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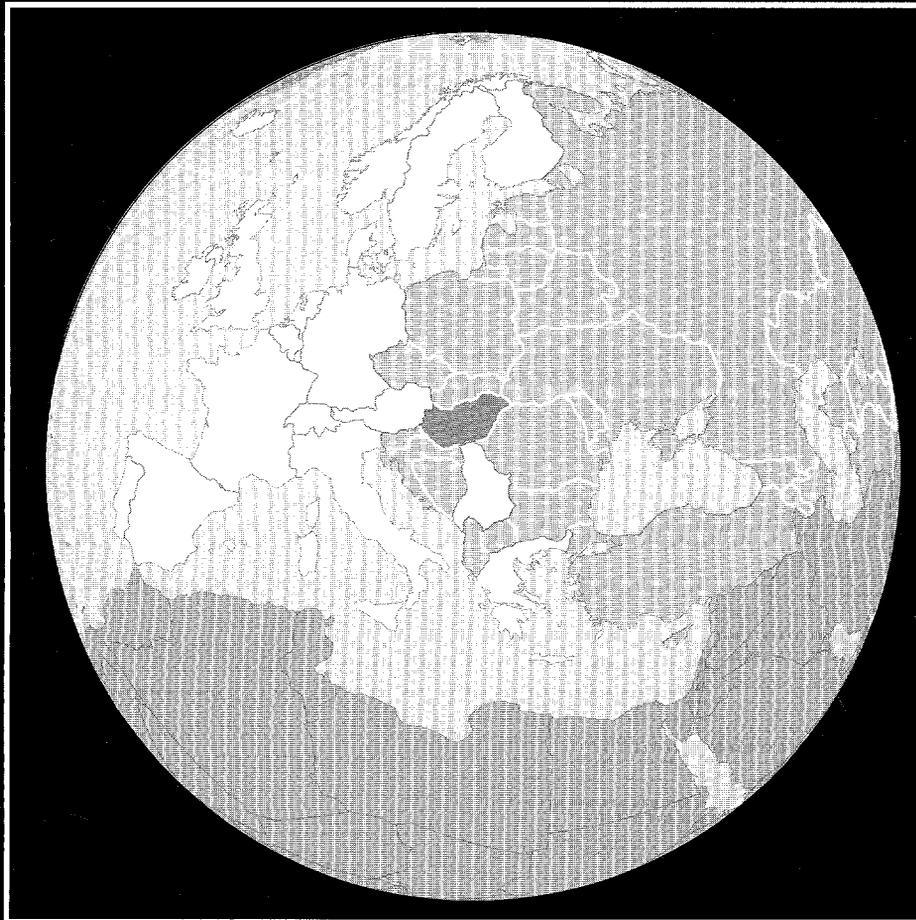
*Europe and Central Asia Poverty Reduction and Economic  
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# Foreign Investment and Restructuring

*The Evidence from Hungary*



*Bartłomiej Kaminski  
Michelle Riboud*

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*Bartłomiej Kaminski  
Michelle Riboud*

*The World Bank  
Washington, D.C.*

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## Table of Contents

Foreword .....	v
Acknowledgments .....	vi
Executive Summary .....	vii
Chapter 1 Introduction .....	1
Chapter 2 Scope and Depth of Foreign Direct Investment: Sources of Success .....	4
Why Hungary? .....	4
Penetration by Foreign Capital .....	7
Chapter 3 Microeconomic Restructuring: The Role of Foreign Direct Investment .....	9
Privatization and Foreign Direct Investment .....	9
Enterprise Performance .....	12
Impact on Performance: Employment, Productivity, and Wages .....	13
Chapter 4 Foreign Direct Investment and Foreign Trade .....	16
Export Dynamics .....	16
Competitiveness in EU Markets .....	18
Foreign Direct Investment and External Sector “Equilibrium:” The “Untold” Dimension of Success of the 1995 Stabilization Package .....	19
Integration into Global Networks .....	20
Chapter 5 Foreign Direct Investment–Led Restructuring and Change in Factor Intensities: The “EU Perspective” .....	23
Chapter 6 Has Hungary Become a Dual Economy? .....	26
Chapter 7 Conclusion .....	29
Notes .....	31
References .....	33

## List of Figures

Figure 1. Manufacturing Enterprises by Number of Employees Before and After the Collapse of Socialism (in Percent) .....	11
Figure 2. Exports of Firms with Foreign Participation, 1989-97 .....	17

## List of Tables

Table 1. FDI Inflows to Hungary in a Comparative Perspective, 1990–97 .....	5
Table 2. Highlights of the “Weight” of Foreign Capital in the Hungarian Economy (in Percent), 1989–96 .....	8
Table 3. FDI by Sectors and the Share of Foreign Firms in Total Number of Firms by Sectors (1992 and 1996) .....	8
Table 4. Enterprise Losses (in Percent of GDP) .....	10
Table 5. Forward-Looking Set 1992–97 (The Same Firms are Followed Over Time; Ownership Category Corresponds to That in 1992) .....	12
Table 6. Backward-Looking Set 1992–97 (The Same Firms are Followed Over Time; Ownership Category Corresponds to That in 1997) .....	12
Table 7. Distribution of Value Added in Manufacturing by Types of Ownership, 1992 and 1997 (in Percent) .....	13
Table 8. Job Losses and Job Gains in the Manufacturing Sector 1992–97 (in Thousands) . . .	14
Table 9. Real Value Added Per Employee in Manufacturing by Types of Firm Ownership, 1992–97 .....	14
Table 10. Wage Advantages of Employees at Foreign Firms (Over Employees at Domestic Firms) in Major Occupational Groups, 1995 (in Percent) .....	15
Table 11. Export Growth of Firms with Foreign Participation, 1989–97 .....	17
Table 12. Trade with the EU in Selected Networks Involving Production Sharing, 1989, 1993, and 1997 .....	21
Table 13. The Composition of Hungarian Exports to the EU According to Factor Intensities, 1989–97 (in Percent) .....	24
Table 14. Composition of Exports and Imports from the EU in Terms of Factor Intensities, 1989, 1993, and 1997 (in Percent) .....	25
Table 15. Firms Operating in FTZs in Hungarian Foreign Trade, 1995–97 (in Percent) . . . .	27

## **Foreword**

The Poverty Reduction and Economic Management Unit in the World Bank's Europe and Central Asia Region has been undertaking a series of analytical work on issues pertinent to the economies in the region. These include: transition issues; issues of economic integration pertinent for the Central and Eastern Europe countries which are candidates for accession to the European Union; poverty issues; and other economic management issues. The analytical work was conducted by staff of the unit and other Bank staff, as well as specialists outside of the Bank.

This technical paper series was launched to promote wider dissemination of this analytical work, with the objective of generating further discussions of the issues. The studies published in the series should therefore be viewed as work in progress.

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PRADEEP MITRA  
DIRECTOR  
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EUROPE AND CENTRAL ASIA REGION  
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The following study was prepared by Mr. Bartłomiej Kaminski, the University of Maryland and The World Bank, DECRG (Development Research Group), and Ms. Michelle Riboud, WBIHD (The World Bank Institute, Human Development Group).

## **Executive Summary**

Hungary is a unique case for studying the impact of foreign direct investment (FDI). To begin with, the penetration of the Hungarian economy by foreign economies is enormous. Most firms accounting for the bulk of sales in their respective markets have some foreign participation. Second, except for a short period during the initial stages of EU accession (1990–94), the government has adhered to the principle of nondiscrimination. Consequently, special treatment (such as subsidies and market barriers) has had no discernible impact on decisions of foreign investors. Third, the program of privatization—with its emphasis on improvement in corporate governance—actively sought to restructure state-owned enterprises (SOEs) before offering them to highest bidders.

Having assessed the reasons for Hungary's pull of FDI and the depth of foreign involvement in the Hungarian economy, this paper addresses the following questions: What factors explain a dramatic improvement in overall profitability of manufacturing activity beginning in 1992? Do firms with foreign participation make an overall contribution to higher employment or do they have a suppressing effect? Do these firms pay lower wages? Do privatized firms with foreign participation become active participants in international markets? Do they push the Hungarian economy towards specialization at the bottom of the value-added spectrum—that is, in unskilled labor-intensive products? Has Hungary become a dual economy, one side increasingly modern and efficient, and the other increasingly backward?

We proceed to answer these questions by (1) using a specially designed database allowing tracing the impact of privatization (including transfers of property rights to foreign investors) on productivity and employment; (2) examining data on the structure of employment and wages in firms with and without foreign participation; (3) examining developments (such as competitiveness and dynamics) in foreign trade with the EU, and assessing the contribution of foreign-owned firms; and (4) examining in factor intensities of Hungarian EU-destined exports.

The analysis presents strong empirical support for the following conclusions. First, impressive performance of the Hungarian economy would have been impossible without FDI. Second, firms privatized to foreigners have increased employment after initial downsizing. Third, foreign-owned firms pay more and employ a more highly skilled labor force. Fourth, the shift in the Hungarian export basket toward human capital-intensive products further confirms this finding. Fifth, foreign firms have modernized Hungary's manufacturing sector, and Hungarian exporters have dramatically improved their competitiveness in high-technology products. Last, fears about the emergence of a dual economy have turned out to be unfounded.



# Chapter 1

## Introduction

Although the official rhetoric in most transition economies has been in favor of foreign direct investment (FDI), few countries have succeeded in attracting sizable inflows. This is despite a dramatic rise in capital flows to developing countries in the early 1990s. The former Soviet Union and Central and Eastern Europe, with an aggregate GDP equal to around 20 percent of all developing country GDPs,—received around 12 percent of all capital flows to developing economies (Claessens, Oks, and Polastri 1998). Clearly, rhetoric alone is not sufficient. It has to be matched by deeds such as privatization and a business-friendly institutional and policy environment.

The averages conceal diversity among transition economies. Some have been quite successful in attracting foreign capital, and Hungary stands out among them. During the early stages of EU accession (1990–93), Hungary absorbed almost half (45 percent) of total FDI inflows to 25 countries of the former Soviet Union and Central and Eastern Europe. Its share of FDI subsequently fell to around 25 percent once other Central European transition economies became attractive to foreign investment. Yet, Hungary's cumulative share of foreign investment outlays in the region from 1990 to 1997 remained very high at around 30 percent.

Several factors helped Hungary to get ahead of other transition economies in terms of attracting FDI. These included earlier reforms under central planning, strong political commitment to attract foreign capital to finance current account deficits and external debt, and the credible commitment of successive governments to establishing competitive markets.

By 1998, annual inflows of FDI to Hungary had been about 5 percent of GDP for eight years, and the cumulative impact on the Hungarian economy was huge. Foreign capital accounted for around 20 to 25 percent of domestic investment outlays. Consider also that foreign-owned firms have invested their retained earnings (or at least some portion of it), thus increasing the actual share of investment by foreigners. It is estimated that foreign firms now account for almost two-thirds of total investment and employ around 40 percent of the Hungarian workforce. The scope of foreign investment embracing all sectors of the Hungarian economy (especially those of tradables) has no counterpart in other transition economies. For better or worse, behavior of foreign-owned firms controls the dynamics of the Hungarian economic performance.

A large body of empirical research has accumulated on the impact of foreign investment on a host economy. The literature distinguishes between direct and indirect effects of industrial subsidiaries of foreign firms on a host country. The potential positive direct economic effect is an increase in the real income in a host country, thanks to the import of capital, technology, and skills that would otherwise be unavailable. However, if the profits accrued by a foreign firm are due to government subsidies (including, for instance, a level of effective protection so high that a product could be imported more cheaply), then the net benefit fails to materialize. Externalities or side effects include the diffusion of imported skills efficiency both horizontally and vertically and the creation of close links with “home” economies. It has been observed that domestic firms become more competitive as they become suppliers of foreign firms “upstream” and buyers of products “downstream” from a foreign firm.

While there seems to be consensus in the literature that both direct and indirect benefits indeed occur in North-North investment flows, some of these benefits may fail to materialize in North-South flows—that is, in developing countries. Two sets of factors are usually responsible for the failure. First, ill-founded policies employed to attract foreign investment may wipe out the positive effect of foreign investment on real income. Excessive indirect subsidies (that is, protection) or direct subsidies (such as tax holidays or project-specific investment in infrastructure) to foreign firms may raise the price of certain goods well above that in international markets. A country would then be better off importing rather than producing the goods. Many countries offering high protection to foreign investors belatedly discovered that the result was industries unable to compete in international markets. There is strong empirical evidence that subsidies offered to foreign investors have been usually self-defeating (World Bank 1994).

Second, indirect benefits may be weakened, if not entirely erased, by the inability of domestic firms to take advantage of new opportunities. Since spillovers to other firms are crucial for economic growth, foreign investment does little to spur economic growth. The evidence on spillover effects remains ambiguous. On the one hand, a number of case studies pointed to significant positive spillovers but only if local skills and the technological progress to adopt techniques used elsewhere are available (Lall 1992). On the other hand, microeconomic studies have found a statistically significant negative spillover effect of foreign participation on firms without foreign participation—see Djankov and Hoekman (1998) and Harrison (1996). Although negative spillover may simply suggest the lack of ability among domestic firms to benefit from know-how diffusion, it remains unclear why the performance of domestic firms in an industry worsens with the increased number of foreign owned firms.

One possible explanation is selectivity bias, that is, the best-performing domestic firms attract interest among outside investors. Furthermore, firms acquired by foreign investors increase their edge over domestic firms. In their study of Czech firms, Djankov and Hoekman (1998) find that total productivity growth is positively correlated with the extent of foreign ownership; firms fully owned by foreigners perform better than joint ventures. A number of other studies on performance of firms purchased by outside investors in transition economies corroborate this result (see Rojec 1998).

It seems that FDI offers the most efficient way to take advantage of growth opportunities offered by the global economy. Firms receiving FDI are not only efficient but also have direct access to the global networks of their parent companies. This is important, since the most rapidly growing segment of global trade is in industrial components and parts, thanks to the possibility of “dividing up the value chain” of production.<sup>1</sup> The result is—to borrow an apt phrase from Feenstra (1998)—integration of trade and disintegration of production in the global economy. FDI offers the opportunity to become part of this process; an estimated one-third of world trade is among affiliates of a single company (Sachs 1998). Becoming part of the production and distribution network of a multinational corporation (MNC) offers an inexpensive way to market products. Firms do not incur marketing costs, which are usually quite significant for newcomers (Roberts and Tybout 1998).

Hence, with the growth in foreign penetration, industries should become more competitive internationally. In Hungary the share of locally-owned firms has been precipitously falling since around 1991. The extent of foreign penetration of the Hungarian economy is substantial not only

by the standards of transition economies but also by those of most successful developing countries. Foreign firms account for almost two-thirds of total investment expenditure, which suggests that their dominance will continue growing. Under these circumstances, the question whether spillovers are negative or positive seems to have little relevance, if any.

However, there are other important questions to consider. What impact does FDI have on employment? Some suggest that FDI in Hungary has contributed to increases in productivity but not to matching increases in real earnings (Ellingstad 1997). Others complain about the emergence of a dual economy—one side increasingly modern and efficient, and the other increasingly backward. Other interesting questions relate to what this omnipresence of foreign firms may mean to current and future economic performance. Considering that Hungarian firms will soon face competitive pressures of a single European Market, will abundant FDI put them in a better position to withstand these pressures?

Most empirical studies we are aware of have focused on the impact of FDI on research and development (R&D) (for example, Elteto 1998), financial performance (for example, Hunya 1998 and World Bank 1999), export performance (Kaminski 1999), modes of integration into global markets (Ellingstad 1997 and Martin 1998), and industrial restructuring (for example, Hamar 1998). Drawing on this rich evidence, this paper seeks to assess the impact of FDI on various aspects of the Hungarian economic performance, including the Hungarian current and future capacity to withstand competitive pressures of a “Single Market”

What matters for the capacity to compete is survival of economic activity at the higher end of a value-added spectrum. While ultimately the outcome depends on government policies, main FDI-related components pointing to the potential for sustainable performance may be traced. These include characteristics of industries attracting FDI in terms of factor and R&D intensities, and the financial performance (that is, profits), investment activity, and foreign trade orientation of foreign owned firms. These aspects of FDI shed light on long-term effects of foreign-owned firms on the Hungarian economy. With privatization nearing its completion, sudden surges in FDI inflows are rather unlikely, but reinvested earnings of foreign-owned firms seem to guarantee their growing presence in the Hungarian economy.

The remainder of this paper is organized as follows. Chapter 2 shows that Hungary’s outstanding success in tapping FDI has been due to privatization and overall liberalization rather than to special incentives (such as subsidies) to foreign investors. Chapter 3 identifies distinctive characteristics of firms with foreign participation in terms of employment, productivity, and profitability. Chapter 4 examines links between FDI-driven microeconomic restructuring and foreign trade effects including export growth, competitiveness in EU markets, and integration into global production and distribution networks. Chapter 5 examines “factor intensities” of Hungary’s restructuring as revealed in exports to EU markets. Chapter 6 addresses the question of “duality” as a result of FDI-led restructuring.

## **Chapter 2**

# **Scope and Depth of Foreign Direct Investment: Sources of Success**

Structural reforms and sound macroeconomic fundamentals are clearly necessary conditions to attract capital flows. Among various determinants of FDI examined in empirical studies, the strength of macroeconomic fundamentals as measured by GDP growth has been consistently very important. Ireland's impressive growth performance, which raised its GDP per capita from 64 percent of the EU average in 1983 to 90 percent in 1996, can be attributed directly to two factors—sound macroeconomic policies and its ability to act as a magnet for U.S. investment thanks to friendly business environment.

Empirical studies of capital flows seem to agree on two observations: official flows lead or stimulate countries' reform efforts, whereas private capital flows, with FDI as the most important component, follow or respond to reform measures. A recent study has found that liberal reforms provide a more powerful explanation of variation in FDI flows to former centrally planned economies (CPEs) than to other developing countries (Claessens, Oks, and Polastri 1998). Indeed, leaving aside investment in nonrenewable natural resources, which are partly immune to an economic regime, there has been a rather strong positive relationship between the size of FDI inflows and the progress in dismantling central planning and the shift to macroeconomic stability. Within the group of former CPEs, improved conditions in access to EU markets due to Europe Association Agreements, often referred to simply as the "EU factor," have clearly acted as a magnet for foreign investors. Yet, the former, (that is, liberal) reforms seem to prevail over the "EU factor" alone, as the experience of Bulgaria and Romania shows.

The developments in aggregate FDI inflows to transition economies seem to confirm these observations. Garibaldi and others (1999) argue that the increase of FDI inflows per capita in 1994–95 coincided with the period when in transition economies reforms have begun to take hold, inflation rates fell and growth resumed. Indeed, there was a dramatic increase from \$18 per capita in 1994 to \$43 per capita in 1995. (All dollar amounts in this paper are U.S. dollars). However, despite rebounding economies and progress in macroeconomic stabilization, former Soviet republics (excluding Baltic states) failed to increase their share in FDI. Two developments—Hungary's "big privatization" sale and Poland's improved creditworthiness thanks to the completion of Club of London negotiations—accounted largely for the increase in FDI.

### **Why Hungary?**

The EU factor, combined with the rapid movement away from central planning and macroeconomic stability, provides a good explanation why the bulk of flows to transition economies went to Central Europe. But these general characteristics fail to explain, for instance, why the Czech Republic, with lower inflation and debt, attracted less FDI than Hungary. It also fails to explain why Poland, despite its much stronger GDP growth performance, has attracted relatively less FDI than the Czech Republic.

Hungary, together with Poland, has received the largest inflow of FDI from 1990 to 1997. But Poland's economy is almost four times larger, and so is its population. Hungary has a huge lead

over other popular transition economies among foreign investors, measured in terms of flows per capita or share of GDP. Cumulative inflows of FDI per capita from 1990 to 1997 to Hungary were 1.8 times larger than to the second largest recipient, the Czech Republic (table 1.A). Similarly large are the differences in cumulative inflows of foreign investment in terms of GDP per capita; Hungary absorbed 1.5 times more than the second largest recipient, Estonia (table 1.B).

Inflows amounting on average to 5 percent of GDP (or one-fifth of total capital outlays) have produced a very significant penetration of the Hungarian economy by foreign capital—much more extensive than in any other transition economy. In addition, the share of foreign-owned manufacturing enterprises in investment outlays in Hungary amounted to 83 percent in 1996 (Havlik 1999). This was 40 percent more than this share in Poland, which scored second among transition countries. The gap is much wider in financial and telecommunication services.

Why has Hungary been so successful? After all, the Central European countries share similar characteristics.<sup>2</sup> They are all in the EU accession pipeline, thus benefiting from the “EU factor” (Claessens, Oks, and Polastri 1998). They are all well endowed with relatively cheap skilled labor, which is usually associated with a high volume of direct investment (Markusen 1998). In various surveys of transition economies the Central European countries are usually classified as the most advanced reformers (EBRD 1998, World Bank 1996, and World Bank 1997). Thus, one would expect a much lower variation in terms of the ratio of FDI to GDP.

It seems that Hungary has been better positioned to benefit from the sharp rise in FDI to developing countries in the 1990s for four reasons. First, Hungary was saddled with a huge international debt at the outset of its full-fledged transition to competitive markets. Unlike Poland, however, it had never sought rescheduling; nor had it defaulted in its payments to private or public creditors. Therefore, Hungary’s creditworthiness remained high. Moreover, earlier dealings with international financial community helped Hungarians develop considerable financial management and negotiating skills. Therefore, despite heavy indebtedness, Hungary was perceived as a reliable and creditworthy partner.

Second, early liberalization of foreign investment, including limited investment opportunity dating back to 1972, set the groundwork for the current high levels of FDI. Limited joint ventures

**Table 1** FDI Inflows to Hungary in a Comparative Perspective, 1990–97

<i>A. Cumulative inflows per capita, 1990–97</i>								
	1990	1991	1992	1993	1994	1995	1996	1997
Estonia	0	0	55	163	305	440	513	620
Czech Republic	12	61	153	216	301	549	683	809
Hungary	29	168	308	531	639	1,068	1,256	1,439
Poland	2	10	27	71	119	214	329	412
Slovenia	0	0	56	112	154	239	328	476
<i>B. Cumulative inflows in terms of the share (cumulative) in GDP</i>								
	1990	1991	1992	1993	1994	1995	1996	1997
Estonia	0.00	0.00	1.90	6.05	11.69	16.66	20.10	25.04
Czech Republic	0.66	2.30	4.44	6.26	8.38	13.83	16.48	19.10
Hungary	0.98	5.54	9.65	15.93	18.78	29.32	33.90	37.85
Poland	0.16	0.56	1.36	3.36	5.39	8.45	11.76	13.89
Slovenia	0.00	0.00	0.90	1.79	2.37	3.27	4.22	5.77

Source: *Global Development Finance*, The World Bank, Washington D.C., 1998, and *Economic Survey of Europe 1998 No. 1*, United Nations Economic Commission for Europe, New York and Geneva, 1998.

with foreign partners were already allowed under central planning: the 1972 Law permitted establishment of firms with foreign participation not exceeding 50 percent of equity. The domestic majority ownership requirement was abolished in 1988. While these legal provisions were of little practical consequence in 1972, they turned out to have positive impact once central planning was abolished. Thanks to the 1972 Law some large MNCs (for instance, TDK in 1973) established their presence, but began investing only in the late 1980s. In other words, earlier joint ventures have often led to follow-up investments.

The early joint ventures enabled foreigners to receive the help of local partners, usually state enterprises, in negotiating the legal and bureaucratic hurdles facing businesses. As the Hungarian private sector was allowed a larger role, foreigners increased their stake in their joint ventures and began to integrate their Hungarian units with their operations abroad. Although the overall number of joint ventures has decreased recently (because the inactive ones were liquidated), new wholly owned subsidiaries have become the norm, not the exception. In 1992, the foreigners' stake was most often a blocking minority; but this slowly changed over the years, and majority and wholly owned subsidiaries have become more common.

Third, Hungarian firms were allowed to establish direct horizontal links with Western firms. They had been involved in subcontracting since 1968, which created a good base for foreign investors to respond to new opportunities created by the collapse of communism, and for Hungarian managers to seek foreign partnerships. Many first joint ventures were simply a more advanced stage in these long-lasting relations (Hamar 1998), but eventually they helped generate a virtuous circle of FDI. Investments by MNCs have paved the way for other investments. These include investments made by competing MNCs in similar lines of products, as well as subcontractors investing in major MNCs that purchase their products. Early entry of foreign capital has also facilitated participation of foreign investors in privatization (after this process was opened to foreign investment).

Fourth, the Hungarian privatization program has specifically targeted outside investors. Hungary has pursued an active policy of selling firms to strategic investors on a case-by-case basis. During the initial stages of restructuring, the state played an active role by "packaging" state-owned firms for sale to outside bidders. Furthermore, Hungary moved much earlier than other transition economies to open the so-called "strategic" sectors to foreign investors. This has set Hungary apart from other transition economies in terms of the scope and timing of the opening.<sup>3</sup> With almost two thirds of privatized assets purchased by foreigners, the Hungarian central budget received around \$6.4 billion in foreign exchange between 1991 and 1997. This was equivalent of 43 percent of total FDI inflows during this period.<sup>4</sup>

The policy of privatization has generated a virtuous cycle of foreign investment. Measures aimed at deepening the financial sector and opening services to foreign capital have created a favorable environment for FDI in other areas. The inflows of foreign capital have increased competition and improved services. Hungary's banking sector, for instance, is regarded as the best in the region. This can be attributed to a well-designed government program of restructuring and foreign banks. A whole array of high-quality services—financial intermediation, port services, telecommunications, and so forth—has increased the attractiveness of Hungary to foreign investors, and has also facilitated exchange by reducing transaction costs.

Hungary's success in attracting large inflows of FDI sheds light on factors explaining the variation in FDI flows to Central European associates of the European Union. The choice of a method of privatization (that is, sale to outside investors), a business-friendly environment, and an earli-

er record of horizontal contacts with Western firms seem to be the relevant ones. While Poland also meets these criteria, a slower pace of privatization of strategic sectors and the unsolved issue of Poland's restructured private debt (until the 1994 London Club deal) negatively impacted FDI. Hungary's edge over other associates was due to an earlier start (compared to Estonia, the Czech Republic, and Slovenia) and foreigner-friendly methods of privatization (as opposed to the Czech Republic and Slovenia).

To sum up, the answer to a question why Hungary outperformed other countries rests on three interrelated premises: the record of high—and historically established—creditworthiness, a unique record of opening to the external world foreign investment under central planning, and the Hungarian approach toward microeconomic restructuring and privatization. An inherited debt seemed initially a liability, but was turned into an asset with a courageous strategic decision not to default on the huge international debt. The authorities had to actively pursue other ways of financing servicing of the external debt. Non debt—creating foreign investment has been the obvious choice. Debt management considerations seem to have provided a strong motive to choose piece-by-piece privatization to an outside bidder and open the strategic sectors to “external” privatization earlier than in other transition economies. In addition, restructuring policies have been designed to establish a business environment friendly to foreign and domestic investors alike.

## **Penetration by Foreign Capital**

Two sets of preliminary observations can be derived from data presented in table 2. The first concerns the scope of FDI, and the second relates to its distinctive features. Clearly, the “weight” of foreign firms in the Hungarian economy is quite dramatic. Foreign firms employ around 40 percent of the Hungarian workforce. Around half of domestically produced products and services come from firms with foreign participation. On the basis of these observations alone, one could conclude that almost the entire economy of Hungary has been taken over by foreign capital.

Furthermore, the significance of firms with foreign participation will grow even without new FDI inflows. Their share in total investment considerably exceeds their weight in terms of other indicators. The share of foreign firms in total investment tripled between 1989 and 1991, rising from 11 to 30 percent and more than doubled thereafter reaching 62 percent in 1996.<sup>5</sup> With the share of foreign firms in the total of all newly incorporated firms in 1997 reaching two-thirds, their role will continue growing. In the manufacturing sector there has been a dramatic expansion of firms with “FDI ownership.” Their number grew from 11,620 in 1992 to 18,070 in 1996 (Hamar 1998).

An important feature of FDI in Hungary is its large scope in terms of sectors covered and actual numbers of foreign owned firms. FDI has been most widespread in manufacturing, where FDI firms are present in all major industries. Among fifteen major industries (denoted by double-digit NACE codes) FDI firms accounted in 1996 for more than 50 percent of total sales, with the following exceptions: textiles (NACE code DB—44 percent), leather (NACE code DC—46 percent), wood (NACE code DD—43 percent), basic metals (NACE code DJ—34 percent), and machinery (NACE code DK—45 percent). The share of FDI firms is not only higher than in other transition economies, but their presence is also more evenly distributed across industries. For instance, the coefficient of variation (the ratio of standard deviation to the average FDI share) in 1996 was 0.79 for the Czech Republic with an average of 22 percent and standard deviation of 17.1, compared to a coefficient of 1.18 for Slovenia (with an average FDI share of 18 percent and standard deviation

**Table 2** Highlights of the “Weight” of Foreign Capital in the Hungarian Economy (in Percent), 1989–96

	1989	1990	1991	1992	1993	1994	1995	1996
Share of foreign firms in total investment	11	18	30	n.a	49	59	62	62
Share of foreign firms in total net sales	5	11	17	24	33	39	45	47
Share of foreign firms in total exports	10	17	28	37	50	61	66	71
Share of foreign firms in employment	n.a	8	11	15	20	24	33	39
Share of foreign firms in total wage fund	4	9	14	19	28	31	37	41
Share of foreign owned assets in total assets of manufacturing sectors	2	5	9	10	16	19	28	32

n.a. not applicable.

Note: Data may differ from those reported in national statistics. These are based on companies reporting to the KOPINT Tax Office, which does not cover all economic agents.

Source: Derived from calculations by Hamar (1998).

of 21). The coefficient was only 0.35 for Hungary.<sup>6</sup>

Although the manufacturing sector has received the largest FDI inflows of \$4.2 billion from 1989 to 1996, accounting for 40 percent of the total foreign investment stock in 1996 (table 3), its share declined between 1992 and 1996. This was mainly because of opening of other sectors of the economy to privatization, particularly public utilities and energy (the 1995 “big” privatization). These sectors attracted \$1.5 billion in 1995, only slightly less than FDI in manufacturing (\$1.7 billion).

The structure of capital outlays alone does not give a full indication of foreign presence, however. The last two columns of table 3 give information on shares of foreign-owned firms in total number of firms by sector. Overall, one in five firms had some form of foreign involvement in 1996. Their presence was particularly large in financial services, with around 60 percent of all firms having foreign ownership and 50 percent of assets owned by foreigners.

**Table 3** FDI by Sectors and the Share of Foreign Firms in Total Number of Firms by Sectors (1992 and 1996)

Sector	FDI stock		FDI stock, distribution		Number firms to foreign all firms	
	1992	1996	1992	1996	1992	1996
	(millions of U.S. dollars)		(percent)		(percent)	
Agriculture	33	122	0.7	1.2	5	12
Fishing	0	1	0.0	0.0	5	15
Mining	81	121	1.7	1.1	33	32
Manufacturing	2,500	4,244	52.8	40.3	22	21
Electricity, gas, steam, water supply	32	1,490	0.7	14.1	9	11
Construction	199	381	4.2	3.6	13	11
Wholesale and retail trade, repair workshops	686	1,248	14.5	11.8	28	25
Hotels & restaurants	159	261	3.4	2.5	24	21
Transport, storage & communication	85	926	1.8	8.8	23	17
Financial intermediaries	484	952	10.2	9.0	18	61
Real estate, renting and leasing, other business activity	432	731	9.1	6.9	20	15
Other	46	63	1.0	0.6	21	12
Total	4,735	10,538	100.0	100.0	22	19

Note: Data may differ from those reported in national statistics. These are based on the set of companies, the data of which are made available by the tax office to the research institute Kopint.

Source: Derived from calculations by Hamar (1998). Conversion from forints (FT) using the average exchange rate of \$1 = FT79 for 1992 and \$1=FT152.6 for 1996 (taken from Van Elkan 1998).

## **Chapter 3**

# **Microeconomic Restructuring: The Role of Foreign Direct Investment**

Hungary owes its impressive economic performance during 1996–98 to the progress achieved in microeconomic restructuring. While gradualism characterized Hungary's approach to policy areas, including foreign trade and exchange rate regimes, radicalism was its trademark in dealing with microeconomic adjustment to the double shocks of the collapse of import demand in Council of Mutual Economic Assistance (CMEA) economies and the shift to a demand-constrained economy, to borrow apt terms from Janos Kornai. Gradualism inflicted additional adjustment cost, whereas radicalism fully paid off albeit with a delay. Halpern and Wyplosz (1998, p. 8) note that "deep restructuring has been partly obscured by the fact that misguided macroeconomic policies allowed some firms and banks to delay adjustment to the new environment." However, even if macroeconomic policies were indeed misguided, they appear to have done little to discourage foreign investors.

Long before enterprises were privatized, enterprise managers in Hungary were allowed to operate with little government control. In addition, while most of the industry assets were controlled by large state-owned enterprises, numerous small private firms were operating even in the 1960s. This kept the entrepreneurial culture alive, helped Hungarian enterprises (even state-owned) establish links with foreign enterprises, and facilitated the transition to a market economy.<sup>7</sup> As a result, firms began restructuring even before they were privatized, which probably explains why research shows that performance of privatized and state-owned firms differed less in Hungary than in other transition economies.<sup>8</sup>

### **Privatization and Foreign Direct Investment**

Early intellectual exchanges, as well as considerable experience accumulated over decades of experimenting with various forms of ownership under central planning, appear to have contributed to the choice of a particular privatization policy. Many argued that dispersed, passive owners—even private—would not manage enterprises better than the state had. As a consequence Hungary did not fall into the trap of mass privatization, with preference given to the speed of property transfers over gains in the quality of corporate governance. Neither did it rely on selling a controlling stake to insiders; this practice remained very limited.<sup>9</sup> Hungary adopted the practice of case by case sales to the highest bidders and encouraged foreigners to participate in the process. The objective was not only to tap foreign savings, although this was an important consideration in a highly indebted country, but above all to encourage transfer of know-how and best international business practice. While the privatization process was slow and often frustrating, corporate governance has become stable, and its quality has become—according to Torok (1998)—comparable to that in highly industrialized countries.

The restructuring was deep and comprehensive, as the subsequent discussion shows. Table 4 shows that gross losses in industry rose alarmingly following the collapse of central planning, from 0.6 percent of GDP in 1988 to 14 percent in 1992.<sup>10</sup> However, from 1992 onward losses decreased precipitously.<sup>11</sup> Railways, the post office and a few firms in the communications sector accounted

**Table 4** Enterprise Losses (in Percent of GDP)

	1988	1989	1990	1991	1992	1993	1994	1995	1996
<i>Industry<sup>1</sup></i>									
Gross losses	0.6	1.4	2.6	8.4	14.2	10.1	7.2	3.1	—
Net profits	16.9	16.2	13.3	4.1	-6.1	-3.4	0.1	2.2	—
<i>Limited industry<sup>2</sup></i>									
Gross losses	—	—	—	—	6.7	4.0	3.3	3.6	2.7
Net profits	—	—	—	—	-3.9	-0.7	0.4	1.2	2.8
<i>Manufacturing</i>									
Gross losses	—	—	—	—	5.6	3.3	2.3	1.8	1.6
Net profits	—	—	—	—	-3.5	-0.7	0.7	2.6	3.3

— . Not available.

1. Includes mining (ISIC category "C"), manufacturing ("D"), electricity, gas and other utilities ("E"), construction ("F"), and transport and communication ("I").

2. Excludes transport and communication (category "I", which has railways and the postal system).

Source: World Bank (1999)

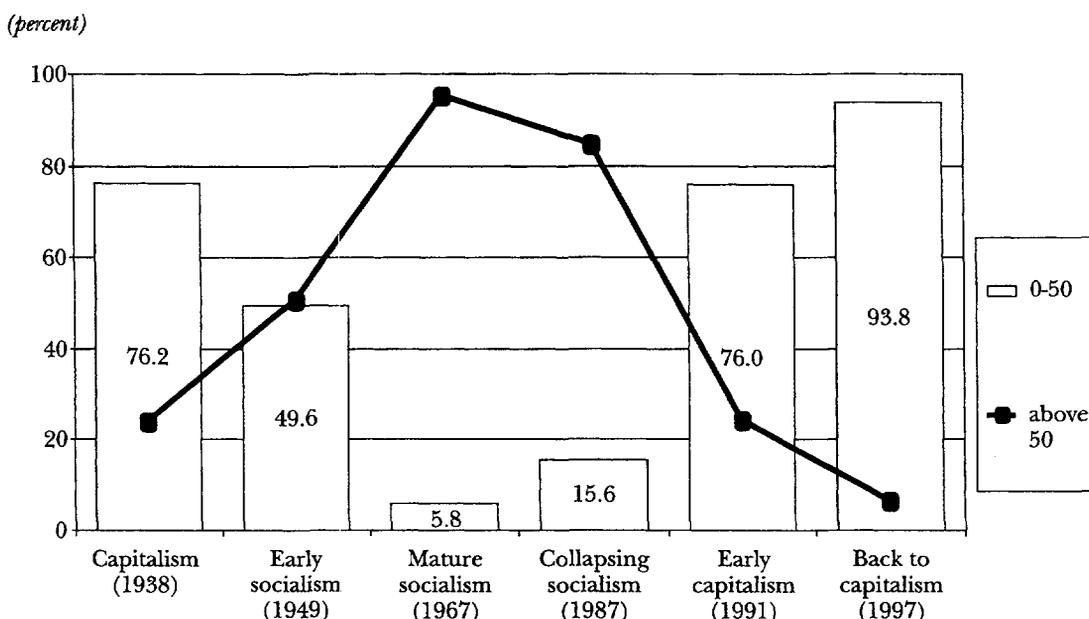
for a large proportion of losses after 1992; when limiting the data to manufacturing, the gross losses decrease. Nevertheless, the same pattern prevails in all cases: the situation improved steadily from 1992 on. Beginning in 1995 net profits exceeded gross losses in manufacturing activity.

Another sign of restructuring is given by the radical changes in the size of enterprises that can be observed since the mid 1980s. Figure 1 depicts the rapid decrease in the number of large enterprises and increase in the number of enterprises with less than 50 employees. While in 1938 around 76 percent of enterprises employed less than 50 workers, this proportion fell to less than 5 percent in 1977, grew to 16 percent in 1987, and reached the 1938 level of 76 percent in 1991. This transformation reversed, almost with the stroke of a pen, a phenomenon that nearly 40 years of central planning had created.

Although small has become beautiful again, the shift away from large socialist giants had actually begun under socialism. The difference is even more pronounced than data portrayed in figure 1 suggest. Since there are no data available on the number of firms employing less than 20 people for 1967 and 1987 and above 100 or 500 people in the 1990s, we have drawn the line at the 50-employees level. However, enterprises employing less than 20 people accounted for 53 percent of all enterprises in 1938, 58 percent in 1991, and 88 percent in 1997. In addition, the percentage of large enterprises employing more than 500 people rose from 3 percent in 1938 to 11 percent in 1949 and 68 percent in 1967, and had fallen to 22 percent in 1987. Thus, some restructuring had already started under central planning, but it gained real momentum in the 1990s.

To what extent was the pace and depth of restructuring influenced by the type of ownership? An analysis of data on manufacturing firms as reported to Hungary's tax office sheds some light on this question. The database—made available by Hungary's statistical office—covers the period from 1992 to 1997 and contains information on firms divided into four groups according to ownership: wholly foreign owned, firms with foreign equity above 10 percent (but less than 100 percent), locally-owned private firms, and state-owned enterprises (SOEs). Two sets of grouped data have been constructed—a "forward-looking" set and a "backward-looking" set. Each helps to analyze different phenomena. In the "forward-looking" set, firms are grouped according to their ownership status in 1992 and remain in this ownership category over time even if ownership status sub-

**Figure 1** Manufacturing Enterprises by Number of Employees Before and After the Collapse of Socialism (in Percent)



*Note:* The total number of enterprises was 3,911 in 1938, 1,632 in 1949, 807 in 1967, 1,043 in 1987, 12,128 in 1991, and 37,888 in 1997 (see Toth 1998).

*Source:* Derived from data in Toth (1998).

sequently changes. Thus, if the number of enterprises in each particular group declines over time, it has to be the result of bankruptcy, liquidation, or merger.

In the “backward-looking” set, firms are grouped according to their ownership status in the final year, 1997, and are placed in that category for earlier years. In this case, variation in the number of firms over time is due to the creation of new firms.

The database covers practically all firms in the manufacturing sector and indicates massive changes. In 1992 the database included about 12 thousand firms; the number increased to nearly 20 thousand in 1997. Changes in the population of firms over time resulted from mergers or liquidation (approximately 4.7 thousand enterprises), as well as from creation of new enterprises (more than 12 thousand).

The shift was unidirectional—from SOEs to the private sector. The number of SOEs fell from 1,360 in 1992 (table 5) to 146 in 1997 (table 6). The number of state-owned firms fell either as result of mergers or liquidations (817 firms) or privatization (397). Since not a single firm was nationalized and 59 SOEs survived intact between 1992 and 1997, one may conclude that 87 emerged as a result of reorganization. In the private domestic manufacturing sector, almost three thousand enterprises were liquidated or merged with others. At the same time, more than 10 thousand firms were newly created. Firms with foreign participation increased in number from 2.6 thousand to almost 4 thousand

**Table 5** Forward-Looking Set 1992–97

(The Same Firms are Followed Over Time; Ownership Category Corresponds to That in 1992)

	<i>100% Foreign controlled</i>		<i>Minimum 10% of foreign equity</i>		<i>State owned</i>		<i>Private domestic</i>	
	1992	1997	1992	1997	1992	1997	1992	1997
Number of firms	781	542	1,789	1,340	1,360	543	7,721	4,866
Value added per employee	1.9	2.97	1.27	2.6	1.8	2.1	2.3	4.37
Sales per firm (HUF million; PPI adjusted)	179.0	571.8	220.3	441.3	744.5	1,242.6	37.3	46.6
Assets per firm (HUF million; nominal value)	209.5	831.2	288.1	792.0	877.7	2,389.7	30.0	60.0
Cash flow to assets (percent)	14.0	31.8	10.0	26.1	11.5	19.6	11.8	27.1
Cash flow to sales (percent)	16.4	19.8	13.0	20.1	13.6	16.1	9.5	15.0

Source: World Bank (1999).

**Table 6** Backward-Looking Set 1992–97

(The Same Firms are Followed Over Time; Ownership Category Corresponds to That in 1997)

	<i>100% Foreign controlled</i>		<i>Minimum 10% of foreign equity</i>		<i>State owned</i>		<i>Private domestic</i>	
	1992	1997	1992	1997	1992	1997	1992	1997
Number of firms	662	1,735	1,018	2,182	59	146	5,606	15,751
Value added per employee	1.4	3.25	1.47	2.6	0.46	0.45	0.95	0.91
Sales per firm (HUF million; PPI adjusted)	297.7	470.3	612.8	490.4	336.3	378.4	61.4	53.2
Assets per firm (HUF million; nominal value)	378.2	736.9	835.6	957.0	493.5	661.0	52.1	74.0
Cash flow to assets (percent)	10.6	30.6	16.6	23.4	2.2	-0.4	12.8	17.9
Cash flow to sales (percent)	13.5	20.5	22.7	19.6	3.2	-0.3	10.9	10.7

Source: World Bank (1999).

## Enterprise Performance

These changes had a direct impact on enterprise performance. Value added in the manufacturing sector increased in real terms by 40 percent between 1992 and 1997. Productivity measured in terms of value added per employee more than doubled and profitability almost tripled.

The contribution of the private sector—and more importantly of enterprises with foreign ownership—has been determinant. While in 1992, the public sector was the dominant source of value added in the manufacturing sector, its contribution fell to 1.4 percent in 1997 (table 7). In sharp contrast, the share of enterprises with foreign ownership (more than 10 percent of equity) rose to 67.5 percent in 1997.

Foreign firms (both fully and partly owned) outperformed both locally—owned firms and remaining state-owned firms on all counts. In both fully and partly foreign-owned firms sales more than doubled, financial results improved, and firms invested heavily in new assets (table 5). For those which only became wholly or partially foreign-owned by the end of the period, improvement was equally noticeable, albeit more modest (table 6). This probably reflects an expected sequence of restructuring measures—first shedding excessive labor and cutting costs before investing in new

**Table 7** Distribution of Value Added in Manufacturing by Types of Ownership, 1992 and 1997 (in Percent)

Type of ownership	1992	1997
100 percent foreign	7.4	29.1
Minimum 10 percent foreign	20.3	38.4
State-owned	50.8	1.4
Private domestic	15.5	26.1
Other	6.0	5.1
Total	100	100

Source: See table 6.

assets and expanding. At the end of the period, all indicators—cash flow to assets, cash flow to sales, assets and sales per firm, and value added per employee—are clearly superior in wholly or partially foreign owned firms (see table 6).

Were there positive or negative spillovers from firms with foreign participation to private domestic firms? While this database does not allow full exploration of this question, it does not show any deterioration in the performance of private domestic firms. A large proportion of those firms have been newly created (only one-third of the 1997 firms existed in 1992) and measures of profitability improved. Thus, it seems that there were no negative spillovers—if anything these were positive.

## Impact on Performance: Employment, Productivity, and Wages

The pivotal role of firms with foreign participation invites analysis of their impact on the labor market. Do these firms create jobs? Do they have a positive impact on labor productivity? Do they create demand for highly skilled labor? The empirical evidence based on comparisons of employment patterns in domestic and foreign (both fully and partly foreign owned) firms suggest positive answers to these questions.

Restructuring in Hungary brought about substantial reallocation of labor. Between 1992 and 1997, total employment declined by 37 percent in the manufacturing sector. This is the outcome of two factors working in opposite directions: a loss of 60 percent of jobs due to downsizing, merger, or liquidation of enterprises existing in 1992, and a gain of 23 percent due to newly created jobs (table 8). This increase in employment was not merely the result of the expanding share of foreign-owned firms. A pattern is easily discernible from the aggregate behavior of firms that were foreign-owned in both 1992 and 1997; an initial shedding was followed by expansion in employment once restructuring had been successfully completed.

Within this overall picture, foreign-owned enterprises clearly had a positive impact, since they are responsible for 75 percent of newly created jobs during this period. Those enterprises absorbed a significant proportion of the labor force released by state-owned enterprises. Employment in wholly or partially foreign-owned enterprises increased by 67 percent over the period. By 1997, it represented 55 percent of total employment in the manufacturing sector.

Labor productivity also increased dramatically from 1992 to 1997 (table 9). As indicated earlier, productivity measured in terms of real value added per employee more than doubled in the

**Table 8** Job Losses and Job Gains in the Manufacturing Sector 1992–97 (in Thousands)

<i>Sector</i>	<i>Employment in 1992 (in thousand)</i>	<i>Change in employment 1992–97</i>	<i>Job losses due to merger, liquidation or downsizing</i>	<i>Job gains due to establishment of new enterprises</i>
Total Manufacturing	577	-213	-344	+131
Foreign-owned enterprises (more than 10 percent equity)	119	+80	-18	+98

Source: See tables 5 and 6.

manufacturing sector. The performance of firms with foreign participation combined with the increasing proportion of workers in those firms has been solely accountable for this increase. Labor productivity increased by 68 percent in firms with 100 percent foreign ownership, and by 104 percent in those with at least 10 percent foreign ownership.

For enterprises that had become 100 percent foreign-owned by 1997, productivity increased by 126 percent (see table 6). By contrast, labor productivity in enterprises remaining under public ownership as well as in domestic private firms, albeit in the latter to a much lesser extent, was lower in 1997 than in 1992. This does not reflect a deteriorating situation within privatized firms but rather shows that newly created domestic firms had relatively lower labor productivity than previously existing firms.

Some of the discrepancies observed between domestic firms (private- or state-owned) and firms with foreign participation in terms of productivity can be attributed to the selection process during privatization. Investors, especially foreign, tend to invest in firms that offer the highest potential. However, other factors play a determinant role. One of them is the quality of the labor force measured by its education and skills. Another is the high degree of complementarity that exists between skills and physical capital. Among skilled workers, younger employees are in particularly high demand because of their greater capacity to absorb new knowledge and adjust to new technologies.

Available evidence does confirm that foreign firms create jobs requiring higher skills than locally owned firms. For instance, research by Kertesi and Köllő (1999) reports that foreign firms employ

**Table 9** Real Value Added Per Employee in Manufacturing by Types of Firm Ownership, 1992–97

<i>Ownership type</i>	<i>Distribution of employment</i>		<i>Percent change in labor productivity 1992–97</i>
	<i>1992</i>	<i>1997</i>	
FDI 100 percent	4	21	+68.2
FDI 10 percent or more	17	34	+104.3
State owned	66	7	-44.1
Domestic private	7	32	-19.9
Unknown	6	6	+104.4
Total	100	100	+121.3

Note: Value added deflated by industry price index.

Source: Authors calculation using CSO data.

a higher proportion of workers with higher education (about 12 percent in 1996 compared to 7 percent in other types of firms). It also confirms that the share of young skilled workers in those enterprises has increased over time. Fazekas and Köllő (1998) also estimate that younger workers have a higher probability of being employed at a foreign firm within each occupational category listed in table 10. Education increases this probability in white-collar occupations and in some, but not all, manual categories. (Machine operators are a notable exception.) The workers heavily “overrepresented” in foreign firms are those with 3–10 years of work experience.

As a result, it is no surprise to find that foreign enterprises pay higher wages than domestic firms. The differential is equal to one-third on average (table 10). It increases for higher-skilled positions (that is, non-manual) and falls below 30 percent for low-skilled occupational groups.

Overall, this analysis points to a substantial transformation of the labor market and a rapid pace of restructuring in Hungary over the years of transition. Workers have left unprofitable sectors or firms and responded to new job and skill-enhancing opportunities. Foreign direct investment has undoubtedly played a major and positive role in this transformation. We find no evidence that MNCs have failed to offer wages matching gains in productivity or that they have increased disparities in income and wealth, as some observers have argued (Ellingstad 1997). The income inequality, as measured by the difference between the lowest and the highest decmille, increased in the 1990s, but it only moved to the levels of Western Europe.<sup>12</sup> Despite public fears to the contrary, foreign-owned private firms have significantly expanded employment opportunities (especially for highly skilled labor) once they initial restructuring was complete.

This progress notwithstanding, Hungary still has a long way to go before bridging the gap with EU countries. Labor productivity in manufacturing was only about 30 percent of that in Italy or Spain in 1996. Since the employment decline has now slowed down, and with the changes in ownership close to completion, maintaining the same pace of productivity gains may become increasingly difficult, albeit not unlikely.

**Table 10** Wage Advantages of Employees at Foreign Firms (Over Employees at Domestic Firms) in Major Occupational Groups, 1995 (in Percent)

<i>Occupational group</i>	<i>Wage differential, percent</i>
<i>Non-manual</i>	
Managers (without top managers)	166
Technicians	135
Executives	139
Office clerks	150
<i>Manual</i>	
Trade and catering occupations	126
Textile, clothing workers	120
Engineering and metal workers	126
Machine operators	126
<i>Other</i>	
Porters, cleaners, guards	131
Total	134

Source: Kertesi and Köllő (1999).

## **Chapter 4**

### **Foreign Direct Investment and Foreign Trade**

The unique feature of microeconomic restructuring of Hungarian industry is that it has been largely FDI-led. Hungary is the first among transition economies to experience FDI-driven industrial restructuring on such a scale. How has restructuring shaped Hungary's re-integration into international markets, especially those of the EU? Because of the dominant role of FDI, answers to this question may provide some interesting insights into the role of foreign capital as a vehicle of integration.

#### **Export Dynamics**

The successful path of industrial restructuring in transition economies—as seen through the lens of export performance—has two stages. During the first stage, most exports come from firms with established links abroad and through redirection of exports from former CMEA markets (Kaminski 1993). In the second stage, sustainability of foreign trade and economic growth depends on facilitating the entry of “second generation” firms—those that were newly established or successfully restructured. In the presence [of external disequilibria, weak export performance combined with little change in export baskets is a clear indication of the failure of industrial restructuring.

Hungary's export performance in machinery and transport (Standard International Trade Classification SITC 7) during the second stage of restructuring offers evidence of impressive progress in industrial restructuring. During the first stage the increase in EU-directed exports came from the redirection of these exports away from the former CMEA, especially the former Soviet Union (FSU). The FSU accounted in the late 1980s for around 40 percent of total Hungarian exports of machinery and transport equipment, whereas the EU accounted for 10 percent.<sup>13</sup> The proportion was reversed by 1991 with the share of the EU in Hungarian exports of these products increasing to 35 percent, and that of the FSU falling to 19 percent. The contraction of 20 percent in the value of machinery exports between 1988 and 1991 does not explain the change, as the value of EU-destined exports more than doubled over this period. In 1992 the share of the FSU fell further to 16 percent, while the value of total machinery exports was flat. Clearly not all exports were redirected, but some of them could be marketed in EU countries.

Thus, Hungary seems to have successfully moved to the second stage of industrial restructuring. In fact, Hungary was quite successful in swiftly redirecting its exports from the CMEA during the first stage. Although between 1989 and 1992 the share of CMEA countries in total exports from Hungary fell from more than 50 percent to 20 percent, the value of total exports contracted only by around 10 percent. The 13 percent contraction in the volume of exports in 1993 was largely due to the combination of the fall of agricultural production and macroeconomic mismanagement. Reorientation (mostly redirection) of exports to Western markets (mainly the EU) allayed the shock of the CMEA collapse. In the process, however, the openness of the Hungarian economy has increased with the share of foreign trade in GDP—as measured by the ratio of the sum of exports and imports divided by two to the GDP—growing from 40 percent between 1990 and 1993 to 60 percent during 1996–97.

Foreign-owned firms have been the driving forces of Hungary's exports. Except in 1996, the value of their exports grew at double-digit rates (table 11). While in 1993 the value of total exports declined by 17 percent, exports of foreign-owned firms increased by 12 percent. The contraction in total exports in 1993 was due to several factors, including bad weather, which was responsible for the fall in exports of agricultural products. The increase in exports in 1994 was exclusively due to growing exports of foreign-owned firms; their increase exceeded the increase in total exports by more than 15 percent.

The shift to the second stage, dominated by restructured "second generation" firms was in fact underway before 1993. Not surprisingly, it provides more evidence of the positive impact of FDI as well as of steady progress in restructuring through FDI. Exports from FDI firms were rapidly increasing, while these from domestically owned sources were falling. They have accounted for all growth in Hungarian exports since 1989 (see figure 2).

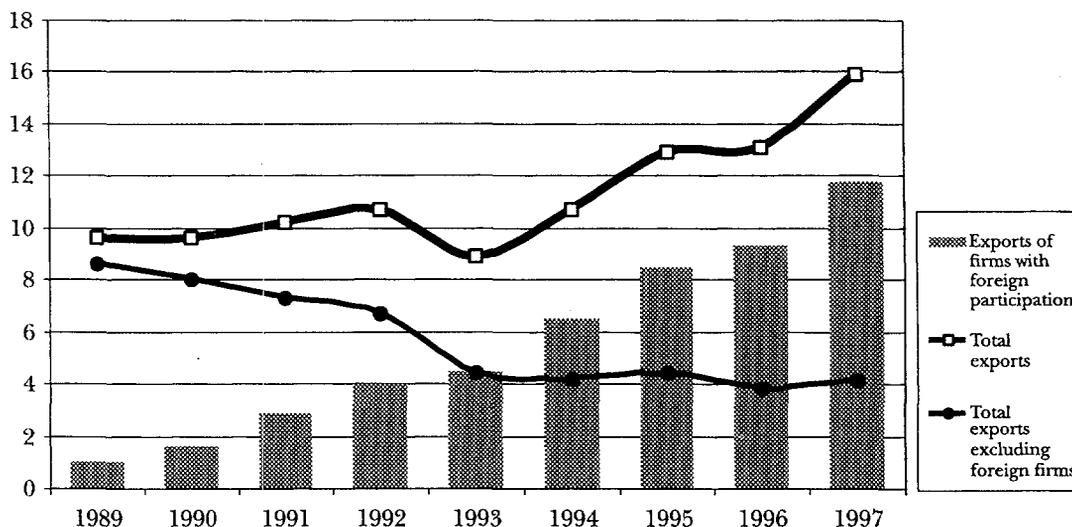
**Table 11** Export Growth of Firms with Foreign Participation, 1989–97

	1989	1990	1991	1992	1993	1994	1995	1996	1997
Total exports (billion of U.S. dollars)	9.6	9.6	10.2	10.7	8.9	10.7	12.9	13.1	15.9
Exports of firms with foreign participation (billions of U.S. dollars)	1.0	1.6	2.9	4.0	4.5	6.5	8.5	9.3	11.8
Annual percent change in total exports (in percent)		0	6	5	-17	20	21	2	21
Annual percent change in exports of foreign firms (in percent)		70	75	39	12	47	30	9	27

Source: Own calculations based on data from Hungarian Central Statistical Office and Hamar (1998).

**Figure 2** Exports of Firms with Foreign Participation, 1989–97

(billion of US dollars)



Source: See table 11.

The focus on exports risks missing their major purpose, which is to generate the foreign currency needed to service the international debt and assure imports. Hence, it is important to bear in mind that rapidly growing export earnings and inflows of foreign capital have allowed an increase in imports, providing higher quality products both for consumption and investment. The value of Hungarian total imports increased from around \$8 billion in 1989 to almost \$10 billion in 1993 and to more than \$18 billion in 1997. Without a dramatic expansion in exports driven by firms with foreign participation such an increase in imports would not be possible.

## **Competitiveness in EU Markets**

The ultimate test of the quality of industrial restructuring is international competitiveness. This seems to have improved substantially, especially in the case of firms with foreign participation. Except in 1996 when the rate of growth of exports in terms of value fell to 7 percent, the annual rates of growth from these firms were at high double-digit levels. Despite the appreciation of the forint, their value increased between 1993 and 1997 by 162 percent. (Total exports increased by 79 percent.) Hungary has become more specialized in manufactures, with their share in total exports rising from 65 percent in 1989 to 80 percent in 1997.

Although changes in shares in imports are only a crude measure of competitiveness, they nonetheless help assess whether Hungarian exporters outperformed those from other countries. In EU markets Hungarian firms have overall done so. The share of products made in Hungary in EU outside imports (excluding trade among EU members) increased each year—except in 1993—between 1989 and 1997.

Hungary no longer seems to be the marginal supplier, highly vulnerable to vicissitudes in the business cycle, that it was in the 1980s. The number of markets in terms of four-digit SITC product categories where Hungarian exporters have had a share larger than 20 percent of external supplies of the EU fell from 12 in 1989 to 8 in 1993 and 1996, and increased to 13 in 1997. The number of product categories with a share between 10 and 20 percent increased from 15 to 17 and 23 over the same period. Between 1993 and 1997 the share of shipments in Hungarian exports to EU markets with a share below 5 percent in EU outside imports has fallen from 65 to 59 percent.

The winners include mostly producers of machinery and transport equipment (SITC 7). For illustrative purpose, one may compare the four-digit SITC 7 items, which accounted for more than 10 percent of EU imports in 1989, with those in 1997. In 1989 there were only two SITC 7 items that met the 10-percent criterion: skin leather working machinery (SITC 7172) and electric bulbs (SITC 7292). The share of leather machinery fell to 2 percent in 1996, and slightly rebounded in 1997, while the share of electric bulbs in EU imports grew to 21 percent. The share of buses (SITC 7322) was 9.8 percent in 1989, and declined slightly to 7 percent in 1997. Three other four-digit items (SITC 7) with a share in EU external imports exceeding 10 percent were also exported in 1989 but in tiny amounts. The share of piston engines (SITC 7115) in EU-external imports was 0.1 percent in 1989 and 27 percent in 1997; that of insulated wire cable was 1 percent and 15 percent respectively; and that of trailers (SITC 7333) increased from 3.5 percent to 18 percent.

## **Foreign Direct Investment and External Sector “Equilibrium:” The “Untold” Dimension of Success of the 1995 Stabilization Package**

An assessment of a firm’s contribution to a trade deficit (or surplus), frequently used, derives from a protectionist credo that exports are a virtue and imports are a sin.<sup>14</sup> This is a wrong approach, albeit with a twist of irony as domestic market orientation has often been the result of protectionist import substitution policies. There is nothing inherently wrong about imports. On the contrary, they are crucial to the efficiency of import-competing sectors of the economy, raise standards of living, and increase a country’s competitiveness in international markets. Macroeconomic and exchange rate policies shape the external equilibrium (or its absence) rather than amounts of foreign currency used up by any particular firm.

Even with the flawed criteria described above, Hungarian firms with foreign participation would probably satisfy economic nationalist thinking for the following reasons. First, foreign firms’ share in exports has been on the increase while their share of imports has grown at a slower pace. In 1993 foreign firms accounting for 38 percent of exports and 39 percent of imports were responsible for 40 percent of the trade balance deficit. Their respective shares increased in 1994 to 40 percent and 44 percent, and their contribution to the trade deficit rose to 56 percent (Hunya 1997). In 1996 the contribution of foreign-owned firms to the trade deficit dropped by 16 percent to around 40 percent, and in 1997 this share fell to less than 30 percent.

Second, FDI-led microeconomic restructuring has contributed enormously to an impressive expansion in Hungarian exports. This would hardly have been possible without expansion in imports. Imports of capital goods (excluding transportation equipment), whose share in imports increased from 29 percent in 1993 to 36 percent in 1997, have driven this expansion during the second phase.

Export expansion driven by firms with foreign participation was crucial to successfully tackle what might have been a serious balance of payments crisis. In 1994 the symptoms of a serious macroeconomic imbalance became apparent. The current account deficit was 10 percent of the GDP for the second year in a row, public debt exceeded 85 percent, and there was a rapid deterioration in external borrowing conditions.<sup>15</sup> Following the implementation of the stabilization program in March 1995, the macroeconomic adjustment was remarkable. By 1997 the net external debt in relation to GDP had dramatically declined and the current account deficit, financed almost entirely by foreign investment, fell below three percent of GDP. Moreover, contrary to what one might expect, the economy—which began recovering only in 1994 after a four-year transformational recession—continued growing.

While the “1995 big privatization sale,”<sup>16</sup> which brought in \$3.8 billion in foreign exchange revenue, facilitated external debt management, and cuts in government expenditure (as well as depreciation of forint) slashed import growth, earlier microeconomic restructuring also explains this quick recovery. The contraction in domestic sales was more than offset by the expansion in manufactures exports, which was already underway in 1994. The GDP growth was lower during 1995-96 than in 1994, but was not negative.

In hindsight, it is now clear that export performance was bound to improve, barring major macroeconomic policy blunders. Hunya (1997) attributed it to several large manufacturing firms

that finished their investment and turned to exports. Considering that by 1994 four years had elapsed with annual inflows of FDI in the range of 5 percent of GDP (accounting for around 20 to 25 percent of domestic investment outlays), one might expect that improvements in quality, efficiency, and productivity would take firm hold. This is exactly what has happened, once firms with foreign participation began to account for the bulk of exports—that is, around 1993 when their share exceeded 50 percent (figure 2).

Furthermore, thanks in large part to foreign investments which appear to have compensated for the decline in domestic savings, there was no contraction in aggregate investment activity in Hungary. The share of gross investment in GDP, after taking a dive in 1992 to 16 percent, increased each year thereafter. Foreign investment amounted to 20 percent of GDP in 1993, 22 percent in 1994, 24 percent in 1995, 25 percent in 1995–96, and 27 percent of GDP in 1998.

However, the ultimate test of whether this foreign investment will produce long-term growth is found in the kind of linkages established by local firms with MNCs. If the latter move only to exploit low cost labor, they are (a) unlikely to transfer important technological capabilities and (b) they may move out once labor cost goes up. A question to which we now turn is whether low unskilled labor cost has pulled FDI to Hungary.

## **Integration into Global Networks**

While indirect effects related to restructuring and productivity spillovers are difficult to define, the contribution of foreign firms to integrating domestic production capacities into global networks of production and distribution can easily be observed. First, taking into account that foreign-owned firms account for almost three-fourths of Hungarian foreign trade turnover, and that this share has been rapidly increasing, these firms can be held largely accountable for a spectacular improvement in Hungarian export performance in EU markets (Kaminski 1999). Indeed, the performance of a number of product groups—top performers in 1996 but not in 1992 or 1989—can be easily traced to production activities of large MNCs. These groups include, above all, automotive parts and electronics.

Second, while Hungarian statistics do not provide data on intra-firm trade, this trade must be quite significant judging by the presence of large MNCs. There is abundant evidence suggesting a rapidly progressing incorporation of manufacturing capacities located in Hungary into global production networks, usually of large MNCs. The list of top 100 Hungarian companies in 1997 includes many easily recognizable subsidiaries of MNCs.<sup>17</sup> Among the 20 largest firms in terms of sales there are at least six companies which are part of large MNCs. These include IBM Storage Products (second largest in sales); Volkswagen's Audi Hungaria Motor (sixth largest); General Motor's Opel Hungary (seventh largest); Philips (12th largest); General Electric Lightning (15th largest); and Japan's Magyar Suzuki (16th largest). Many companies are majority owned by MNCs (such as a white-goods producer Lehel Hutoegepygar, the 39th largest in sales, owned by Sweden's Electrolux).

Data presented in table 12 shed additional light on the emerging importance of links within global networks.<sup>18</sup> It focuses on two networks—a motor vehicle network and an “information revolution” network. These accounted jointly in 1997 for 35 percent of Hungarian EU-destined exports of manufactures and 23 percent of its manufactured imports from the EU.<sup>19</sup> Note that these shares

**Table 12** Trade with the EU in Selected Networks Involving Production Sharing, 1989, 1993, and 1997

	<i>Motor vehicle network<sup>1</sup></i>		<i>Information revolution networks<sup>2</sup></i>	
	<i>1993</i>	<i>1997</i>	<i>1993</i>	<i>1997</i>
Exports of final products (millions of US\$)	105	1,813	62	1,271
Exports of parts	57	389	195	453
Imports of parts	178	1,372	348	947
Exports of final product minus imports of parts	-72	441	-286	324
<i>Memo:</i>				
Imports of final products	636	672	21	73
Share of exports (final and parts) in EU-oriented exports of manufactures	3.90	22.70	9.22	12.11
Share of imports (final and parts) in imports of manufactures from the EU	12.10	17.90	4.11	5.32
Trade balance	-652	158	-112	704

1. Final products are piston engines (SITC 7138), passenger motor vehicles (SITC 781), and road motor vehicles (SITC 784). Parts include piston engine parts (SITC 7139) and motor vehicle parts (SITC 784).

2. Final products include TV receivers (SITC 761), radio receivers (SITC 762), sound recorders (SITC 763), and office machinery and data processing equipment (SITC 751). Parts are telecommunication parts (SITC 764) and office machinery parts (SITC 759).

Source: Derived from EU foreign trade statistics as reported to the UN COMTRADE database.

were 13 percent and 16 percent respectively in 1993, which testifies to a spectacular rise in importance of this trade.

The motor vehicle network includes motor vehicles, motor vehicle parts, piston engines, and piston engine parts. The establishment of a factory assembling piston engines by Volkswagen's Audi Hungaria Motor has shaped development of this network. The bulk of trade activity taking place around motor vehicle piston engines (that is, parts to these engines) relates to the Audi-VW network. Imports of parts expanded by a factor of 10 between 1993 and 1997, but exports of piston engines expanded in the same period by a factor of almost 20. The share of piston engines in EU-destined exports of manufactures increased to 13 percent, while the share of parts grew to 4 percent.

Not all major investors are from the EU. Japan's Suzuki established an assembly plant in Hungary which started producing mid-size cars in 1992 (Tutak 1999). Hence, an interesting question is whether production links that emerged between Hungary and a non-EU country, (that is, Japan) are similar to those with EU firms.

The analysis of trade in motor vehicle parts between Hungary and Japan (Suzuki has been in operation there since 1992) suggests that so far this has been a one-way operation; FDI has not triggered exports to Japan. Hungary's imports of parts (SITC 784) grew from \$3 million in 1992 to \$30 million in 1996 and \$80 million in 1997. The value of Hungary's exports was below \$1 million in 1997, and so was the value of Hungarian exports of motor vehicles (\$0.6 million in 1997). On the other hand, probably because of restrictions in access to Hungarian markets, exports of

motor vehicles were relatively low; Japan exported only \$85 million to Hungary in 1997. Thus, in contrast to the bulk of investment from the EU car manufacturers, Japanese involvement does not seem to be driven by the logic of production fragmentation. It has been so far a classic example of tariff-jumping type of investment.

Another network that appears to have acquired importance is electronics, listed here under the heading of an “information revolution” network. This network consists of sound reproducing and recording and telecommunications equipment, plus relevant office machinery equipment together with parts. It seems that subsidiaries of Philips and IBM have mainly been responsible for the growth in trade of TV monitors and receivers, sound reproducing equipment, and radio broadcasting receivers. Note that the value of exports of these items increased almost 30-fold between 1993 and 1997 (their share in EU-destined exports of manufactures increased from 0.7 percent to 5 percent), while the value of imports of parts directly used in their production merely doubled (their share in imports of manufactures grew from 4 percent to around 5 percent). These data certainly suggest the existence of very intensive exchanges within the networks, but they also appear to suggest that a growing share of parts may be supplied locally and that firms in Hungary have moved upward the production process.

In addition, the growth in intra-industry trade provides another indication of Hungary's integration into global networks. With MNCs acting as the main agent of globalization of the Hungarian economy, transition to competitive markets has been accompanied by expansion in intra-industry trade.<sup>20</sup> Change in the level of intra-industry trade is a good indicator of the extent to which local firms are integrated into global networks of production and marketing. This trade—as measured by the Grubbel-Lloyd index<sup>21</sup>—seems to have expanded considerably. The value of this index, calculated for Hungary's trade with the EU, was already higher in 1994 than for some EU members (such as Finland, Greece, and Portugal).<sup>22</sup>

The consequences of active participation of Hungarian firms (whether foreign or locally owned) in global networks are both economic and political. Politically, these firms are economically complementary rather than rivals. Zysman and Schwartz (1998) point out that this might simplify the task of establishing a stable and prosperous Europe. Aside from the standard economic effects of FDI, firms by becoming part of the “disintegrated” industry's value chain not only have access to technology but also enjoy more predictable demand for their products. Further, it is unlikely that they would have become competitive in world markets on such a large scale and in such a short time without foreign involvement.

## **Chapter 5**

# **Foreign Direct Investment–Led Restructuring and Change in Factor Intensities: The “EU Perspective”**

An examination of Hungarian exports in terms of their factor intensities provides insights not only into foreign investors' perception of Hungary's relative factor endowments but also into factor characteristics of Hungary's microeconomic restructuring. Since the bulk of FDI went to privatized SOEs, factor intensities provide a good indication of what foreign investors perceived as strength in Hungary's endowment in factors of production. Has restructuring pushed the Hungarian economy towards specialization in unskilled labor intensive products, as many feared at the outset of transition, or has it actually resulted in the expansion of products at a higher end of the value-added spectrum? Furthermore, an examination of change in exports—driven almost entirely by firms with foreign participation (see chapter 4)—in terms of factor intensities can confirm or reject our earlier finding about foreign firms employing highly skilled labor. The shift towards human-capital-intensive products would provide strong evidence that this has been indeed the case.

The dominance of FDI firms in Hungarian exports justifies looking at factor characteristics of restructuring through the lens of the export basket instead of examining domestic supply of goods. After all, there is no serious doubt that exports are competitive internationally, and they offer the best way to assess Hungary's position in the evolving global division of labor.

The analysis focuses on EU-oriented export baskets for three reasons. First, the share of firms with foreign participation in EU-oriented exports (80 percent) is significantly higher than that in exports to other markets. Furthermore, exports to the EU soared between 1993 and 1997, and foreign firms drove this expansion.<sup>23</sup> Thus, one obtains a closer approximation to actual exports of firms with foreign participation, especially relevant in absence of data. Second, the bulk of FDI came from firms operating in the EU. Considering the empirical finding that affiliates' exports back to the parent country depends on differences in factor endowments between the home and host country (Markusen 1998), it provides a firmer ground for the analysis of the role of factors endowments in foreign investors' decisions.

To examine factor intensities we identify four commodity groups that reflect their relative factor intensities.<sup>24</sup> These groups are natural resource–intensive products; unskilled labor–intensive products; technology-intensive products; and human capital–intensive products. The first two groups represent lines of production characterized by low value added, high natural resource–intensity, and simple technologies. For less developed countries, such products account for a dominant share of exports.

The change in the composition of Hungarian EU-directed exports corroborates our earlier hypothesis about the time profile of two stages of industrial restructuring, as depicted in export performance. As can be seen from data in table 13, the share of unskilled labor–intensive products reached its peak level in 1993—the cutting year of the two stages. Note also that in 1993 the share of FDI firms in total exports reached 50 percent. Simultaneously, the share of human capital-intensive products seems to have substantially increased during 1994–95 (the beginning of the second phase) and again in 1997.

**Table 13** The Composition of Hungarian Exports to the EU According to Factor Intensities, 1989–97 (in Percent)

<i>Relative factor intensity groups</i>	1989	1990	1991	1992	1993	A	1994	1995	1996	1997	B
Natural resource intensive	47	43	39	34	32	67	29	25	22	17	57
Unskilled labor intensive	19	21	23	25	27	141	23	19	19	16	74
Technology intensive	19	21	23	23	25	131	29	35	37	45	153
Human capital intensive	13	14	13	16	15	117	17	19	20	22	131

*Notes:* A—Index, 1993 (1989=100).

B—Index, 1997 (1993=100).

*Source:* Derived from the UN COMTRADE database as reported by the EU.

The relative decline in unskilled labor-intensive exports from 1993 has more than a token meaning. Given the abundance of high-skilled labor relative to Hungary's GDP per capita, one would expect dominance of skilled labor-intensive products in Hungary's exports. But from 1989 to 1993 unskilled labor-intensive rather human capital-intensive products expanded faster. This situation changed only with a switch to a second stage of industrial restructuring, characterized by the dominance of "second generation" firms.

It appears that second generation firms have selected products that are mostly human capital and technology intensive.<sup>25</sup> Technology-intensive products registered the fastest export growth to EU markets among relative factor intensity groups. Their value increased from \$1.5 billion in 1993 to \$5.9 billion in 1997 and their share in total Hungarian exports almost doubled. Affiliates of MNCs have been responsible for this expansion; the driving force in Hungarian exports has been machinery and transport equipment (SITC 71–73), completely dominated by MNCs. Their share in total EU-directed exports increased from 12 percent in 1989 to 18 percent in 1992 and to 48 percent in 1997. While between 1989 and 1992 the value of these exports increased by 174 percent, their value grew by 444 percent during 1993–97. The expansion in technology-intensive products demonstrates that Hungary benefited from transfer of knowledge capital usually associated with MNCs.

The comparison of export structure in terms of factor intensities with that of imports from the EU points to the increasing convergence of the two baskets (table 14). While in 1989 Hungary exported mainly natural resource-intensive products and imported technology-intensive products, the share of technology-intensive products in its EU exports was higher than in EU imports in 1997. Note also the closing gap in trade balance in technology and human capital-intensive products.

Calculations of Hungary's Export Specialization (ES) indices in EU markets confirm a significant shift in specialization.<sup>26</sup> While technology-intensive products and human capital-intensive products were initially at a comparative trade disadvantage, their standing has been subsequently reversed. The ES index of human capital-intensive products exceeded unity first in 1990, and between 1992 and 1997 increased from 1.06 to 1.46. Technology-intensive products have recorded even more impressive gains, albeit from a lower base. The value of the ES index rose from 0.61 to 1.16 from 1989 to 1993 and their share of EU external imports also quadrupled.

On the other hand, exporters of natural resource-intensive products have lost comparative advantage in these markets, while that of unskilled labor-intensive products has been on the decline. The ES indices of unskilled labor were increasing during 1989-93 but subsequently fell. Hungary's share, however, in EU imports of these products was growing until 1996. Unskilled labor

had the highest share in EU imports until 1996. In 1997, however, human capital-intensive products topped the list of best performers in that sector.

While further research is needed to assess the stability and technological potential of established external linkages, the discussed change in Hungary's EU-oriented export basket in terms of factor intensities suggests that low skills and low wages do not epitomize FDI in Hungary. On the contrary, the dramatic shift towards human capital- and technology-intensive products points to the movement up the value-added production chain. A recent study of price/quality gaps of Central European producers seems to confirm this observation. Burgstaller and Landesmann (1999) find that Hungary was one of the fastest in closing the quality gap (as measured in relation to prices per kilogram charged in EU imports) in engineering industries (which produce, for instance, capital equipment, office machinery, and computers).

**Table 14** Composition of Exports and Imports from the EU in Terms of Factor Intensities, 1989, 1993, and 1997 (in Percent)

<i>Commodity SITC 4</i>	<i>Composition of imports</i>			<i>Difference compared to exports</i>			<i>Memo</i>		
	<i>1989</i>	<i>1993</i>	<i>1997</i>	<i>1989</i>	<i>1993</i>	<i>1997</i>	<i>Trade balance as percent of exports</i>		
Natural resource products	13.9	14.3	10.6	34.1	17.7	6.2	67.8	41.8	31.4
Unskilled labor products	12.9	18.0	13.6	6.3	8.9	2.3	25.2	13.1	7.0
Technology products	48.4	39.3	44.9	-28.8	-13.7	0.4	-174.8	-99.5	-7.5
Human capital products	24.8	28.3	30.9	-11.6	-12.9	-8.8	-109.0	-139.2	-51.9
All goods	100.0	100.0	100.0	0.0	0.0	0.0	-11.2	-29.9	-8.4

*Source:* See table 12.

## **Chapter 6**

### **Has Hungary Become a Dual Economy?**

Has Hungary become a dual economy—one domestic and inefficient and another one modern, largely foreign owned, and decoupled from the domestic economy—as a result of massive inflows of FDI? The preceding analysis finds no grounds for describing Hungary as a dual economy with an impoverished and neglected sector operating alongside a modernizing sector.<sup>27</sup> Advocates of this view may find some support for their thesis in the fact that foreign firms have been a modernizing force of restructuring. But this does not necessarily imply that domestic firms are not internationally competitive. Nor should it suggest that foreign firms are an enclave (or enclaves).

Most sectors, including many producing nontradables, have been open to external competition from imports. The foreign trade regime compared to Hungary's major trading partners is very liberal. Industrial imports from preferential partners—mainly but not only the EU—are not subject to tariff and nontariff barriers. Consequently, most markets for manufactures are almost as competitive as world markets. Domestic firms account for more than half of total net sales, and one-third of total exports. Better familiarity with local conditions seems to provide an explanation (though not a complete one) why locally owned firms tend to be less export oriented than firms with foreign participation are. Thus, it appears that domestically owned firms producing tradables remain internationally competitive for the most part, although they are on average involved in lower value-added activity.

Second, while firms with foreign participation tend to perform better than those without it, this fact alone does not validate an observation that FDI has contributed to the emergence of a dual, deformed economy. There is not one branch or sector of the economy that has not been penetrated by foreign capital. Most, if not all, major firms operating in all sectors of the economy have had infusion of foreign capital. Aside from industry, their presence is particularly large in financial services, with around 60 percent of all firms having foreign ownership and 50 percent of assets owned by foreigners. Under these circumstances, the distinction between domestically owned firms and foreign-owned firms seems to have lost much of its relevance. Overall, one in five firms had some form of foreign involvement in 1996.

But have foreign-owned firms become an integral part of the Hungarian economy? Has there been any progress in terms of industrial-sector FDI firms expanding backward (supply) and forward (demand) linkages? Considering their huge presence these might seem the wrong questions to ask. It is certainly possible that most firms with foreign participation are simply affiliates of their respective MNCs, integrated into their global production and distribution networks with no links with each other. However, it is also possible that a network expands domestically through acquisition of property rights or thanks to shifts to local suppliers. Furthermore, many outside suppliers may have moved their operations to Hungary to supply MNCs' affiliates starting their operations there. These scenarios remain hypothetical, since to our knowledge there have been no empirical studies of the integration of foreign-owned firms in the Hungarian economy.

Dualism is often an unintended consequence of government's attempts to use foreign trade policy tools to attract FDI. The danger of creating a distorted dual economy then emerges in relation to sectors protected by tariffs or nontariff barriers. This may be the case of agriculture or food

processing industry in Hungary, but probably not of other sectors. Since the share of foreign firms in exports far exceeds their corresponding share in domestic sales, the barrier-jumping hypothesis would fall well short of explaining the bulk of FDI inflows. Other features of the Hungarian economic regime and policies appear to have attracted FDI.

It is true that the Hungarian foreign trade policy may have weakened the development of backward linkages by providing an extra incentive to firms to move to a foreign trade zone (FTZ). Foreign investors often choose a FTZ in order to avoid dealing with customs administration and exposure to uncertainties in foreign trade policy. The potential negative impact of export zones on domestic integration of firms is considerable. Firms operating in a FTZ are outside the customs territory. They operate in enclaves, and are devoid of any incentive to develop backward and forward linkages with the rest of the economy. The reliance on a FTZ usually exacerbates tendencies towards a deformed dual economy.<sup>28</sup>

Both output and exports of firms located in a FTZ grew faster than those of firms located inside the Hungarian customs territory. The value of output of FTZ firms increased 350 percent between 1994 and 1997, whereas that of non-FTZ firms increased by 61 percent. The difference in export expansion was much even larger—a 5.5 times increase against a 1.9 times increase. In 1997 the value of FTZ exports rose by 76.6 percent. Hence, the most dynamic sector of the Hungarian economy may have potentially weak internal links.

Firms in FTZs not only grow faster but also seem to make more intensive use of knowledge capital. For example, electronic products accounted for about 77 percent of investments (Szanyi 1998). Exports from FTZs accounted for 54 percent of total engineering exports in 1997. Between 1995 and 1997 the share of FTZ-located firms in total exports increased from 11 percent in 1995 to and 26 percent in 1997 (table 15). In consequence, contribution of FTZs to the diffusion of import-efficiency may be lower than expected.

Another danger inherent in a FTZ is that firms investing there may move out once there is a change in circumstances that had initially attracted them. With the termination of various extra charges on imports (such as surcharge and customs fees) introduced in the 1995 stabilization program and liberalization of market access as stipulated in international agreements, FTZs may indeed lose their appeal. Another potential concern relates to the termination of the drawback system. In July 1997 Hungary became a member of the Pan-European Cumulation system, which is based on the principle of no drawback.<sup>29</sup> The absence of a customs drawback may affect FDI, because exporters using inputs from outside the Pan-European Cumulation territory can no longer obtain refunds on duties paid on these inputs. In other words, they no longer have free-trade access to EU markets, which accounted for 94 percent of their foreign sales in 1997 (Hamar 1998).

**Table 15** Firms Operating in FTZs in Hungarian Foreign Trade, 1995–97 (in Percent)

	1995	1996	1997
Share in total exports (in percent)	11.0	19.1	26.4
Share in total imports (in percent)	8.0	13.8	19.1
Exports (billion of US dollars)	1.4	2.5	4.2
Imports (billion of US dollars)	1.2	2.2	3.6
Imports to exports (in percent)	87.39	89.35	85.71

*Source:* Own calculations from data in Hamar (1998) and Newsletter, Vol. 10. No. 1/1988, Ministry of Trade, Industry and Tourism, Budapest.

The experience with FTZs in other countries suggests that liberalization in the rest of the economy help in developing strong domestic linkages. Compliance with the EU *acquis communautaire* implies the movement towards a transparent and liberal economic regime as well as improved administrative procedures. This in turn may help to weaken the incentive for foreign investors to move their production facilities elsewhere, and enhance their incorporation into a local economy.

## Chapter 7

### Conclusion

Hungary in transition from central planning provides rich empirical evidence that FDI is the best ally for development and that liberalization of foreign trade and investment regimes, combined with privatization emphasizing improvement in corporate governance, is the best way to attract quality FDI. While there were some unique factors that cannot be easily reproduced elsewhere, Hungary's success in attracting FDI has broader policy lessons. Hungary has clearly benefited from the EU factor; the Association Agreements have not only opened EU markets to manufactures but have also compelled Hungary to liberalize its own foreign trade regime. Commitment to liberal reforms has also been a very important factor in attracting FDI. Since the collapse of central planning in Central and Eastern Europe, Hungary has consistently been among the most advanced reformers in the region. Its privatization program has put emphasis on improvement in corporate governance rather than provenance of investors. It was the first transition economy to open the so-called strategic sectors to foreigners. This approach has clearly paid off in terms of improved microeconomic efficiency and growth.

The case of a successful Hungarian industrial readjustment demonstrates that FDI is the best vehicle for integration into the second global economy (in contrast to the first global economy at the end of the nineteenth century). FDI-led microeconomic restructuring has resulted in the emergence of a highly competitive industrial sector tightly integrated into the EU markets. FDI firms have been behind the current expansion of exports, having a strong positive impact on growth and not the reverse. This strong positive impact seems to rest upon a solid foundation.

The evidence of the positive impact of FDI firms is indeed overwhelming. It should put to rest fears that FDI only exacerbates inequality and does little to reduce poverty. First, the impressive economic growth performance Hungary has experienced since 1994 would have been impossible without FDI-led microeconomic restructuring assisted by macroeconomic stabilization. Export expansion has driven Hungary's GDP growth since 1993, and the major engines of this growth have been firms with foreign participation. This also explains the success of the Hungarian economy relative to other Central European economies in generating jobs. Overall, microeconomic restructuring has resulted in more economic dynamism and beneficial spillovers.

Second, FDI firms have had a positive impact on the balance of payments. Thanks to their export earnings as well as inflows of foreign investment, Hungary was able to avoid a possibly very grave balance of payments crisis in 1995. Foreign-owned firms have been heavily export oriented. In addition, Hungary was saved immeasurable quantities of foreign exchange through the import-substitution effect of foreign investment in local industries.

Third, contrary to earlier fears, FDI firms have created employment opportunities, especially for highly skilled labor. By 1997, wholly or partially owned firms represented more than half of total employment in the manufacturing sector. During the transition, they were responsible for 75 percent of newly created jobs. Foreign firms have also set higher standards of pay and requirements, which in turn has set a valuable example for labor and employers throughout the economy.

Fourth, the FDI-driven process of industrial restructuring has produced internationally competitive industrial capacities and integrated the Hungarian economy into the largest and the

fastest-growing economy—the world market. Firms with foreign participation have contributed to a rapid closing of the initial gap (that is, at the outset of transition to market economy in 1989) between the potential of Hungary in terms of its factor endowments and its performance. The natural resource-intensive and unskilled labor-intensive products that dominated Hungary's 1989 EU-destined export basket were a symptom of the inability of the Hungarian economic regime under central planning to obtain full performance from a very important resource—human capital. While during the first phase unskilled labor-intensive products drove the growth in EU-destined exports, technology-intensive and human capital-intensive products recorded the fastest growth in the second phase of economic restructuring. Shift from natural resource and unskilled labor-intensive products to technology and human capital-intensive products in EU-oriented exports suggests the ongoing integration at a higher end of a value-added spectrum. It also suggests that firms seem to have developed the capacity to move up the value-added production chain.

Furthermore, trade between Hungary and the EU trade has become increasingly like trade among highly industrialized economies. Intra-industry commerce has grown rapidly, and the gap between exports and imports from the EU in terms of factor intensities has dramatically narrowed. Both baskets have become more alike, with a shift towards technology and human capital-intensive products.

Fifth, rapid and recently accelerating growth of exports of parts and components suggests advanced integration of Hungarian firms into EU-wide (if not worldwide) distribution and production networks.

Sixth, there is no evidence that FDI has created enclaves with little or no connection to the domestic economy. This is hardly surprising considering that firms with foreign participation are present in all sectors of the economy.

## Notes

1. According to a very conservative estimate, global production sharing (that is, trade in parts and components) amounting to around \$800 billion annually accounts for around 30 percent of world trade in manufactures. It has been growing faster over the last decade than trade in finished manufactures (Yeats 1998).

2. The exceptions are Estonia and Slovenia, which became sovereign states in late 1991 and mid-1992 respectively. But even this delay does not account for the variation in FDI inflows.

3. Both the Czech Republic and Poland have also benefited from privatization-related FDI. As in Hungary, privatization-related deals accounted for 43 percent of total FDI in Poland from 1991 to 1995 (Hunya 1997). But the share of FDI in GDP was much lower. Although the Czech Republic sold SPT Telecom to a foreign investor for \$1.32 billion, bureaucratic hurdles and the structure of mass privatization have prevented other large investments. Poland is yet to open fully its "strategic" sectors (energy, utilities, and telecommunication) to foreign investors.

4. The largest annual sale of \$3.8 billion was in 1995. (For details, see Hunya 1997). Foreign exchange revenues accrued in 1995 account for more than 50 percent of all foreign investment in privatization over 1991–97, and they surpassed their value accumulated over 1991–94. The share of privatization varied over time but has not fallen below 20 percent. Based on data from the State Privatization and Asset Management in van Elkan (1998).

5. It compares very favorably with the share of FDI in capital formation in Singapore and Malaysia, which had experiences the largest FDI inflows among ASEAN countries. The average share over 1985–95 was 41 and 32 percent respectively (Zysman and Schewartz 1998).

6. Calculated from data in Havlik (1999).

7. As mentioned earlier, joint ventures with foreign partners were already allowed under central planning. This allowed Hungarian units to begin integrating with operations abroad.

8. See Pohl, Anderson, Claessens, and Djankov (1997). The study is based on survey data of about 1,000 Hungarian firms from 1992 to 1995.

9. Although managers and employees could buy shares at a 5 to 10 percent discount, it is reported that there were fewer than 100 instances where they bought a majority of a firm's shares. See World Bank (1999).

10. In this table, enterprises reporting profits are separated from the others and losses of the remaining enterprises are scaled by GDP.

11. In this measure, firms reporting profits are separated from each year's sample of firms and the total losses of the remaining firms are scaled by GDP.

12. The difference (1:8) is about the same as in France. It is well below levels in most developing countries and below the Russian figure of 1:12 (Csaba 1998a: 1387).

13. Calculations based on data reported by Hungary to the UN COMTRADE database.

14. This has been often voiced criticism of foreign firms in many countries including transition economies. Due to pent-up demand for consumption goods, which were neglected under central planning, much FDI during the initial stages of the transition focused on the domestic market. But these critiques ignore the fact that with liberalization of foreign trade and domestic currency convertibility, domestically produced products would replace more expensive imports. This in turn would increase purchasing power of consumers, create employment, and generate extra tax revenue.

15. Policy factors that contributed to the turnaround in the current account position were the exchange rate policy (a strong appreciation of domestic currency) as well as an "unduly lax monetary policy (in 1993)" (Oblath 1997, p. 11).

16. It is called "big" because the total hard currency revenues from this program account for more than 50 percent of all foreign investment in privatization from 1991 to 1997 and they surpassed their value aggregated from 1991 to 1994.

17. See the top 100 list in *The Wall Street Journal Europe's Central European Economic Review* (July & August 1998, Vol. VI, Number 6). Compiled by Dun & Bradstreet Hungaria Inc.

18. For a detailed discussion of issues involved in estimates of production sharing, see Kaminski and Ng (1999)

19. For a detailed analysis of product categories involved, see Kaminski and Ng (1999).

20. Except for Bulgaria, all Central European economies experienced an outburst of intra-industry trade following the collapse of central planning (Landesman 1997).

21. The index is the difference between unity and the quotient of the absolute difference between exports and imports of a given sector and the total of imports and exports for this sector. When the index equals zero, there is no intra-industry trade.

22. This value was 0.51 for Hungary; 0.48 for Finland; 0.27 for Greece; and 0.42 for Portugal. As for Central European countries, the index was highest for the Czech Republic (0.54) and Slovenia (0.56). Considering Hungary's lower GDP per capita, this suggests a very high level of intra-industry trade relative to Hungary's level of economic development. The index was calculated for trade with EU using 129 three-digit NACE sectors (Kierzkowski 1998).

23. Hungary is the second largest exporter (after Poland) among economies of the first EU-candidate group. Leaving aside Estonia's initially volatile reintegration into the EU markets, Hungary registered the highest growth rates from 1995 to 1997. It caught up with the Czech Republic in terms of value of exports in 1997, and has been a top reformer among those countries (see the ranking in EBRD 1998).

24. For a discussion of methodological issues, see Kaminski (1999)

25. This share is larger than that of technology-intensive products because some products from the group (SITC 71-73) are classified as human capital intensive.

26. A country's "revealed" comparative advantage (or export specialization) in a product "j" is defined as the ratio of the share of "j" in the country's exports to the share of the product "j" in world trade. A value for this index below unity indicates a comparative disadvantage. If the index takes a value greater than unity, the country is considered to have a "revealed" comparative advantage in the product. In this particular case, Hungary has a revealed comparative advantage in a product if its export of that item as a share of its total exports exceeds the EU imports of the item as a share of EU total imports.

27. Dualism characterizes many developing countries. Sectors identified usually include a large stagnant agricultural sector and the small modern industrial sector. The linkages between the two are weak; growth in the industrial sector does not generate growth in the agricultural sector (Singer and Ansari 1982).

28. A FTZ's integration into the domestic economy hinges critically on government policies in the rest of the economy. "If the rest of the economy does not liberalize, the zone will stay an oasis and be limited in its contributions" (Madani 1999, p. 13).

29. The Pan-European Cumulation system, established at the request of the Copenhagen European Council (June 22-23, 1993), includes EU, EFTA, and CEFTA members as well as the Baltic States and Bulgaria. Thirty-one states are members. The Czech Republic, the Slovak Republic, Slovenia, Bulgaria, and Romania joined the system in March 1997. Estonia, Latvia, Lithuania, Hungary, and Poland joined on July 1, 1997 (Nell 1997). The rationale for removing the drawback is simple. Producers selling their products in their domestic market would face "unfair" competition from imports. The former would have to include customs payments in their cost, whereas the latter would be reimbursed for them. The principle of non-drawback does not apply on "outside" exports.

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