, the larger its lead over the average productivity in the country. Higher productivity of subsidiaries is due to lower labour input due to narrow specialization, also to the absence of management and research functions. In addition, in transition economies FIEs usually represent a special quality in technology, management and marketing, more developed than in domestic, especially state-owned enterprises. The productivity advantage exists both in technical terms and in terms of higher output value due to higher sales prices. Higher prices can be achieved by better marketing, western brand names, etc. If the FIE sector is very different from the domestic one, the two segments of the economy may find it difficult to co-operate and the foreign sector functions as an enclave. In this case direct spill-over effects do not exist. Indirect spill-over takes place through the income and knowledge of individual employees. The learning process going on in domestic-owned companies may with time lead to narrower FIE/DE gaps.

Table 10

Sales per assets, FIEs in per cent of DEs in manufacturing, 1993-1998

	1993	**1994**	**1995**	**1996**	**1997**	**1998**	***1998/1994, %***
Czech Republic	.	124.4	116.2	120.9	124.0	132.8	107
Estonia	.	.	.	43.6	58.9	61.8	142[1]
Hungary	.	.	.	.	.	.	.
Poland	108	96	102	130	119	110	115
Slovenia	.	141	150	140	132	129	91

1) 1998/1994.

Source: Hunya (2000b).

Endowment with capital is higher in the FIE sector than in the domestic-owned enterprises. This may confirm the expectation that foreign investors use more recent, capital-intensive and labour-saving technology. It also reflects the concentration of FDI in manufacturing branches with high capital intensity. The lead of FIEs in terms of capital intensity is especially pronounced in Hungary where capital-intensive industries (e.g. steel industry, oil refineries) were more accessible to foreign investors than in the other countries. Capital productivity is higher in FIEs than in DEs in the Czech Republic, Poland and Slovenia (sales per assets, Table 10). In these countries the advantage of FIEs in terms of total factor productivity is obvious. Capital productivity of FIEs is significantly lower in Estonia. It is lower in Hungary too but the only indicator available is sales per nominal capital.

The duality of performance in the manufacturing sector appears in two respects:

– the dichotomy of modern, foreign-dominated industries on the one hand and traditional industries with both domestic and foreign companies on the other. In Hungary the nine foreign-dominated industries represented 50% of manufacturing sales in 1998;

– in the industries with both foreign and domestic companies, a comparison of indicators shows that the foreign sector is more efficient and more export-oriented than the domestic sector.

This duality between foreign- and domestic-dominated industries appeared in all countries and is growing over time. The dichotomy of performance between the foreign- and the domestic-owned companies in the same industry is largest in Hungary and smallest in Slovenia.

8 Competitiveness of the CEEC-5 on EU markets

FIEs have high and growing shares in export sales. The outstanding export performance relative to sales indicates that FIEs are more export-oriented than domestic firms (Tables 11 and 12). In Hungary FIEs account for 86% of manufacturing exports. The difference of export intensity (exports / sales) between the domestic and the foreign sectors has been growing. Export intensity in the domestic sector was 22% in both 1994 and 1998, but it increased from 37% to 56% in the case of FIEs. The shift of FIEs to exports has accelerated in recent years when more export-oriented, assembly-type greenfield investments started production. The domestic sector's export volume was the same, USD 2.4 billion, in both 1993 and 1998, while exports from the foreign sector increased from USD 5.8 million to USD 14.6 million.

Table 11

Export sales, share of FIEs in manufacturing exports, per cent, 1993-1998

	1993	**1994**	**1995**	**1996**	***1997***	***1998***	***1998/1994, %***
Czech Republic	14.9	15.9	.	.	41.9	47.0	296
Estonia	.	.	25.4	32.5	32.1	35.2	139[1]
Hungary	52.2	65.5	68.3	73.9	83.3	85.9	131
Poland	36.1	26.3	33.9	40.5	45.1	52.4	199
Slovenia	.	21.1	23.2	25.8	28.0	32.9	156

1) 1998/1995, %.

Source: Hunya (2000b).

Table 12

Exports per sales, FIEs in per cent of DEs in manufacturing, 1993-1998

	1993	**1994**	**1995**	**1996**	***1997***	***1998***	***1998/1994, %***
Czech Republic	134.0	132.3	.	.		187.5	142
Estonia	.	.	135.1	132.7	127.5	137.9	102[1]
Hungary	155.3	152.9	168.6	177.8	255.8	259.9	167
Poland	333.0	168.3	166.5	146.0	146.8	161.8	96
Slovenia	.	131.7	141.7	142.5	145.6	152.1	115

1) 1998/1995, %.

Source: Hunya (2000b).

The export share of FIEs in the Czech Republic was just about half the Hungarian rate, 47% in 1998. The increase is nevertheless impressive, considering that the share of FIEs in export sales was only 16% in 1994. Also the export intensity lead of FIEs over DEs increased very rapidly. In 1994 FIEs were only 1.3 times more export-oriented than DEs, but in 1998 already 1.9 times more. Estonia is a different case: although FIEs are more export-oriented than DEs, the gap is only 1.4 times and does not grow with time. In Poland more than half of the export sales were provided by FIEs in 1998 as a result of the rapid increase over the previous four years. The export intensity lead of FIEs over DEs by a factor of 1.6 did not change much over time. Polish DEs and FIEs are both more domestic-market-oriented than in other countries. This has to do with the size of the country and the rapid increase of domestic demand in the mid-1990s. Slovenia is a strongly export-oriented country where both DEs and FIEs have a high proportion of export sales in sales. The gap between the two increased from the 1.3 fold to the 1.5 fold over a four-year period. Still, FIEs provide only one third of the export sales. The two smallest and most export-oriented countries, Estonia and Slovenia, have the smallest role of FIEs in selling abroad.

The competitiveness on EU markets can be measured by the share of each country in the EU's imports and the development of EU imports between 1995 and 1998 (Table 13). Successful CEE exporters increased their export volumes (EU-15 imports) and market shares dynamically – in the first place Hungary, which has the highest foreign penetration. It is followed by Estonia, a small country with small export volumes. The medium range is formed by the Czech Republic. Low export dynamism and stagnating market shares characterize Poland and Slovenia. Exports to the EU increased due to reorientation and to overall export dynamics. Reorientation of trade took place mainly in the early 1990s; after 1995 it was significant only in Estonia.

The relationship between market share development and foreign penetration is most obvious in the case of Hungary and Slovenia. The rapid market gains of Hungary were the result of the restructuring and market-conquering activity of foreign investment enterprises (FIEs). Slovenia recorded low FDI, a low share of FIEs in export sales and a loss of

EU market shares. Estonian exports increased as fast as the Hungarian ones, Czech exports at medium high speed, while Polish export shares stagnated. Foreign penetration in the latter three countries is very similar to each other, if we correct for the discrepancies in data coverage, thus the very different market share dynamics cannot be explained by the presence of foreign investors. Poland has the strongest foreign penetration among them and has the worst export performance. The reason is that foreign investment in Poland is more domestic-market-oriented, as indicated by export sales as low as 28% per sales compared to over 50% in the other countries. But also Estonian exports depend mainly on the performance of domestic-owned companies as the foreign penetration of the manufacturing sector is low.

Table 13

Market shares of CEECs in EU-15 extra-EU imports, 1995-1998

	Czech Rep.	Estonia	Hungary	Poland	Slovenia
Market share 1995, %	1.85	0.17	1.54	2.49	0.93
Market share 1998, %	2.35	0.25	2.33	2.55	0.88
Market share change, %point	0.50	0.08	0.79	0.06	-0.05
Market share change, %	127	147	151	102	95
Export volume change, %	64.4	93.8	96.3	32.9	22.7
Share of FIEs in export sales, 1998, %	47.0	35.2	85.9	52.3	32.9
FIE: export sales/sales, 1998, %	57.2	50.9	56.0	27.8	72.3

Source: Eurostat Comext database and Hunya (2000b).

Market share developments at industrial branch level show which industries have gained or lost competitiveness between 1995-1998 (Table 14). In the case of the Czech Republic, half of the 22 industries gained shares and half of them lost. The major winners were the industries motor vehicles, electrical machinery n.e.c., fabricated metals and paper, printing & publishing. The main losers were the light industries (categories 15-20) as well as the industry with the highest market share, non-metallic minerals. The shift of exports is towards high value-added products. Both industries with the highest gains are dominated by foreign capital, and losing industries have generally lower foreign penetration.

Estonia can be characterized by generally increasing market shares. The three exceptions are industries with low exports anyway. Gains effected the main industries of specialization – wood, wearing apparel, textiles, fabricated metals and radio & TV-sets. A generally backward export structure and a lack of export-oriented manufacturing branches puts limits on future export growth. In the case of small countries such as Estonia or Slovenia, economies of scale cannot be developed enough to put up export-oriented subsidiaries.

Table 14

Imports of the EU-15 from selected CEECs by industry: market share gain and market share loss in the top 3 industries

Czech Republic	**gain % points 1994-1998**	**market share 1998, %**	**FIE share in exports, 1998, %**
34. Motor vehicles	4.08	6.84	88.2
31. Machinery n.e.c.	2.22	5.17	60.2
28 Fabricated metals	2.13	9.43	36.9
	loss % points		
19. Leather	-0.63	0.35	10.8
26. Non-metallic minerals	-0.30	9.99	43.5
18. Wearing apparel	-0.15	1.39	32.4
Other high market share industries			
20. Wood	-0.15	4.76	52.2
25. Rubber and plastic	1.47	4.49	60.1
22. Publishing, printing	2.08	4.43	29.0
Hungary	**gain % points 1994-1998**	**market share 1998, %**	**FIE share in exports, 1998, %**
34. Motor vehicles	3.79	8.83	99.1
31. Electrical machinery	2.57	5.67	92.7
30. Office machinery	2.37	2.67	99.9
	loss % points		
16. Tobacco	-0.88	0.0	100.0
22. Printing, publishing	-0.35	0.66	31.1
27. Basic metals	-0.23	1.37	59.4
Other high market share industries			
28. Fabricated metals	0.40	3.77	62.5
26. Non-metallic minerals	0.44	3.03	64.9
Poland	**gain % points 1994-1998**	**market share 1998, %**	**FIE share in exports, 1998, %**
31. Electrical machinery	1.54	3.55	74.7
32. Radio, TV	0.84	1.43	96.43
21. Pulp, paper	0.69	2.92	94.7
	loss % points		
26 Non-metallic minerals	-1.34	6.94	44.4
27 Basic metals	-0.81	3.59	14.6
18 Wearing apparel	-0.63	6.27	46.0
Other high market share industries			
20. Wood	0.19	8.54	59.8
28. Fabricated metals	0.47	8.30	42.3
34. Motor vehicles	0.41	4.13	95.7

Source: Eurostat Comext database and Hunya (2000b).

For Hungary motor vehicles, electrical machinery and office machinery are the major industries gaining market shares, all totally foreign controlled.

Poland is a country with almost stagnating market shares but more gaining industries, 13, than the Czech Republic. But both gains and losses of market shares are of a small magnitude showing that structural change is slow. Gaining industries such as electrical machinery and radio & TV sets are among the market share winners in other countries too. Together with the wood industry these are almost completely foreign controlled. Motor vehicles have a relatively small share and little gains of market shares, showing that the big FDI coming into this branch is mainly attracted by the large and expanding domestic market. Significant losers, such as non-metallic minerals, metals and wearing apparel, show a duality: FIEs' production and exports grow, those of domestic firms shrink. Poland seems to have a problem of international competitiveness in most industries. Although it shows the second highest (after Hungary) foreign penetration rate measured by sales, this has not contributed much to the export performance.

As for Slovenia, loss in market shares affects a wide range of industries, among them traditionally strong ones with high market shares such as paper, apparel and non-metallic minerals. Market-share winners such as metal products, electrical machinery and printing & publishing are industries with low foreign penetration. Those with the highest foreign penetration, motor vehicles, paper and radio & TV sets, have by and large stagnating market shares in the EU-15.

The analysis of the data revealed that Hungary has had a clear competitiveness gain due to FDI penetration. Estonia also had a competitiveness gain but less linked to FDI. The competitiveness gain of the Czech Republic is less than of the former two countries, but it is mainly due to FDI. Poland has strong foreign penetration with little effect on overall competitiveness. Slovenia has the most severe international competitiveness problem as it is losing market shares in the EU. This can be a result of the relatively low foreign penetration and low inflow of FDI. The modern branches, even under foreign control, do not develop fast enough to generate structural change and gain new markets.

9 Ability to earn and its impact on growth at the industry level: profitability and investment propensity of foreign and domestic firms

The rate of profit (profits per sales) is higher in FIEs than in DEs, thus a high share of profits in CEECs is produced by FIEs (Tables 15 and 16). 92% of the profit in Czech manufacturing in both 1996 and 1998 was earned by FIEs. This indicates the generally difficult financial position of domestic enterprises. The low rate of profit in the domestic sector will further curtail investment and delay restructuring. The highest profit rates in the Czech FIE sector were achieved in the tobacco industry, rubber and plastic and

non-metallic minerals. The major lossmaker in both the domestic and the foreign sectors in 1998 was the production of 'other transport equipment'. The difficult start and final success of the Škoda-Volkswagen company is reflected in the profit development of the motor vehicle industry: in 1993 and 1994 huge losses were booked. In 1997 and 1998 the car industry became profitable and produced one quarter of the manufacturing industry's profits.

Table 15

Profits, share of FIEs in manufacturing, per cent, 1993-1998

	1993	1994	1995	1996	1997	1998
Czech Republic	4.6	0.2	26.9	92.5	70.3	92.1
Estonia			loss	loss	25.6	59.2
Hungary	.	.	63.3	89.7	89.7	88.8
Poland	loss	2.4	23.6	40.6	43.9	66.0
Slovenia	.	17.8	21.0	21.9	21.2	24.9

Source: Hunya (2000b).

Table 16

Profits per sales in the FIE and the DE sector in manufacturing, per cent, 1994-1998

	1994		1996		1998	
	FIE	DE	FIE	DE	FIE	DE
Czech Republic	0.1	13.0	5.0	0.1	6.4	0.2
Estonia	.	.	4.8	-3.4	0.9	0.3
Hungary	.	.	5.8	1.1	8.0	2.4
Poland	0.6	4.8	5.3	3.6	3.6	1.3
Slovenia	3.1	3.0	3.3	2.8	3.8	3.7

Source: Hunya (2000b).

The profit share of FIEs peaked in Hungary in 1996 with 90% and has declined slowly since then. In the last two years, increasing profits in the domestic sector, despite declining sales shares, point to positive results of restructuring. In the mid-1990s there were several industries with negative aggregate profit. In 1998 they disappeared in the domestic sector but not in the foreign sector. The major producer of profits in 1998 was the motor vehicle industry, followed by chemicals and office machinery. High-technology industries with the highest amounts of FDI were the main profit generators with profit rates of 10% or above. Profits per sales were generally low in the mid-1990s at the time of recession, while in the past two years profit rates in Hungary reached high levels. But FIEs in the industries basic metals, other transport equipment and recycling made losses on average. The risk of failure persists mainly in the case of privatized companies. The bad situation of the 'other transport equipment' industry is not unique. It received FDI at the early stage of

transformation in the Czech Republic, Hungary and Poland and became a problem in later years. One of the causes can be low investment in public railways.

In Poland the profitability gap between FIEs and DEs has grown rapidly. In 1993 the foreign sector made losses. It became profitable a year later and increased its share in profits as well as the rate of profit. In 1996 FIEs received 41% of the profits, in 1998 already 66%. The rate of profit (profit per sales) equalized between the domestic and the foreign sectors at 5% in 1996. Since then a growing gap in favour of FIEs has appeared. Some industries remained lossmakers even in the foreign sector: textiles, leather, metals, and other transport equipment. Profit rates diminished in 1998 for both sectors, reflecting overall economic difficulties and the slowing down of economic growth. In the foreign sector the production of wearing apparel remained the only industry where the profit rate was 10%, in the DE sector office machinery had a similar rate. The motor vehicles industry had very low profits in the case of FIEs and losses in the case of DEs. The mostly domestic-market-oriented Polish car industry is doing significantly worse than the export-oriented Hungarian and Czech ones.

Companies in Estonia made losses in 1995 and 1996, domestic and foreign alike. In the past two years both sectors recorded profits, but 59% of all profits were generated in the foreign sector. Profits per sales decreased in 1998 due to difficulties following the Russian crisis. In Slovenia profit rates showed a lead of the foreign sector in 1996 which almost vanished by 1998. This is another sign of the rather balanced relationship between the two sectors in this country.

Table 17

Investment outlays, share of FIEs in manufacturing, per cent, 1993-1998

	1993	**1994**	**1995**	**1996**	**1997**	**1998**	***1998/1994***
Czech Republic	25.3	26.9	27.4	33.5	31.9	41.6	155
Estonia	.	.	.	41.8	27.1	32.9	79 (/96)
Hungary	58.9	79.0	79.9	82.5	78.3	78.7	100
Poland	.	30.6	41.0	45.6	49.9	51.0	166
Slovenia	.	.	14.0	20.3	23.3	24.3	174 (/95)

Source: Hunya (2000b).

FIEs are more active than domestic firms in terms of investment activity (Table 17). Investment per assets and investment per sales show a clear lead of FIEs over DEs. This is a confirmation of the importance of FDI in economic growth and restructuring. Investment data suggest that foreign investors rapidly restructure the acquired manufacturing firms and make further investment to expand activities. As a result of stepped-up investment activities, the weight of FIEs in CEE manufacturing will grow in the future even in the absence of new projects. Investment outlays per sales for FIEs in

Slovenia are not better than for DEs, which is another proof for the strength of the domestic sector in this country.

In 1996-1998 FIEs increased their share in investments in three countries, the Czech Republic, Poland and Slovenia. The small decrease in the case of Hungary is in line with the general recovery of the domestic sector after 1996. If 1994-1998 is taken into consideration, the 79% shares of FIEs in manufacturing investments remained flat. In the case of Estonia, the recovery of domestic-sector investment was much more pronounced. In key industries, such as food, wood and apparel, a clear lead of domestic firms is visible. The lack of high-technology industries prohibits large differences between sectors.

10 Conclusions and policy implications

(1) The positive link between foreign penetration and various components of international competitiveness could be demonstrated in the case of five first-tier EU accession countries. This is true both at the aggregate and the sectoral levels. It is obvious that the activity of a strong foreign sector in manufacturing increases international competitiveness. In 1994-1998 GDP growth, productivity growth, structural change and profit rates were higher in countries with a stronger presence of FDI. Economic policy can support the long-term attractiveness of a country by strengthening its locational advantages. Exchange rate policy and wage policy have to support cost competitiveness. Fiscal and other investment-related regulations and incentives must be attractive compared to other nearby countries.

(2) The deeper the foreign penetration, the faster was the speed of structural change: Hungary was first, followed by the Czech Republic and Poland in the period 1996-1998. This is relevant both for the change of output structure and the country's exports to the EU.

(3) The size and industry distribution of foreign penetration depends on industry-specific features and on the characteristics of the privatization policy. FDI in CEECs follows the world-wide characteristics in the corporate integration of industries; technology-intensive electrical machinery and car production are the main targets. Foreign direct investment helped CEECs to shift their product structure to become more similar to the more developed EU countries. This may give further impetus to economic growth and narrow the development gap between the more advanced CEECs and the EU.

(4) Foreign presence remained relatively small in branches with great structural difficulties and oversized capacities, such as the steel industry. Privatization is not enough to set restructuring of these industries in motion. Sectoral policy and financial restructuring is necessary to make companies attractive for foreign take-overs.

(5) Foreign capital has penetrated activities with relatively stable domestic markets, e.g. in the beverages and tobacco industries. Profit rate differences point to the abuse of monopoly positions especially in the tobacco industry. Competition policy is especially important in countries hosting large multinationals.

(6) A duality between foreign- and domestic-dominated industries appeared in all countries and is growing over time. The duality of the manufacturing sector can emerge in two respects,

– between modern, foreign-dominated industries on the one hand and traditional industries with both domestic and foreign companies on the other. FDI concentrates increasingly in a few technologically more advanced industries;

– a foreign–domestic gap within the industries with both foreign and domestic companies.

There are some indications for a slow productivity and profitability catch-up in sectors with both foreign and domestic companies, but the gap grows at aggregate level due to the faster growth of totally foreign-owned industries.

(7) The dichotomy of productivity and profit rates between the foreign- and the domestic-owned companies in one and the same industry is largest in Hungary and smallest in Slovenia. In Slovenia the balanced relationship between the domestic and the foreign sector is coupled with a low average rate of foreign penetration and the relatively low presence of technology-intensive industries. The small gap between the foreign and the domestic sector may indicate a slow rate of technological progress and not spill-overs.

(8) Foreign subsidiaries can perform better but not behave independently of the general conditions determining corporate income. Profit rates in the economy usually deviate between the foreign- and the domestic-owned companies, but they usually develop in the same direction as a response to overall economic conditions. The alarmingly low profit rate of domestic enterprises is a problem especially in the Czech Republic. It is becoming a problem in Poland. Profit rates are generally low in Estonia. Relief from the corporate tax to attract investors may be of little value in countries with poor profit expectations. Incentives may increase FDI more by targeting the costs of investment: regional and employment policy measures, customs allowances, industrial parks.

(9) The gap between domestic and foreign companies can widen due to unequal access to investment incentives despite the national treatment principle. Economic policy measures usually benefit large investors more than small ones. Small and medium-

size domestic firms cannot meet the minimum investment and employment requirements to become eligible for tax breaks or to receive direct investment incentives. It would be mainly to the advantage of the domestic-owned firms to implement a specific SME policy along with investment promotion incentives.

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Methodological Annex:
Database on foreign investment enterprises

Companies with some foreign share in their nominal or equity capital, foreign investment enterprises (FIEs), were sorted out from national databases containing data on the income statements of companies. The remaining companies are classified as domestic enterprises (DEs). Estonia is a special case where only majority FIEs are included in the database.

Data sources are the national statistical offices of the given countries. They are based on the financial reports of companies. Data were specially collected for the Phare-ACE project P97-8112-R. In most countries the data in this database differ from the statistics found in statistical yearbooks for the total manufacturing sector due to methodological differences between national statistics and company book-keeping.

In the case of Hungary in 1997-1998 and Slovenia, the coverage could be limited to companies with at least 10% foreign ownership, which corresponds to the internationally accepted definition of FDI. For the Czech Republic and Poland, companies with even lower foreign shares had to be included.

The database is biased towards large companies. In Hungary and Slovenia only very small ventures may fall out. Data for the Czech Republic cover only companies with 100 or more employees. Data for Estonia cover companies with more than 20 employees for 1996-1998, for 1995 the limit is 50 employees. For Poland companies with more than 50 employees could be included. Due to the above limitations in coverage, the numbers of manufacturing FIEs in the database for 1996 and 1998 are the following: 284 and 408 for the Czech Republic, 61 (1995) and 368 for Estonia, 4312 and 4024 for Hungary, 2991 and 4008 for Poland, and 286 and 320 for Slovenia. The relatively small numbers in the Czech Republic are due to the size limit. The average size of FIEs is larger than that of domestic enterprises (DEs) and the size limit blows up the share of FIEs in the Czech and the Polish samples.

The strong increase in the number of FIEs in the Czech Republic may partly be due to the fact that the growth of employment in FIEs has shifted smaller enterprises into the survey sample while shrinking DEs fell out. The same applies to Poland where the total number of domestic firms is several times larger than those covered by the database. The countries which do not have this minimum size problem – Hungary and Slovenia – show a fairly constant share of FIEs by number.

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