

DISCUSSION PAPER SERIES

No. 1904

**THE EXTERNAL SECTOR,
THE STATE AND DEVELOPMENT IN
EASTERN EUROPE**

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TRANSITION ECONOMICS



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Discussion Paper No. 1904
June 1998

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ABSTRACT

The External Sector, the State and Development in Eastern Europe*

The countries of Central and Eastern Europe have displayed widely disparate trade performance since the beginning of the transition. The Czech Republic and Hungary have had some success moving into the production and export of more technologically-sophisticated, higher value-added goods, while Bulgaria and Slovakia have continued to specialize, sometimes increasingly, in low-skill, low-value-added goods. Poland and Romania are intermediate cases. In Poland, different parts of the economy show each of these tendencies. In Romania, performance is very different in different periods – significantly better after 1994 than before. In accounting for these patterns, our analysis points to the importance of direct foreign investment (DFI) and outward processing trade. DFI has been an engine of technological and organization learning, but it has been significant only in the Czech Republic, Hungary and, most recently, Poland. Outward-processing trade (OPT) is widely spread and helps to explain the strong export performance of the region. The technological and organizational implications of OPT are, however, less obviously favourable: in particular, it does not encourage the development of differentiated, price-insensitive export products that offer countries insulation from foreign competition.

JEL Classification: F1, F2, P2, P3

Keywords: Eastern Europe, transition, foreign investment, outward processing

*The authors thank György Szapáry for helpful comments. The opinions expressed here do not reflect those of the OECD or its member countries.

Submitted 15 April 1998

NON-TECHNICAL SUMMARY

The countries of Central and Eastern Europe have displayed widely disparate trade performance since the beginning of the transition. The Czech Republic and Hungary have had some success moving into the production and export of more technologically-sophisticated, higher value-added goods, while Bulgaria and Slovakia have continued to specialize, sometimes increasingly, in low-skill, low-value-added goods. Poland and Romania are intermediate cases. In Poland, different parts of the economy show each of these tendencies. In Romania, performance is very different in different periods – significantly better after 1994 than before.

We develop these points by analysing Eastern Europe's trade with the European Union. Here in particular, Hungary and to a lesser extent the Czech Republic have shown an ability to diversify into new sectors and to develop exports of more R&D and skill-intensive, higher value-added, less price-sensitive products. Export trends in the other Central and East European Countries (CEECs) are less uniformly positive. Poland, Romania and Slovakia have also demonstrated some success in raising value added and moving into the production of more skill-intensive goods. While some parts of their economies have been specializing increasingly in the production and export of low-wage, low-value added goods, however, others have been developing 'higher-tech' capabilities, a duality which is most clearly evident in Poland. Bulgarian exports, in contrast, are increasingly concentrated in low-skill, labour-intensive, undifferentiated, price-sensitive commodities, although even there one sees some evidence of success in raising manufacturing value added. Thus, one no longer sees the once-standard bifurcation between the so-called first and second tiers of transition economies. Instead, there is a steady gradation or tiering of development, as one moves from north and west to south and east.

In accounting for these patterns, our analysis points to the importance of direct foreign investment (DFI) and outward processing trade. DFI has been an engine of technological and organization learning, but it has been significant only in the Czech Republic, Hungary and, most recently, Poland. Outward-processing trade is widely spread and helps to explain the strong export performance of the region. The technological and organizational implications of OPT are, however, less obviously favourable: in particular, it does not appear to encourage the development of differentiated, price-insensitive export products that offer countries insulation from foreign competition.

it appears that 'the integration of Central and Eastern Europe into the international division of labour' is taking different forms in different countries. In the more advanced economies, integration is taking the form of integrating the more advanced economies into multinational production networks, not merely as manufacturers of components but as integrated manufacturers with the capacity to undertake product development and R&D. Integrated production is largely found in sectors, such as electronics and motor vehicles, characterized by strong backward linkages. In the region's less advanced economies, where DFI is largely absent, integration into the world economy takes the form of outward processing and assembly, which affords opportunity for investment in human capital, employment of skilled labour, and local R&D. It is found in low-wage, labour-intensive, technologically sophisticated sectors like textiles, apparel and footwear, thought to afford domestic spillovers.

Can governments manage this process? A realistic strategy must acknowledge three facts. First, these economies are latecomers. While countries like Czechoslovakia were once among the high-income elite and, under central planning, possessed some capacity to produce technologically-sophisticated goods (mainly in connection with military needs), there is a significant technology gap between high-value-added industries in Eastern Europe and their counterparts in Western Europe and Asia. As latecomers, Eastern Europe's essential task is not to invent new products and processes but to tap the existing stock of technological knowledge and adapt it to local conditions.

In addition, these countries must integrate into an existing economic order. In an earlier era, when many countries restricted inward foreign investment and did not provide a hospitable environment for multinationals, countries like Japan and Korea could license foreign technologies; but today, when economic globalization is sweeping the world and many countries are competing for foreign investment, global corporations have better alternatives than sharing their proprietary knowledge. A licensing strategy that was feasible two decades ago is not feasible today. This leaves no alternative to DFI and OPT.

Finally, Eastern Europe possesses a distinctive political inheritance. Two generations of totalitarianism have left its citizens leery of strong governments and large organizations. Bureaucrats, managers, and trade union leaders are not held in high esteem. Attempts to provide 'economic governance' would not enjoy public support or be resistant to capture.

The countries of Central and Eastern Europe thus have no alternative to what we term the 'Iberian model'. This means capitalizing on proximity to Western

European markets, access to which can be locked in by accession to the European Union. It means acquiring technological and organization know-how through DFI and OPT. For the less advanced countries of the region, where location, infrastructure and politics imply that the prospects are less for attracting DFI, it means exploiting their comparative advantage in low-wage, labour-intensive sectors, such as textiles and apparel.

Governments can contribute to this process. Those of the European Union can agree to a timetable for the accession of the most advanced Eastern European countries in a manner that does not saddle the latter with expensive social programmes and restrictions on their sales of 'sensitive' products. Those of Eastern Europe can make the environment for DFI and OPT more attractive and encourage intellectual and organizational spillovers by privatizing infrastructure and services and opening these sectors to foreign investment. They can pursue stable policies, improve infrastructure and invest in human capital. They can place domestic producers in a competitive environment that provides incentives for learning.

The External Sector, the State and Development in Eastern Europe:

Barry Eichengreen and Richard Kohl¹

March 1998

I. Introduction

Early optimists hoped that Eastern Europe might be able to emulate the high-performance economies of Asia once the shock of liberalization was absorbed.² The ingredients of the East Asian "miracle," in this view, were rapid accumulation based on high investment in physical and human capital, productivity growth based on technology transfer through licensing and direct foreign investment, rapidly expanding exports able to support industrial specialization and scale economies, and a strong state capable of guiding the development process and solving coordination problems.³ Emulating this recipe could provide the basis, it was hoped, for the expansion of exports and buoyant economic growth more generally.

In fact, Eastern Europe's economic progress has been less uniformly impressive than the optimists had hoped. While exports have risen rapidly, there has been a tendency toward large trade and current account deficits,

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² In this paper we focus on Eastern Europe narrowly defined, putting aside the successor states of the former Yugoslavia and the former USSR, including the Baltic States, whose cases differ in important respects.

³ See, for example, World Bank (1993). To be sure, the East Asian "miracle" looks less miraculous since that study was published. Commentators now suggest that the East Asian recipe might be appropriate for the early stages of industrialization (the period of "extensive growth") when the problem is to import known technologies and embody them in large amounts of physical investment, but less appropriate for later stages (the period of "intensive growth") when the problem is increasingly to stimulate innovation and total factor productivity growth.

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potentially constraining growth. There is no obvious correlation between competitiveness and output growth, with some countries growing rapidly but displaying little ability to move up the product ladder into the export of higher value-added goods, and others, while moving into higher value-added exports, growing more sluggishly overall. Thus, Poland has been growing rapidly largely on the basis of low-value-added activities, whereas the Czech Republic and Hungary have been growing more slowly while building a more advanced industrial base.

The East Asian mirror provides clues as to why. While Eastern Europe, like the best performers in East Asia, possesses relatively high levels of human capital, the other ingredients of "miracle growth" are missing. Rapid accumulation is discouraged by immature financial markets, the stresses of macroeconomic stabilization, and pent-up consumer demands. Eastern European governments have only a limited capacity to guide the process of economic development: their fiscal systems are weak and they lack a cadre of well-trained bureaucrats. Moreover, the economies of Eastern Europe must integrate themselves into an international economic order that closes off options available 20 or 30 years ago. Economic liberalization and opening in other parts of the world make global corporations increasingly footloose. Multinationals can choose where to operate and resist pressure to share proprietary knowledge. The technology-licensing strategy that was feasible for Japan and South Korea is not available today.

This leaves the option of relying on direct foreign investment (DFI) and outward-processing trade (OPT) if Eastern Europe is to achieve sustained economic growth and converge with the West. The hope is that DFI and OPT will permit greater market access and serve as channels for the acquisition of

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technological and organizational knowledge. Combined with the CEECs' high levels of indigenous human capital, this may enable them to move up the technological ladder into the production of higher-wage, higher-value-added goods.⁴

But the geographical incidence of OPT and DFI has been uneven. Hungary, the Czech Republic and, recently, Poland continue to attract the vast majority of DFI. Together, these three countries continue to account for fully 90 per cent of DFI flows to the region.

The story for OPT is different. Where Hungary was the principal location of Eastern European OPT prior to the transition, the OPT center of gravity has shifted toward Poland and Romania. Czech and Hungarian OPT is increasingly dominated by newer, more technologically-sophisticated, skilled-labor-intensive products. While the same tendency is evident in certain sectors of the Polish economy, other sectors continue to rely on low-wage, unskilled-labor-intensive OPT. Clearly, there is a correlation between this pattern of DFI and OPT and the afore-mentioned trends in manufactured value added and movement into the production of differentiated products.

The question, of course, is why countries differ in their ability to attract DFI and engage in technologically-sophisticated OPT. Unavoidably, part of the answer is geography, history and politics: less proximity to Western European markets, inferior infrastructure, and unstable policies make the southern and eastern tiers of transition economies⁵ less attractive destinations for technologically-sophisticated Western investment. But in addition, higher-tech DFI and OPT, once started, have worked to disseminate technological and organizational knowledge and to attract additional DFI and

⁴ As we shall see, in Hungary enterprises with some foreign ownership account for 70 percent of total exports. In Poland OPT accounts for a quarter of total exports and more than 80 percent of exports of light industry, the most vibrant part of the economy.

⁵ And, by implication, the successor states of the former USSR.

OPT in a self-reinforcing circle. This virtuous circle has operated most effectively where DFI and OPT have been concentrated regionally (facilitating local knowledge spillovers) and where governments have used competition policy to encourage emulation by domestic firms.

Generally speaking, however, Eastern European states have had only limited success in putting in place policies that accentuate these positive spillovers. In this respect, Eastern Europe resembles Iberia more than East Asia.⁶ Following the fall of their authoritarian governments and regulated financial systems, Spain and Portugal took steps to attract DFI and OPT and put in place the preconditions for growth. Both countries integrated into the European Union. Both took steps to stabilize their macroeconomies and liberalize their markets. Both succeeded in attracting increasingly sophisticated DFI, and both were in a position to attract net transfers and structural aid from the EU. But neither possessed a strong state capable of closely guiding development, and investment only modestly exceeded OECD averages. In other words, neither country followed the East Asian model. While they have begun to close the income and productivity gap vis-à-vis Western Europe, neither has experienced growth at rates that approach East Asia's in the 1970s and 1980s.

This suggests several lessons for Eastern Europe. First, while OPT and DFI can provide market access and technological know-how helpful for closing the income and productivity gaps, they cannot fuel growth as fast as that enjoyed by the high-performance East Asian economies into the 1990s. Limited levels of investment will mean less opportunity for spillovers through embodied technical change. And limits on the extent of state support will

⁶ Another case worthy of comparison is Ireland, where direct foreign investment is widely seen as a dominant factor in the growth of exports and as serving as a conduit for the adoption of advanced technologies. DFI is seen as having been attracted by Ireland's access to the EU market, the provision of tax incentives, and the existence of an English-speaking labor force. See De la Fuente and Vives (1997) and the references cited there.

constrain the speed with which technological and organizational knowledge is transferred to domestic firms.

Second, while the Iberian economies have had unique advantages by virtue of their early integration -- on favorable terms -- into the European Community, they made significant mistakes in the course of restructuring and opening. DFI inflows were regulated and discouraged until the second half of the 1980s, and privatization was delayed, further limiting the scope for foreign investment. In Spain, rigid labor markets, an overly generous welfare state, and unstable financial policies have hindered convergence with the EU. At the same time, transfers from the European Union through regional aid and the Common Agricultural Policy have played an integral role in these countries' economic development. The analogous treatment of the new Eastern European members of the EU is likely to be less generous.

II. Trade

We develop these points by analyzing Eastern Europe's trade with the European Union.⁷ To summarize our findings, while that trade has expanded impressively, different countries have had different degrees of success in moving into the production and export of higher value-added, higher-tech goods. Hungary and to a lesser extent the Czech Republic have shown an ability to diversify into new sectors and to develop exports of more R&D and skill-intensive, higher value-added, less price-sensitive products. Export trends in the other CEECs are less uniformly positive. Poland, Romania and Slovakia have

⁷ There are several obvious justifications for this focus on trade. In a period when economic statistics are still incomplete, data on Eastern European trade are relatively abundant and organized into standard international categories. In a world of increasingly globalized markets, and especially for economies that seek to enter the European Union, trade and international competitiveness are critical to economic success. Trade is affected by domestic factors and the external environment and as such sheds light on the sets of two forces operating on these economies. And trade has been critical to the success of the two cases which the economies of the region seek to emulate: Western Europe after World War II and East Asia since the 1970s.

also achieved some success in raising value added and moving into the
production of more skill-intensive goods.⁸ However, while some parts of their
economies have been specializing increasingly in the production and export of
low value added goods, others have been developing "higher-tech"
commodities. A duality which is most clearly evident in Poland. Bulgarian
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there is some evidence of success in raising manufacturing value added. Thus,
one sees the once-standard bifurcation between the so-called first
and second waves of transition economies. Instead there is a steady gradation
of development as one moves from north and west to south and east.

Competition

The composition of CEEC exports changed with the decline of sectors
in the CMEA markets (engineering, especially mechanical) and CMEA inputs
(metals). Consider EU exports to the European Union. 1996 exports
were 100 per cent similar to those in 1988 for the region as a whole (see
Table 1). A comparable figure was noticeably lower for Spain and Portugal
at their accession to the EU, underscoring the rapid pace of structural
change in Central Europe. Reinforcing this picture is the fact that the
similarity of individual Eastern European countries are even lower than those
of the region as a whole. Not only were there ongoing changes in the
composition of the external trade of the region, in other words, but there
were also substantial reallocations of trade within it.

Table 1: Similarity of CEEC Exports to the EU over Time

This picture can be further elaborated by calculating the similarity of
the export structure of different countries (as in Table 2). While there is no

⁸ Romania, this is a relatively recent development. There, economic
growth through 1994 was followed by a dramatic reversal in 1995-6 following
a change in policy regime.

obvious pattern for 1988, three separate clusters had emerged by 1996.⁹ Romania and Bulgaria are now highly similar to one another, as are Hungary and the Czech Republic, and as are Poland and Slovakia.¹⁰

[Table 2: Similarity of Export Structure Across Countries]

Table 3 shows that the share of exports accounted for by the top 10 export sectors increased by five percentage points between 1988 and 1996. The commodity composition of exports to the EU remains concentrated in intermediates (cork and wood, chemicals, non-metallic minerals) and low-wage manufactures (clothing and apparel, footwear, cork and wood products, furniture, leather goods, and luggage). The only sectors that declined were energy products (reflecting the loss of cheap Soviet inputs), agriculture, and food products. The share of labor-intensive goods increased between 1988 and 1996, as did the shares of sensitive sectors other than agriculture and chemicals.

[Insert Table 3: Share of Top Five and Ten Exports in Total Exports]

The largest increase in export concentration between 1988 and 1996 occurred in Bulgaria and Poland. Romanian exports have remained the most concentrated, Czech and Hungarian exports the most diversified. This impression is confirmed by studies which show rapidly rising inter-industry trade in the more advanced CEEC countries.

B. Factor Content

Although Eastern Europe is touted as possessing a skilled labor force, the composition of its trade implies a comparative advantage in low-skill,

⁹ Bulgaria and Romania are the most similar to one another, but Bulgaria is also similar to Hungary and the CSFR.

¹⁰ Note the similarity with Spain and Portugal. As of 1988, none of the CEEC countries is at all similar to Spain, and only the leading CEEC exporter, Hungary, displays any similarity with Portugal. By 1996, in contrast, one can see a substantial convergence toward export structures of the sort evident in Portugal, particularly on the part of the middle-income CEECs (Poland and Slovakia). In contrast, only the Czech Republic and Slovakia show signs of resembling Spain, presumably reflecting the importance of the automotive sector.

labor-intensive sectors.¹¹ The European Commission analyzed the factor content of CEEC exports (based on factor intensities of EU production at the 3 digit NACE level) using 1992 data and found that CEEC exports were low in R&D and skill content.¹² Conversely, EU exports tended to be high-skill, high-R&D, and strongly capital-intensive.¹³ Eastern Europe's revealed comparative advantage remained stable between 1989 and 1992, reflecting long-standing structural characteristics of the region. Drabek's (1995) analysis for the Czech Republic, Hungary and Poland in 1988 and 1993 found consistent evidence of comparative advantage in low-skill, high physical capital sectors, leading him to conclude that "the pattern of revealed comparative advantage has scarcely changed over the five-year period, even though trade volumes were growing at a remarkable rate."¹⁴

We repeated this analysis using the European Commission's methodology. The results confirm that Eastern Europe's exports to the EU remain predominantly in low-skill sectors (Table 4).¹⁵ That said, there are striking changes since 1992 (subsequent to the period covered by the EU and Drabek studies). Exports have become more evenly divided between labor-intensive and non-labor-intensive sectors, and between R&D-intensive and non-R&D-intensive sectors (Table 5). The shares of both the energy- and capital-intensive sectors have declined. While there has been an increase in the share of skill-intensive exports, this has come at the expense of sectors characterized by intermediate levels of skill

¹¹ The CEECs also have an advantage in low value to weight commodities because of the physical proximity to Western Europe.

¹² 79.3 percent were of low or medium-R&D intensity and 81.6 percent were of low or medium skill-intensity.

¹³ The EC analysis was disaggregated to the three-digit level but used factor intensities derived from Western European data.

¹⁴ A closer examination of Drabek's results show that the comparative disadvantage in high human capital sectors was decreasing and the comparative advantage in the low human capital, high physical capital sectors of motor vehicles and textiles had nearly disappeared.

¹⁵ We also compute the revealed comparative advantage of Iberian exports, for use in our CEEC-Iberia comparison in Section III below.

intensity. Hence, the share of unskilled-labor-intensive exports has remained roughly constant.

[Insert Table 4: Share of Labor Intensive Exports in Total Exports to EU]

[Insert Table 5: Share of CEEC Exports to EU by Factor Intensity]

These region-wide patterns disguise different movements in different countries. Hungary displays huge increases in R&D-, capital- and skill-intensive sectors, and corresponding drops in low-R&D and low-skill-intensive sectors, rendering the absolute share of R&D- and skill-intensive sectors higher than for any other country. Poland and the CSFR similarly show a shift toward R&D intensive sectors. They also display small declines in capital-intensive sectors in favor of their labor-intensive counterparts. Romania and Bulgaria, in contrast, show large shifts from capital- to labor-intensive exports. Romania shows little rise in the R&D and skill intensity of its exports, while Bulgaria actually shows a decline in both.¹⁶

C. Unit Values

Although the CEECs have had limited success in developing new export sectors, exporters may nonetheless be improving their competitive position within existing sectors and moving up the technological ladder into the production of higher-value-added goods. Drabek (1995) concludes that export unit values fell substantially in most countries between 1988 and 1991.¹⁷ Hungary was an exception

¹⁶ Hoekman (1995) used three different measures of changes in composition. First, he found that there was a large increase in the number of new 6 digit- product lines in Bulgaria, with little or no change occurring in Romania and Poland and modest change in Hungary and the CSFR. Second, he found that using measures of revealed comparative advantage (market share basis), he found large increases in Poland, Bulgaria and Romania, but none in Hungary or the CSFR. Finally, he looked at the correlation between 1988 and 1994 measures of real comparative advantage (specialization basis) in exports to the EU, finding large changes for Bulgaria and little change in Hungary. The latter measure may indicate that Hungary has yet to develop a revealed comparative advantage in many of its growth sectors.

¹⁷ The assumption is that unit values are reasonable proxies for value added. The problem with it is that changes in unit values will also be affected to some extent by movements in the world prices of the commodities in question. The ECE, which examined the ratio of export to import unit values, found this to be even more true for total exports. Though they also found

-- its export unit values have been rising steadily since 1988.

Our analysis reports the unit value of CEEC exports to the EU relative to the unit value of non-CEEC exports to the EU. The indices constructed using 1988 weights highlight the movement of unit values for sectors that were important prior to liberalization, while those constructed for 1996 place particular emphasis on sectors that are important in the post-transition period. (The second and third panels of Table 6 replicate these calculations for manufacturing and agriculture, respectively.)

[Insert Table 6: Ratio of CEEC to Non-CEEC EU Import Unit Values]

The indices using 1988 weights show a striking lack of movement through 1992. When we consider 1992 weights instead, unit values rise from 71.0 to 81.6, with half the improvement concentrated in 1994-5. This is again true when we base our calculations on 1996 weights. Overall, then, the picture is one of little improvement in competitiveness in those sectors that dominated CEEC trade and production prior to the transition, some slight progress in newly-emerging sectors through 1992 (confirming the findings of the EC and Drabek studies), and then accelerating progress as those countries which undertook structural adjustment began putting their difficulties behind them.¹⁸

Hungary displays the highest unit value ratio over the period. Its old industries (sectors which already loomed large in exports in 1988) improve their unit value ratios along with the newer sectors, a pattern which is evident nowhere else but the CSFR. In the CSFR, however, the rise in manufacturing unit

rising unit values for manufacturing exports. Hoekman, by contrast, presented unit values for several key commodities for individual countries, and concluded that unit values were rising for most countries for most commodities.

¹⁸ It is still possible that the improvements in trade performance evident in 1994-5 reflect cyclical factors, in particular, strengthening Western European demands for the products of Eastern Europe. This picture is consistent with our hypothesis that the granting of GSP status in 1991 was important for the transition, insofar as this event coincided with a marked improvement in CEEC trade performance in 1992.

values is skewed toward newer sectors.¹⁹

Polish and Romanian performance is more difficult to characterize. In Poland the improvement in manufacturing unit values is more apparent in emerging than traditionally important sectors (the increase is more than triple when 1996 rather than 1988 weights are used), while agricultural unit values decline across the board. Both agricultural and manufacturing unit values thus paint a picture of a dualistic Polish economy. In Romania all weighting schemes show a sharp increase in manufacturing unit values, with that increase concentrated in 1995-6 following the election of a new government and the implementation of new policies. In Romanian agriculture, on the other hand, there is evidence of progressive movement toward the production of lower value added goods.

Bulgarian performance is less rosy. The unit values of exports of manufactures collapse when 1988 weights are used, reflecting difficulties in traditional sectors, while doing somewhat better when 1992 and 1996 weights are employed (reflecting the rebound in total exports).²⁰ In agriculture there appears to have been some progress late in the period when 1992 and 1996 weights emphasizing newer products are used.

To what extent did outward-processing trade drive these trends? Table 7 reports the export unit values of OPT exports relative to the unit values of non-OPT exports for the same sectors.²¹ For the CEEC6, this ratio declines by nearly a third over the 1988-96 period. The drop is pronounced in Poland, Hungary and the

¹⁹ While the initial deterioration in agriculture is more pronounced, unit values there held up better in 1996.

²⁰ Much of the recent success of Bulgaria's traditional exports can be attributed to the large devaluation of its currency and may not therefore be systematic.

²¹ Unit value ratios were calculated for the 35 most important three-digit SITC sectors in terms of OPT exports. These accounted for 85 per cent of CEEC6 OPT exports to the EU in 1996. Three simple unweighted averages were calculated: a simple average, an average which excluded observations we judged to be outliers, and an average which excluded observations that were at more than half the average difference between the minimum and maximum values for that country and year.

CSFR, while the ratio actually moves in the opposite direction in Romania and (after 1992) Bulgaria. This suggests that OPT has not promoted the movement into higher value-added exports in the case of the Visegrad 4 but that a case can be made for it in the second tier of CEEC economies. (We return to this below.)

[Insert Table 7: Ratio of OPT Export Unit Values to Other Export Unit Values]

In sum, this analysis reveals a sharp divergence between Hungary on the one hand and Romania and Bulgaria on the other. While all the CEECs but Bulgaria are raising their export unit values, they are doing so in different ways. Romania (along with Bulgaria) is moving out of the capital-intensive sectors of the planned economy in favor of labor-intensive, assembly-oriented activities. Hungary, the Czech Republic and Slovakia have been more successful in developing more R&D, skill-intensive export sectors. But this trend is only pronounced in Hungary with Poland and the CSFR effectively keeping a foot in the labor-intensive camp.

D. Price Sensitivity

Table 8 divides exports of manufactures to the EU into price-sensitive and price-insensitive goods.²² The summary figures indicate a shift out of price-sensitive exports, whose share declined by 6.2 percentage points between 1988 and 1995. This is progress in the sense of restructuring away from exports of raw materials in favor of differentiated products. Note, however, that this movement is concentrated in 1988-91 and 1994-96. In the first period it was associated with the loss of traditional markets and the decline in non-viable sectors. There was then a lag of three or four years until further progress began to take place, reflecting the effects of prior enterprise restructuring and DFI inflows.

²² We rank three-digit SITC categories using the conventions followed in Aiginger and Wolfmayr-Schnitzer, 1996. By considering the share of high, moderate, and low price-sensitive export, we can examine the potential ability of countries to capture rents associated with the production of more differentiated products.

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**Insert Table 8: Distribution of CEEC Manufactured Exports to EU by Price
Sensitivity of Sectors]**

The differences apparent in our earlier tables is evident here as well. The change in the share of price-sensitive exports is most pronounced in the CSFR, Poland and Hungary and least evident in Romania and Bulgaria. The decline in the share of price-sensitive exports is larger in Slovakia than in the Czech Republic. Poland is unusual in that the shares of both the most and least price-sensitive exports to the EU rise at the expense of the intermediate sectors.²³ Romania shows the opposite pattern, with moderately price-sensitive sectors increasing their share at the expense of the extremes and with most of the change occurring after 1993. Bulgaria shows a movement into more price-sensitive sectors, consistent with our analysis of factor content and unit values.

Are these adjustments simply responses to relative prices? Table 9 reports the correlation of the change in the volume of exports and the change in export unit values. If relative prices are driving these trends, we would expect positive correlations. In fact, the figures for the 1988-96 period are uniformly negative: this is true of total exports, exports of manufactures, and exports of agricultural goods and raw materials. The right-hand side of Table 8 suggests that this negative correlation reflects the decline of non-viable sectors in manufacturing. There we exclude the categories of exports showing the largest decline on the presumption that these tended to be the non-viable sectors in manufacturing. Once these outliers are excluded, many of the correlations become positive. For the subperiod 1990/1-1995/6, this is true for every country and export category but CSFR manufacturing.²⁴ Still, the fact that the data must be so

²³ This increase is more dramatic before 1992 than after, presumably reflecting the big-bang strategy followed by the reformers.

²⁴ This is consistent with our finding of increased movement into more price-sensitive sectors. The correlation between changes in export volumes and unit values, corrected for outliers, is if anything larger in Romania and Slovakia than in Hungary and Poland, confirming the significant price insensitivity of Bulgarian exports (found above) and the importance of OPT exports for Romania (to be discussed below).

heavily massaged before they yield evidence of a positive correlation suggests that other forces, and not simply relative prices, are shaping the development of Eastern Europe's trade. Prominent among these, we argue momentarily, are direct foreign investment and outward processing trade.

[Table 9: Correlation Between Change in Units (Tons) and Unit Value Ratios]

Overall, then, this analysis provides some evidence that, particularly since 1994, Eastern Europe is moving rapidly into the production of higher value-added goods and converging with the West. The high levels of education and skill for which the region is known and which were embodied in technology-intensive exports to CMEA markets do not form the basis for its exports to the EU. While Bulgaria appears to be increasing its dependence on the kind of low-wage, price-insensitive commodities upon which much of Eastern Europe's pre-transition trade with the West was based, Hungary and the Czech Republic have been more successful at moving up the value-added ladder into the production of more technologically sophisticated goods. Poland, Slovakia and Romania, here as elsewhere, display both tendencies.

The question is why. We consider three explanations: the Association Agreements, Eastern Europe's reliance on direct foreign investment, and outward-processing trade.

E. The Effects of the Association Agreements

Under the terms of the Association Agreements, the members of the European Union reduced their tariffs on imports from Eastern Europe starting in 1992/3 and agreed to phase out quotas on the products of the "sensitive sectors" after five years (four years for certain metal products). (See Table 10.) EU quotas and anti-dumping policies have been criticized as restrictive, while EU tariff reductions have been praised as facilitating the expansion of Eastern Europe's trade.²⁵

[Table 10: Share of Sensitive Sectors in CEEC Exports to the EU]

²⁵ See for example Winters (1992).

In fact both characterizations are wide of the mark. The tariff reductions provided by the Association Agreements have had little effect with the possible exception of agriculture. Tariffs were already low due to large reductions following the granting of Most-Favored-Nation and General-System-of-Preferences (GSP) status in 1990/91 (Table 11). While large in relative terms, the additional cuts offered by the Association Agreements were small in absolute size.²⁶

[Table 11: EU Tariffs and NTBs Faced by CEECs Prior to Europe Agreements]

While quotas on CEEC exports of the products of the sensitive sectors have been criticized as stifling Eastern Europe's trade, improvements in market access provided by GSP status and the Association Agreements combined have in fact permitted a substantial increase in CEEC exports.²⁷ Strikingly, exports of the sensitive sectors other than agriculture have grown more rapidly than total exports, again with the exception of Hungary. Moreover, Eastern Europe's exports to the EU have expanded more rapidly than those of other developing and transition economies (like the Mediterranean countries). This is hard to reconcile with the view that EU quotas significantly stifled Eastern Europe's trade.²⁸

²⁶ As a study by the Commission itself, based 1993/94 data concluded:

"the largest gains in competitiveness in manufacturing exports were observed between 1988 and 1991, which suggests that the initial reforms and liberalization of trade and payments, including convertibility, had probably a stronger impact on competitiveness than the implementation of Association Agreements and the resulting better access to EU markets which [followed]" (p.50)

²⁷ With the notable exception of agriculture, as we indicate below.

²⁸ Although Kaminski (1993) calculates ratios of exports to quotas in excess of 100 percent prior to the negotiation of the Association Agreements, suggesting that pre-Agreement quotas were binding and that EU liberalization could have been important, others suggest that such high average export/quota ratios reflect binding quotas on a narrow range of CEEC exports, and that for the majority of categories Eastern Europe did not come close to bumping up against quota limits. And even where quotas were filled, they did not necessarily preclude additional exports to the West; Eastern European exporters could export above quota by paying a relatively modest tariff on the additional exports. Assessment is further complicated by the fact that for sensitive sectors -- the so-called five year group or Annex III, MFA group,

The effects of the EU's anti-dumping policies are also of questionable importance. Anti-dumping actions declined in number, scope and severity once the CEECs were no longer state-trading countries. They have been too few to have significant demonstration effects. Over the three-year period from 1993 to 1995 only 11 of the EU's 87 anti-dumping investigations were directed against the CEEC 6. (Of these, four were directed at Poland, three at the Czech Republic.) The affected sectors (unalloyed zinc, wooden pallets, iron or steel sections, Portland cement, and urea ammonium nitrate) accounted for less than two percent of the industrial exports of the countries subject to action.²⁹

F. An Aside on Agriculture

The exception to the CEEC's increasing concentration on traditional exports has been agriculture. Before 1992 the CEEC 6 ran an annual agricultural trade surplus of \$2.5 billion based on exports of \$7.5 billion. Bulgaria, Hungary and Poland accounted for nearly 90 percent of CEEC agricultural and food exports. Despite the rapid growth in total exports, exports of agricultural materials and foodstuffs have stagnated, while imports have soared. Poland's agricultural imports have doubled, fueling pressure for the imposition of import levies. The region's agricultural trade surplus has fallen from nearly \$3 billion to less than \$1 billion. By 1995, the only countries running a positive agricultural trade balance were Hungary and Bulgaria (and Bulgaria's surplus was about 1/3 the size of 1989).

The balance with the EU has been central to this reversal. In 1988-90 the

and items under the European Coal and Steel Community (ECSC) -- quotas are in the midst of being phased out.

²⁹ Agreements with the European Union and accession to the GATT and the WTO resulted in the reduction of import as well as export barriers. Cuts in import barriers partly explain the rapid growth of imports of foodstuffs and other consumer items, though pent-up demand for Western quality and brand-names has also been important. Thus, Eastern Europe's commitment to reduce and eliminate remaining barriers between 1997 and 2001 may further stimulate the already high growth rate of imports. This will pose difficulties for governments, like Poland's, which already face strong protectionist pressures at home.

CEEC ran an annual agricultural trade surplus of 800 million ECU; by 1993 this had become a deficit of nearly 400 million ECU.³⁰ The CEEC share of total EU external agricultural imports has fallen by one percentage point, whereas the CEEC share of EU exports has increased by four.³¹

Drought, EU trade barriers, and changes in comparative advantage all help to explain this development. Transition-related restructuring and drought in 1992-94 depressed agricultural yields.³² Poland's output dropped by 20 percent between 1989 and 1994. Output declines have been particularly pronounced in meat production, which in 1988 was the fifth most important (2-digit) category of exports to the EU.

EU trade barriers may have played a role as well. All the CEECs but Hungary and Romania reduced agricultural tariffs more than partner OECD countries, and the use of nontariff barriers by OECD countries resulted in effective rates of protection for agriculture of over 100 percent. Agriculture was largely exempted from the trade liberalization provisions of the Association Agreements. EC (1995) showed that nine of the EU's 20 most protected (3-digit) sectors were in food and agriculture.³³

³⁰ As late as 1990 four of the CEEC 5 had trade surpluses with the EU; between 1993 and 1995 only Hungary had a surplus.

³¹ By contrast, in recent years agricultural and food trade among the CEECs, has revived, offsetting the increased deficits with the EU.

³² Agricultural output was supported by the state in the form of subsidized seed, credits, fertilizers, fuel and other inputs. The loss of Soviet supplies of cheap energy products caused large increases in fuel, fertilizer and energy prices, declines in irrigation, as well as in feedstocks for animals which were often ultimately energy intensive. In addition, agricultural production, particularly in Romania and Bulgaria and to a much lesser extent in Poland, was dominated by very large state-owned farms and a network of monopolistic suppliers of inputs and credit, and monopsonistic purchases of output. Breakup of the state farms has resulted in inefficient average production size, a mismatch between agricultural machinery and plot size, and a breakdown of the supply, credit and purchasing networks, among other problems.

³³ Moreover, tariff and non-tariff barriers have been supplemented by health and safety regulations. The most important of these is prohibition on meat exports because of hoof and mouth disease in the former Yugoslavia.

Many of these factors may prove temporary -- agriculture exports recovered in 1995-96 and will continue to improve as privatization and restructuring of former state farms and food processing industry unfolds.³⁴ Still, the large agricultural trade surpluses of the late 1980s and early 1990s were artificial and are not likely to return. Surpluses were sustained by large devaluations, low domestic demand from the transition shock, and low domestic prices relative to world prices. As these conditions were reversed, and implicit and explicit subsidies (on fertilizers, credit, animal feed, energy and fuel) were reduced or eliminated, the profitability of domestic agricultural production declined (irrespective of restructuring and the drought), and what was produced could be sold more profitably domestically.³⁵

G. Trade-Related Direct Foreign Investment

Direct foreign investment in Central and Eastern Europe rose from negligible levels in the first years of the transition to \$4 billion in 1992, \$11 billion in 1995, \$9 billion in 1996, and an estimated \$7 billion in 1997.³⁶ Still, flows of DFI into Central and Eastern Europe have been modest in

³⁴ Much of this section is based on discussions with Andrezej Kwiecinski while he was a consultant at the OECD. His help is gratefully acknowledged.

³⁵ The widely-held assumption that Central and Eastern Europe retains a comparative advantage in agriculture -- having been the "breadbasket of Europe" before World War II -- may in fact be mistaken. By the 1930s most CEEC agriculture was characterized by near-feudal conditions, with very low domestic meat consumption by the majority of the (largely rural) population, permitting substantial grain and meat exports. Communist policies eliminated this structure at the same time the EC achieved self-sufficiency as a result of its Common Agricultural Policy. According to Kwiecinski (1996, p. 46), although Polish agricultural prices are lower than the artificially higher prices prevailing in the EU, that country's agriculture is not competitive at world prices. This is likely to be true of the region as a whole; furthermore the EU has targeted a gradual move to world prices. Together, these factors mean that CEEC exports in meat and grains, and therefore agricultural surpluses overall, are unlikely to return to the levels of the late 1980s, not to mention the 1930s. The CEECs are likely to retain an underlying comparative advantage in soft fruits and their products (and do face significant trade barriers in this area), but the size of this potential trade is small compared to historical levels.

³⁶ Alternative estimates of the magnitude of DFI vary significantly. The figures we utilize are drawn from IMF balance of payments data. Figures produced by the WIIW in Vienna show a similar pattern over time: total inflows of \$10

comparison with flows into other developing regions, with the exception of Hungary which was one of the top five recipients world-wide in 1992-94.³⁷

The distribution of DFI inflows has been determined by the pace of privatization, especially of large, capital-intensive public utilities such as telecommunications and electric power, and by the openness of that privatization to foreign investors. Until 1994, Hungary was the primary recipient of DFI.³⁸ Inflows into Hungary, Poland and the Czech Republic have continued to rise, most dramatically in Poland where joint ventures have increased their capitalization to the point where the stock of Polish DFI probably passed that of Hungary in 1997. Together, Poland and Hungary are host to nearly 80 per cent of direct foreign investment in the region.³⁹

[Insert Table 12: Foreign Direct Investment in the CEEC 6 and Iberia]

The largest share of DFI has been in manufacturing, although flows into wholesale and retail trade, services (financial and business services in particular) and infrastructure (transport, utilities and telecommunications) are growing. Still, manufacturing accounted for around 40 percent of the DFI stock in Hungary and some 60 per cent in the Czech Republic and Poland at the end of 1996.⁴⁰ Food and consumer goods, electronics, motor vehicles, and telecommunications have been popular industries for foreign investment. DFI has

billion, \$9 billion in 1996 and an estimated \$8 billion in 1997.

³⁷ United Nations (1995) notes that the stock of DFI in Eastern Europe remains below that of Argentina, a single middle-sized semi-industrialized economy.

³⁸ As late as 1992, Hungary accounted for 55 percent of the region's accumulated stock of DFI. 91 of the top 200 Hungarian firms have foreign ownership. Poland and the Czech Republic came in a distant second and third.

³⁹ Privatization also accelerated, and the reestablishment of international creditworthiness with the London and Paris Club deals was no doubt important.

⁴⁰ This conclusion, measured in terms of value, must be treated with caution as a few large deals in capital-intensive sectors (e.g. automobiles, telecommunications, electric power machinery, and public utilities) can dominate the statistics.

oped areas, the environs of capital cities, and borders with
ries.⁴¹

investment enterprises (FIEs) have higher levels of capital,
and investment than domestic firms. Hunya (1996a) found that FIEs
shares of capital and output than employment in Hungary, the Czech
Slovakia, i.e. they are better capitalized and more productive than
.⁴² FIEs report higher levels of investment as a share of capital
domestic rate in the Czech Republic).⁴³ These higher investment
that FIEs' superior productivity performance is likely to

account for a disproportionate share of Eastern Europe's trade. They
estimated 50 to 70 percent of Hungary's exports in 1994-95, nearly
share of the capital stock and the labor force.⁴⁴ This export
not just a compositional effect reflecting greater investment in
d sectors; FIEs have a disproportionate share of exports even when
or sector.⁴⁵ FIEs also account for a disproportionate share of

in Hungary is concentrated in the region around Budapest and on
h Austria and Slovakia, for example, while DFI in Slovakia is
between Bratislava and Vienna, close to the Austrian and
nders.

comparison relies on the book value of capital for domestic
many firms have relied that book value since the beginning of the
economic meaning of this measure in many cases remains
comparisons utilizing it should be treated with caution.

their investment is more heavily concentrated in machinery and
two-thirds of this is in imported machinery, FIEs account for
total imported machinery (compared with 32 percent of sales).

data for Czech manufacturing confirm the Hungarian results:
for 16.4 percent of exports, compared to 10.2 of fixed capital
of employment. Exports accounted for 41 percent of their sales
percent for domestic firms. Zemplerová (1996). Confirming the
bias and higher labor productivity found in Hungary, the share of
added in the Czech Republic was lower than their share in output
than their share in employment.

(1995). A similar tendency for FIEs to export a
ate share of their output (and to import a disproportionate share
nts -- see below) has been found for other countries, although

imports, reflecting their high levels of investment and heavy reliance on imported capital goods, as noted above, and intensive use of intermediate inputs.⁴⁶

H. Outward-Processing Trade

OPT exports to the EU have been growing, at a compound annual rate of around 24 per cent since the beginning of the transition (Table 13). This is more rapid than the growth of CEEC's non-OPT exports to the EU, so that the share of OPT in total CEEC exports to the EU rose from 10.5 to 15.8% between 1988 and 1996.⁴⁷

[Insert Table 13: OPT Exports]

The OPT share of total exports has at least doubled in all countries but Hungary. OPT exports now account for over 30 per cent of all Romanian exports, followed by Poland and Bulgaria with 17 and 15 per cent, and the OPT share in the other countries ranges from 11 to 13 per cent. These differential growth rates mean that the geographical center of this activity has shifted from Hungary to Poland.⁴⁸

The timing of the initial surge in OPT suggests that trade preferences have been important. The period of most rapid increase was 1991-92.⁴⁹ This implies that

these propensities have been found to decline with time. See McAleese and McDonald (1978).

⁴⁶ Whether DFI-related trade and investment are associated with productivity spillovers and positive linkages to domestic firms is a separate question, to which we turn in Section III below.

⁴⁷ Growth was most rapid in 1991-92 and 1995, strongly suggesting that OPT exports are pro-cyclical, acting as the marginal source of production for EU manufacturers.

⁴⁸ In 1988 Hungary accounted for about 35 per cent of the region's OPT exports to the EU, with another 28 and 26 per cent coming from Romania and Poland. By 1996 Poland's share had matched Hungary's in 1988, with Hungary, Romania and the Czech Republic all with slightly less than 20 per cent each. Though OPT exports are important in Bulgaria, that country accounts for a tiny share of total CEEC exports; therefore, Bulgarian OPT exports account for only a small share of the region's total.

⁴⁹ In percentage terms, from what is admittedly a relatively low base.

the granting of GSP status played an important role.⁵⁰ GSP status in 1991 significantly liberalized EU quotas on imports of textiles and clothing, including OPT. It eliminated nearly half of all quotas on OPT exports of Polish textiles and clothing to the EU and increased limits on those that remained by an average of 115 percent. Quotas on direct exports, in contrast, were enlarged by a relatively modest 45-64 percent. The Association Agreements further encouraged OPT by granting zero tariffs on OPT exports of clothing and textiles but not on 46 categories of direct exports.⁵¹ As of 1995 there remained 108 EU quotas on direct exports from Eastern Europe but only 62 on OPT.⁵²

Liberal quotas have permitted the CEECs to increase their market share in EU OPT imports, particularly of clothing and apparel. The CEECs' market share in the EU relative to other OPT exporters has risen from 23 per cent in 1988 to 32 per cent in 1992 and 42 per cent in 1996. Meanwhile, their share of EU OPT clothing and apparel imports rose from around 40 per cent in 1990 to 60 per cent in 1996, largely at the expense of Morocco, Tunisia and Turkey.⁵³ The CEECs also have substantial market share (over 50 per cent) in furniture, footwear and auto parts.

⁵⁰ However, the CEECs' share of the overall increase in EU OPT imports was 74 per cent in 1992-6 but only 40 per cent in 1988-92, suggesting that the Association Agreements further accelerated the trends initiated by GSP status. See the discussion below.

⁵¹ ECE (1995), chapter 7. Direct exports of products of sensitive sectors covered by the Association Agreements require licenses in both the importing and exporting countries; OPT requires only that a single license be obtained by the EU importer. This allows EU importers to capture the quota rents, leading them (and their governments) to plump for OPT. As noted by ECE:

"... [this] suggests that the system as a whole is intended to favor Community producers more than manufacturers in eastern Europe. . . . the main drive for OPT appears to have been improving the competitiveness of the EU's clothing industry. The bias in favor of OPT and against direct exports is reflected in the rate of quota utilization under each regime. The utilization rates have been much higher in the case of OPT than for direct exports." (ECE (1995) Ch. 5, p. 120).

⁵² This bias in favor of OPT will presumably be eliminated before 1999 as remaining quotas on exports of the products of the sensitive sectors disappear.

⁵³ ECE (1995), chapter 7.

Initially, apparel and clothing accounted for two thirds of all OPT exports. Early in the transition other low-skill labour-intensive sectors like footwear and furniture also made up an important part of OPT exports. Since then several new sectors have emerged: textiles; electrical machinery, appliances and apparatus; and telecommunications equipment. This shift was due mostly to an increase in the OPT share of total exports of these sectors rather than their faster overall export growth: the OPT share of total exports in traditional sectors (footwear, furniture, luggage) declined, in part replaced by DFI in the same sectors. By contrast, the OPT share of total textiles and telecommunications exports rose.⁵⁴

The composition of OPT exports suggests that the Czech Republic, Slovakia and Poland have an advantage as a result of their proximity to Germany and Scandinavia. This gives the Czech Republic and Slovakia an edge in telecommunications equipment and electrical machinery, since it minimizes monitoring and coordination costs, facilitating just-in-time turnaround. Such factors appear to dominate any handicap associated with the Czech Republic's relatively high labor costs. Poland's success in capturing OPT exports of furniture also likely reflects the importance of proximity, in this case to Scandinavia.⁵⁵ Insofar as Romania's subsequent stabilization did not lead to the return of its OPT exports of furniture, the implication is "if you lose it, it doesn't come back."

Together, these trends reflect the now-familiar differentiation between the more- and less-advanced CEEC economies. Whereas Hungary and particularly the Czech Republic have moved into OPT exports of newer, more technologically sophisticated, skilled-labor-intensive products, over 90 per cent of Romanian and

⁵⁴ Interestingly, the countries with growing OPT exports in the newer sectors tended to be the four Visegrad countries, which are also displaying more ability to export the products of new sectors according to our other measures.

⁵⁵ In addition, Poland's ability to capitalize on its location was also presumably facilitated by early macroeconomic stabilization.

Bulgarian OPT exports continue to be accounted for by low-wage, unskilled-labor-intensive sectors such as footwear, clothing and apparel. Here as elsewhere, Poland displays both tendencies, while OPT remains of marginal significance in Slovakia.

III. Growth

In this section we consider the implications for growth of Eastern Europe's OPT and DFI-oriented strategy. We describe the state's capacity to accentuate the positive effects of these activities. Viewing Eastern Europe in an East Asian mirror, we conclude that this capacity is more limited in Eastern Europe and suggest that Iberia is a more pertinent comparison. We therefore review the effects of DFI and OPT and of integration with the European Union on Iberian economic development.

A. Spillover Effects of DFI and OPT

The literature on the host-country spillovers of DFI distinguishes technology spillovers, organizational spillovers, and market-access spillovers.⁵⁶ Technology spillovers involve the spread of best practice from foreign-investment enterprises to host-country competitors.⁵⁷ Organizational spillovers involve the spread of knowledge about quality control, distribution, and post-sales servicing of products.⁵⁸ Market-access spillovers facilitate the efforts of local producers to penetrate foreign markets, as local component suppliers are encouraged to feed into multinationals' production networks, thereby developing familiarity with the

⁵⁶ For a survey, see Blomstrom and Kokko (1996). Markusen and Venables (1997) provide a model of the mechanisms discussed in this subsection and references to the literature.

⁵⁷ Riedel (1975), for example, argues that technology spillovers were important for the development of manufacturing in Hong Kong, where FIEs have long been prominent.

⁵⁸ Thus, in the Czech Republic, Volkswagen transferred skills to indigenous managers following its acquisition of Skoda by having pairs of managers, one Czech and one expatriate, work together as a team and by sending its Czech managers abroad to study and work.

prerequisites for international production.⁵⁹ These three types of spillovers flow through direct linkages -- when local firms supply inputs to FIEs, for example -- as well as through emulation and instances where workers and managers who have acquired relevant knowledge are hired away from FIEs.⁶⁰

Most empirical studies focusing on backward linkages (for example, Reuber et al. 1973) estimate only the propensity of FIEs to source their inputs domestically without regard to the sophistication of the inputs that are sourced or the scope for domestic producers to move up the technological ladder. Nor does this literature devote much attention to organizational and marketing spillovers. Although the preponderance of studies concludes in favor of positive effects, a significant minority argues for negative or nonexistent spillovers (e.g. Aitken and Harrison, 1991).⁶¹

One way of reconciling these findings is to emphasize that specific conditions accentuate positive spillovers. A small knowledge gap between domestic- and foreign-owned firms is conducive to technology transfer because domestic producers already possess the relevant technological base (Haddad and Harrison 1993).⁶² A high level of human capital enhances the capacity to absorb technological, organizational, and market-access techniques. Technically-

⁵⁹ Market-access spillovers are purported to have been important in East Asia, where firms acquired marketing skills through contacts with Japanese trading companies (Hone 1974).

⁶⁰ See United Nations (1995), p.116 and passim.

⁶¹ The Eastern European automobile industry has been cited in support of the negative view: Western component producers have followed automobile producers into the region, given the importance of locating as close as possible to the assembly plant (virtually all producers having adopted just-in-time production methods) and the difficulty domestic firms have experienced in delivering components of the requisite quality and reliability on time. Thus, the motor vehicle industry threatens to become the kind of foreign-owned enclave warned of by the critics of DFI. On the other hand, McDonald's, since entering Poland in 1992, has increased the share of its inputs sourced from domestic suppliers from 25 to more than 70 percent. See Simpson (1995). Clearly, experience in different sectors varies.

⁶² This point is evident in the comparison between the response by domestic suppliers to McDonald's entry into Poland and foreign motor-vehicle assembly in the region.

competent local universities and strong links between universities and enterprises encourage foreign-investment enterprises to locate R&D facilities close to host-country manufacturing. FIEs are more likely to place relatively-advanced activities requiring technicians and engineers in countries which possess them in large numbers, and native technicians and engineers are more inclined than the typical worker move to domestic firms after acquiring new knowledge (Gerschenberg 1987). Science parks, as in Japan, Malaysia, Korea and Singapore, help local firms and FIEs to capture R&D spillovers and make efficient use of links to public research institutes.⁶³ A dependable legal system which protects intellectual property will encourage FIEs to undertake R&D locally. A relatively high level of competition in the relevant sectors is conducive to technology spillovers insofar as indigenous firms come under pressure to acquire and emulate best practice (Kokko 1994). Finally, DFI concentrated in particular parts of the recipient country tends to encourage localized learning.

Eastern Europe's generous human-capital endowment favorably positions domestic producers for technology transfer. On the other hand, the gap in best practice between Western and Eastern Europe is large.⁶⁴ Manufacturing technologies rely on increasingly sophisticated computer and chemical technologies even in "low-tech" industries such as textiles and apparel, complicating technology transfer.

Perhaps most significantly, competition is limited in many sectors in which DFI is important -- in telecommunications, consumer electronics and motor vehicles. Some FIEs have no significant domestic competitors. Small firms seeking to enter input markets are constrained by inadequate access to external finance

⁶³ This is not exclusively an East Asian phenomenon: the Swedish company Astra collaborates with the Indian Institute of Science both directly and through its Indian affiliate.

⁶⁴ Though it is not clear that it is larger than in East Asia twenty years ago.

limited organizational knowledge.⁶⁵ While there is some evidence of inter-industry spillovers from DFI, most studies conclude that intra-industry spillovers dominate and that the latter will be limited where domestic competitors are few. Only in consumer goods -- textiles and apparel in particular -- is the situation clearly favorable.

This same literature compares direct foreign investment to technology licensing, the alternative pursued by some East Asian countries. It suggests that transfer lags tend to be longer for technologies that are licensed or sold. Haggfield and Romeo (1980) examine the dissemination of 26 U.S. technologies and find that transfers to affiliates tend to be of a more recent vintage than transfers that take place through licensing to outsiders. Their results do not tell us about the speed with which the various vintages then diffuse to other enterprises.

The spillover effects of OPT have not been the subject of similar scrutiny, but we conjecture that the situation is similar to FDI. OPT exposes workers and managers to new products and processes; it is a channel for the transfer of technology and marketing expertise. In contrast to DFI, market-access spillovers may be more important than technology spillovers. Because the output of firms involved in OPT is exported, firms gain familiarity with international standards of quality, packaging, product design, and distribution. On the other hand, OPT does little to encourage the development of products with brand recognition. Because the technologies involved in assembly and processing tend to be less sophisticated, OPT has relatively little impact on production technology. The fact that exports of price-insensitive goods have not risen as quickly from Romania and Poland, where OPT is disproportionately important, as from Hungary and the Czech Republic is consistent with this conjecture.

While there is considerable evidence that DFI and licensing are conduits

⁶⁵ With which prevents them from managing cash flow, information, and equity control.

for technology transfer, it is unclear which is more efficacious. DFI provides access to more up-to-date technologies, but it is criticized for encouraging host countries to specialize in low-wage, low-valued-added goods. It remains unclear whether licensing is a more effective means of encouraging producers to move up the value-added ladder, but there is no question that global firms are increasingly reluctant to license their most advanced technologies.⁶⁶

B. State Capacity

The contingent nature of technology transfer points to the pivotal role of state capacity and social capability. The literature on these topics (e.g. Abramovitz 1986, Koo and Perkins 1995) is still in its infancy. It identifies a cluster of determinants of the capacity of firms to acquire technical and organizational knowledge (see e.g. Dahlman and Nelson 1995). Key determinants include the stock of human capital (the labor force's literacy and numeracy, the existence of engineers and technicians to adapt foreign technology to local conditions and of scientists to monitor technical trends), the transparency of regulatory and tax systems (which encourages entry by assuring producers that their profits and intellectual property will not be arbitrarily appropriated), and the stability of macroeconomic and trade policies.

In addition, recent analyses of high-growth economies have highlighted the need to solve coordination problems deterring modernization. Rodrik (1995) emphasizes coordination problems associated with the need for the simultaneous production of a range of nontraded inputs, in whose absence the marginal efficiency of investment is too low to support significant capital formation. In his model, it is in the interest of no single manufacturer to start up in the absence of comparable initiatives by others. Government may then have a role in coordinating the necessary activities through public-enterprise production and selective subsidies. If it does, the marginal efficiency of capital rises sufficiently to elicit higher levels of investment, and export growth follows as

⁶⁶ United Nations (1995), p.159 and passim.

a way of financing imports of capital goods.⁶⁷

Other recent analyses (e.g., Campos and Root 1996) emphasize the importance of wage moderation for investment and of institutions for encouraging wage moderation. Realistic real wages are important for small open economies that sell into markets where price competition is intense. And where financial markets are less well developed and firms depend on retained earnings for liquidity, the stimulus to profitability and retained earnings from wage moderation can be critical for capital formation. Governments can encourage wage moderation by ensuring an even income distribution, coordinating bargaining across firms and sectors, and encouraging cooperation rather than confrontation between unions and employers.⁶⁸

Each of these perspectives highlights the role of the state in economic development. If rapid rates of growth are to be sustained, the state must have the capacity to underwrite human capital formation (since liquidity constraints prevent individuals from funding it themselves). It must build a stock of engineers and technicians with the skills attractive to foreign-investment enterprises.⁶⁹ It can support institutions providing research and extension services, because these functions must develop ahead of the market and firms appropriate only a small share of the returns on their own R&D expenditures in

⁶⁷ Rodrik has applied his model to East Asian experience. Three features of his account stand out. First, once coordination problems were solved, East Asian economies could exploit the existing backlog of technology because they possessed adequate levels of human capital. Second, trade was important for providing access to imported capital goods. Third, exports were a consequence rather than a cause of the acceleration in East Asian economic growth.

⁶⁸ In East Asia (Campos and Root 1996) -- as in post-World War II Western Europe (Eichengreen 1996) -- governments encouraged wage moderation by building institutions (deliberative councils in East Asia, workplace co-determination in Germany) and pursuing policies (carrots like land reform in East Asia and the welfare state in Europe, sticks like the favorable tax treatment of investment in both places) to ensure workers that wage restraint would result in additional investment (rather than simply higher distributed profits), increased productivity, and ultimately improved living standards.

⁶⁹ For example, it can create institutes for management education and encourage training abroad.

the early stages of growth. By cultivating a competitive environment, it can strengthen the incentive for indigenous firms to emulate the examples set by FIEs. It can provide concessional finance for small and medium-sized enterprises that would otherwise find entry barred by liquidity constraints. It can establish the testing and quality-control standards needed to penetrate foreign markets (in pharmaceuticals, for example) because producers will free ride on private attempts to create them.⁷⁰ Finally, it can seek to solve coordination problems while at the same time resisting capture by special interests who seek to divert resources to socially unproductive but privately remunerative uses. If it is to have the leverage and legitimacy needed to oversee a social contract to exchange wage restraint for high investment, it must be insulated from political pressures but at the same time be accountable to the polity.

C. The East Asian Mirror

East Asian states are well endowed with these capacities. Public support for the developmental state was buttressed by the specter of military aggression from China and North Korea. Politicians saw development as integral to the national defense and gave economic experts free rein so long as they delivered results. Public-sector employment was based on civil-service examination and merit-based promotion, rewarding good performance. The strength of East Asian states, based on a distinctive conception of "guided democracy" and the political role of the military (itself a legacy of the army's role in wars of liberation), provided insulation from special interest pressures, while, at the same time, the accountability of the state to its constituencies was ensured by the presence of consultative bodies, minimizing government excesses and seeing that the fruits of

⁷⁰ In addition, the existence of a strong state can support the pursuit of stable macroeconomic policies (an aspect of transition that we do not explicitly deal with here). In particular, to frame sound and stable monetary and fiscal policies, the executive and central bank must be insulated from politicians whose time horizon extends only as far as the next election. To encourage participation in the formal sector, the government must operate an efficient and equitable tax system, or it will be forced to raise tax rates to onerous levels on those firms which have not already fled to the underground economy.

growth were equitably shared.

Together these factors enhanced the efficiency with which the East Asian state gathered information, guided the allocation of private-sector subsidies and public enterprise production, and encouraged wage moderation and investment. Deliberative councils helped to solve principal-agent problems between the state and its constituencies. Civil-service systems helped to solve agency problems between political leaders and their appointees. And strong states possessed the independence and capacity to play a decisive role in economic development.

The East Asian approach now appears less admirable in the wake of the financial and economic crises of 1997-8. Where it was once said that strong states grounded in the distinctive Asian conception of democracy and reinforced by the existence of an external threat possessed the insulation to fend off special-interest pressures, "guided development" the Asian way is now seen as a recipe for cronyism and corruption. This too may pass; it may be that the reaction against the Asian model will prove to have been overdone. Alternatively, it could be that a model suited to the stage of extensive growth (when the problem for Asia's industrializers was to import known technologies and embody them in high levels of capital formation) is less suited to the subsequent stage of intensive growth (when the problem is to raise total factor productivity). It could be that a model appropriate in an environment of highly regulated financial markets is less well suited to a world of globalized finance. If so, encouraging Eastern European countries to emulate the Asian model would only lock them into a development strategy no longer suited to the times.

Then there is the fact that state capacity is more limited in Eastern Europe. In reaction against decades of authoritarianism, political systems are open and elections are hotly contested; many countries have reinstalled their pre-1950 electoral systems, which are conducive to party proliferation and parliamentary fractionalization. This gives special-interest groups, be they pensioners, farmers, or enterprise managers, the opportunity to shape government policy to their narrow ends. The old regime lacked a tax system, requiring the

transition economies to create one de novo; this opened the door to noncompliance and evasion. Public employees are poorly trained and poorly paid; only Hungary gives them civil-service protection.⁷¹ Judiciary systems are too weak to efficiently enforce property rights. Government concertation of wage negotiations often breaks down in the face of fragmented and warring union confederations and weak employers associations. Two generations of Stalinism have created an aversion to the idea of a strong state and at the same time encourage the presumption that the government should provide support from cradle to grave.

For all these reasons, Eastern European states lack the capacity to emulate the Asian growth model. Attempts to eliminate bottlenecks through public production and selective subsidies are susceptible to capture and prone to go awry. Initiatives to solve coordination problems are too likely to be delegated to bureaucrats formerly employed by planning institutions whose attitudes and outlooks were formed in pre-liberalization days. The preferential provision of credit to small firms is unlikely to target viable enterprises or include workable performance criteria.

D. The Iberian Mirror

The fact that Eastern Europe lacks the capacity to implement the East Asian model does not mean that its economies will stagnate. Other Western economies, those of Spain and Portugal for example, emerged from decades of authoritarianism and centralized planning similarly lacking strong states; yet their governments, by following more limited interventionist agendas, have succeeded in sustaining respectable rates of growth. Those agendas include stable macroeconomic policies, economic integration, and the creation of an environment hospitable to DFI and OPT. The result has been healthy rates of capital formation and economic growth. This would seem to be a model which Eastern Europe can follow. We therefore

⁷¹ Poland passed limited civil service protection in January 1997 but implementation has been slow and so far covers only a few hundred employees. In Romania, a civil service law was being considered by Parliament in the spring of 1998.

consider it in more detail.⁷²

I. Transformation and Growth

Spain and Portugal, like the transition economies of Eastern Europe, experienced significant dislocations as a result of liberalization and transformation. They emerged from dictatorship with state-owned enterprises, protected manufacturing sectors, underdeveloped service industries, and repressed labor markets.⁷³

Growth in the first post-liberalization decade was a relatively modest 1.5

⁷² Spain and Poland are of comparable size, as are Portugal, the Czech Republic and Hungary. Openness is comparable for Spain and Poland and only slightly lower in Portugal than in the smaller CEEC countries. In terms of external openness, the ratio of exports and imports to GDP for Portugal, on a national accounts basis, increased from 42 per cent in 1976 to 60 per cent in 1986 and 66 per cent in 1994. For Spain, the comparable figures are 32 per cent, 38 per cent and 47 per cent. Recent figures for the CEECs show the Czech Republic at 108 per cent, Hungary at 65 per cent and Poland at 47 per cent (calculated on a national accounts basis from OECD data base). Per capita GDP in the Visegrad 4 is a bit less than half that in Portugal and Spain but close to Iberian levels in the early 1980s, measured at purchasing power parity. The ratio of per capita incomes was somewhat higher in the case of the Czech Republic (at 70-80 per cent), whereas at the other end of the spectrum Bulgaria and Romania have roughly similar though rapidly diverging levels (30 to 40 per cent, respectively).

⁷³ In Spain, state ownership of heavy industry was a result of a system of central planning which was not dissimilar to that in Eastern Europe. Extensive nationalization of already existing large enterprises, often conglomerates, occurred in Portugal after the 1975 revolution. As of 1988, Portugal, with Greece and Italy, had one of the largest public enterprise sectors in the EC, 14.5 per cent of non-agricultural business sectors employment. While Spain's public enterprises were a much smaller share of employment--7.5 per cent -- public financial support to this sector averaged 2.4 per cent from 1977-85, reaching a peak of 3.7 per cent in 1984. As for protection, Spain's nominal and effective protection rates prior to EC membership are estimated at 15.1 and 24.7 per cent, excluding quotas and other NTBs. These subsequently fell to 4.9 and 4.1 per cent, respectively. OECD (1990/91b), Table 15. The converse of underdeveloped service sectors, namely excessively large agricultural and industrial sectors, implied, as it has in Eastern Europe -- a double-barreled problem of transition, with the potential for producing high unemployment. The share of total employment in agriculture was 36 and 21 per cent in Portugal and Spain, respectively in 1976. The industrial sector in Spain and Portugal accounted for 37 and 35 per cent of employment in 1975. Even by the time of EC membership agricultural employment had only fallen to 22 and 12 per cent, respectively, and as of 1994 were 11 and 7 per cent. Agricultural productivity still remains low, with agriculture accounting for 4.6 per cent of Spanish GDP in 1994. Spain (again like the CEECs) quickly established social welfare systems similar to those found elsewhere in the EC, with the attendant labor market problems, compounding the problem of the double transition.

per cent per annum in Spain and 2.6 per cent in Portugal. In 1986-1991 it accelerated to 4.1 and 4.7 per cent per annum.⁷⁴ With the EC growing at a bit more than two per cent per annum, this produced steady convergence. But with the Europe-wide recession of 1992-93 and persistent problems of fiscal and financial imbalance, Iberian growth rates slipped back to less than one per cent. More recently, the Iberian economies are again converging with the rest of Western Europe, if slowly. But associated with this deceleration has been mounting unemployment, especially in Spain, a problem blamed on high tax rates, excessive hiring and firing costs, and generous welfare and unemployment benefits.

[Insert Table 14: Spanish and Portuguese Macroeconomic Performance]

Growth has been accompanied by buoyant trade: between 1976 and 1985, exports rose at an annual rate of 23 in Spain and 37 per cent in Portugal.⁷⁵ Accession to the EC had little obvious impact on export growth (which had already accelerated prior to entry) but occasioned a shift in its direction toward Western Europe. The EC's share of Spanish imports and exports rose from one third to two thirds within a few years of membership. The growth of trade was not, however, accompanied by Asian-style investment rates; investment/GDP ratios averaged 21 in Spain and 30 per cent in Portugal (compared to 30-40 per cent in Japan and the NICs).⁷⁶

Tables 4 and 5 above provide some information on the factor content of this trade. Spanish and Portuguese exports are increasingly R&D intensive, although

⁷⁴ Current OECD projections for both countries see real GDP growth remaining under 3 per cent through 1998, only slightly higher than the EU average.

⁷⁵ Over the 1977-96 period as a whole, they expanded at double-digit rates.

⁷⁶ These investment/GDP ratios are for 1977-91. In any case, the higher figures for Portugal were sustained by large inflows of EU regional aid. For Portugal, combined investment by the central and local government, public enterprises, and private sector investment cofinanced with the EC accounted for an average of 72 per cent of total investment from 1986-89. Total gross inflows from EC Structural Funds alone averaged 2.1 per cent of Portuguese GDP from 1986-93, which were 80-90 per cent of gross financial inflows from the EC. See OECD Economic Survey of Portugal (1991-92, 1993).

this change occurred later in Portugal (mainly after 1992), coincident with a shift in the composition of inward DFI (see below). Portuguese exports have also shifted out of low skilled, labor-intensive sectors in favor of moderately skill- and labor-intensive activities.

ii. The Role of DFI

DFI was substantial in the first post-liberalization decade, averaging nearly one per cent of GDP in both Spain and Portugal.⁷⁷ It then rose to 2.1 per cent and 2.3 per cent of GDP, respectively, in 1986-92.⁷⁸ Foreign investment accounted for more than a tenth of all investment in Spain and for an even higher share in Portugal. (See Table 12 above.)

Foreign firms were initially attracted to Spain by the desire for access to the home market. Low labor costs were not a major factor (DFI was in fact concentrated in relatively high labor cost areas around Madrid and in Catalonia).⁷⁹ The Portuguese market being smaller, foreign firms were attracted more by low labor costs and export potential.⁸⁰

Following entry into the European Community in 1986, the EC's share of DFI inflows into Spain rose to nearly two thirds of the country's total (from one third in the mid-1980s), while the share of DFI in Portugal originating in the EC

⁷⁷ These statistics are for the period 1976-86.

⁷⁸ Corado (1998) reports slightly different figures of DFI ratios of 0.7% of GDP and 2.5% of GFCF between 1976-85, increasing to 3.1% of GDP (12% of GFCF) in 1986-92. DFI reached peaks of 2.5 and 4.0 per cent, respectively, in 1990.

⁷⁹ Various regression analyses of the determinants of DFI inflows to Spain emphasize the importance of domestic market access, availability of skilled workers and infrastructure, and explicitly reject unit labour costs, and this is equally true of the sectoral distribution.

⁸⁰ The weight that should be attached to low unit labour cost in DFI is disputed. Corado (1998) argues that DFI was primarily attracted into industries characterized by undifferentiated products and mature technologies (metal and non-metallic mineral products, or technology intensive industries (machinery, equipment and transport equipment), and not labour-intensive industries. At the same time, they find a high correlation between labour costs and the share of exports in total sales. By contrast, Simoes argues that low labour costs were the primary attraction, even if labour-intensive industries (food and beverages, textiles, footwear) were not the primary targets.

(including Spain) rose from one half to three quarters.⁸¹ Accessing the Spanish market remained an important motive for EC investment, but the country also emerged as a platform for exports to Portugal, North Africa, Latin America and, of course, the EC itself. Green-field investment gave way to the acquisition of Spanish enterprises by EC firms, and the composition of DFI shifted from manufacturing to services (insurance, real estate and retailing). In Portugal, the service sector (particularly financial services) was an even more important destination for foreign investment.⁸²

This pattern of investment flows was shaped by tariffs, subsidies, regulation, and privatization. Spain and Portugal both restricted foreign ownership until the mid-1980s, when liberalization accompanied EC accession.⁸³ Privatization and deregulation of the banking, telecommunications and transportation sectors also helped attract a critical mass of foreign investment, especially into services. In Portugal, tax and financial benefits amounting to as much as 30 per cent of investment succeeded in attracting major investments in auto components.⁸⁴

⁸¹ From 48 to 71 per cent to be precise. These Portuguese figures are for 1986-93 and 1980-84. Figures for Portugal include DFI from Spain. The Spanish data is based on country of final origin, whereas the Portuguese data is not.

⁸² Spanish banks were often the foreign investor.

⁸³ These changes facilitated the increase in DFI in services and other new sectors discussed above. The initial program of 1988 only undertook privatization of minority shares, and limited foreign participation to 5 per cent. After full privatization which was launched in 1989 commenced foreign participation in privatization was gradually raised to 30-40 per cent (as of 1993), with actual participation based on case-by-case considerations that generally limited foreign participation to a 25% share. Furthermore, safeguard clauses were put in place initially, though never used, which discriminated against non-EC investors. See OECD (199*) and Corado (1995). Priority was given to the financial sector, explaining the large share of this sector in total inflows.

⁸⁴ Foreign firms operating in Portugal now include Ford, GM and Volkswagen. Waves of foreign investment in these sectors occurred both in the early 1980s and again in recent years. Prior to 1986, autos and auto components, chemicals, and electronics accounted for half of all projects and nearly 80 per cent of investment receiving subsidies. These sectors also received some preferential tariff treatment. Other incentives targeted

As in Eastern Europe, Iberian FIEs have a greater propensity to import than domestic-owned firms.⁸⁵ In Spain, FIEs employ more skilled labor than domestic-owned firms, undertake more R&D, and import more technology (as measured by expenditures on licensing fees).⁸⁶ Compared to domestic-owned firms, FIEs in Portugal are larger and more capital intensive and pay higher wages.

DFI in Portugal has been associated with the production of low-tech components using low-wage labor. There is less evidence of it leading to indigenous product development and R&D.⁸⁷ The recent movement of FIEs into services and integrated manufacturing (like auto components) has been offset by only a limited increase in domestic component sourcing, training, and cooperation with domestic research institutions. Most observers credit the export incentive programs of the 1980s, at least in the case of autos, with the success since they generated few backward linkages, although the more limited success of the early 1990s may have been more successful in augmenting Portuguese

information technology, biotechnology, ceramics and plastics, surgical equipment, food processing, and tourism.

⁸⁵ And again as in Eastern Europe, they also have a high propensity to import, arguably contributing to the problem of trade deficits, particularly true for majority-owned FIEs. One study of Spain (Bajo and Torres, 1992) showed that as of 1989 exports accounted for 50 per cent of FIEs' production, and as of 1990 five of the six largest export categories were FIEs, (all were auto companies). The same study cited by Duran (1996) that FIEs accounted for 25 per cent of the Spanish trade deficit in 1990, compared with 12 per cent of Spanish GDP. Martin and Velazquez (1996) analysis confirmed this result for the 1983-89 period, and also showed that FIEs import propensities were several times higher.

⁸⁶ By contrast, there was little difference between domestic and FIEs in terms of labor productivity. Bajo and Torres (1996) find that FIE-dominated sectors were characterized by higher productivity and higher technology intensity.

⁸⁷ What Simoes (1992) characterizes as product specialization. Strategic majors are responsible for developing, manufacturing, and marketing specific products for regional or world markets, and have substantial technological content. Strategic majors are the same but more focused on developing entirely new lines of business and with even more local content and design content, and in fact may have as their role maximizing local technological developments.

capacity, technological knowledge, and utilization of skilled labor.⁸⁸ Note, however, that these financial incentives occurred in the context of substantial inflows of regional aid from the European Community for infrastructure investment. These clearly played an important role in making Portugal in particular more attractive to integrated manufacturers like the producers of automotive components.

There is some evidence that FIEs in Spain are using more modern technologies and undertaking greater product innovation.⁸⁹ The foreign (usually German) managers who accompanied foreign purchases of newly-privatized firms -- who took part in the so-called "flight to the sun" -- helped to diffuse managerial skills (especially around Madrid and in Catalonia, where DFI and foreign management were highly concentrated). FIEs in Spain have never been low-wage oriented, and the size of the domestic market and the roles of Barcelona and Madrid as regional centers may have helped by allowing DFI to achieve a critical

⁸⁸ A case study of Renault in Portugal by Corado et al. (1995) indicates that it was a failure. Portugal had no auto industry prior to 1980. Renault was attracted by high trade barriers, a guaranteed increase in market share, low wage costs, and subsidies which cumulated to 0.5% of GDP. Renault did not meet targets in terms of job creation, production or domestic content, and after liberalization of the import regime and the end of subsidies at the end of the 1980s lost market share. It is now likely to close all remaining production in Portugal.

⁸⁹ Duran Torres (1992) presents evidence from a 1988 survey of Spanish firms that the subsidiaries of MNCs were 4 times as likely as publicly-owned Spanish companies to be innovating new products and processes, and twice as likely as private domestic Spanish companies. He also presents evidence from the balance of payments on imports and exports (payments and receipts) for technology licensing, but this appears to be somewhat contradictory regarding the relative role of domestic and foreign owned firms. At one point he states, as of 1989: "...80 per cent of the number of transactions and almost 70 percent of the payments are in the hands of domestic Spanish firms, with no foreign capital. The majority-owned subsidiaries account for 15 percent of the transactions and 27 per cent of the payments" (p.239). However later he states, in the context of a discussion of new product innovation, that "MNC subsidiaries are on average the most active in the introduction of new products or processes. The imports and exports of technology are concentrated in relatively few firms. Thus the top hundred import companies pay about 70 percent of the total and about 20 of them are responsible for 50 per cent of total payments. Out of these, three-quarters are subsidiaries of multinational companies." It isn't really clear what this tells us about technology transfer in terms of economy-wide diffusion, as opposed to embodiment in particular products.

mass where domestic spillovers became significant.

iii. Implications

Spain and Portugal emerged from dictatorship with structural and macroeconomic problems similar to those facing the CEECs. After a few rocky years they achieved solid growth based on domestic restructuring (reallocating resources from industry to services and from agriculture and industry to expanding manufacturing activities), integration with the EU, immigrant remittances, and inflows of DFI and regional aid. Investment rates, while above OECD averages, have been modest by East Asian standards, as has been government intervention. Instead, Iberian growth has been propelled by exports and foreign investment. Exports, primarily to the EU, have allowed domestic producers to exploit economies of scale and scope. DFI has provided modest technological spillovers (more in Spain than in Portugal) as FIEs have begun producing components as part of global production networks.

Spanish FIEs' relatively high levels of technology licensing, R&D, and backward linkages to domestic suppliers are encouraging for Central Europe. Hungary and the Czech Republic even more than Spain 20 years ago possess the skilled labor, infrastructure and locational advantages which allow countries to serve as regional platforms for multinationals.⁹⁰ But a key lesson from Spain is that the spillover effects of these activities are pronounced only when a critical mass of foreign investment develops. Tax and other financial incentives can help bring this about, but a key role for government is opening up infrastructure and service sectors to privatization and foreign investment.

Portugal, with its smaller population, greater openness, lower incomes, and larger share of labor-intensive sectors (including clothing and textiles), better

⁹⁰ Poland has in common with Spain a large domestic market. And in fact, transportation infrastructure is often superior in density, if not quality, to that in Iberia. Gual and Martin (1995) show that Hungary had a denser system of railways and public roads than Spain, as well as the Danube. Hungary also has a higher share of secondary and university graduates than Spain. See their Table 6.13.

approximates conditions in Eastern (as opposed to Central) Europe. The Portuguese case reminds us that there is no guarantee that a low wage country providing an export platform for foreign firms will benefit from significant backward linkages into component production, let alone give rise to domestic product design and R&D. Simoes (1992) argues that Portugal's weakness in indigenous management skills, science, technical infrastructure, and marketing inhibited greater use of domestic suppliers and domestic innovation and suggests as a remedy the explicit promotion of technical cooperation with government-funded research facilities and universities.

Moreover, there are reasons to question whether Eastern Europe can match even Portugal's achievements. Capital formation in Portugal was stimulated not just by DFI but also by remittances from Portuguese citizens working elsewhere in the EU; it is implausible that a Western Europe already saddled with high unemployment will permit the equally free entry of Bulgarian or Romanian labor until such time, well into the 21st century, when these countries are admitted to the EU. In addition, aid transfers from the EU were important both for their macroeconomic effects and for priming the pump for DFI. While new Eastern European members of the EU will continue to receive Structural-Fund transfers for some years, it seems unlikely that the cash-strapped incumbent members will be willing to finance transfers on the scale enjoyed by Portugal in the 1980s. Finally, an important component of the Portuguese story that has little to do with trade and DFI is the large decline in real wages that occurred in 1977-85, which was not completely offset during the 1986-91 boom. This reflected Portugal's unique political situation; it seems unlikely that it could be replicated in Eastern Europe today.

Another lesson of Iberian experience is that while a DFI-intensive development strategy holds out the promise of technology spillovers and foreign finance, it is also a source of macroeconomic vulnerability. The high levels of

DFI of the initial years of EC membership have not been sustained.⁹¹ Meanwhile, export growth has fallen off from the levels of the first post-liberalization decade.⁹² The large current account deficits financed by foreign investment (especially in the case of Spain) created adjustment problems when the capital inflow fell off, since large shifts in the trade balance were required.

A final lesson from Iberia is the importance of limiting interference in labor markets, limiting social safety nets which hinder regional and intersectoral adjustment, and restraining real wage growth. The extensive regulation of the Spanish labor market is a legacy of Franco, while the burdensome social safety net installed in the 1970s can be understood as a well-intentioned but misguided attempt to cushion the need for sectoral adjustment. One can imagine that Eastern European governments, inheritors of a similar legacy, might succumb to excessive labor regulation and excessive safety nets, given the social dislocations associated with restructuring and EU pressure to harmonize domestic arrangements with those of the advanced industrial countries.

IV. Conclusion

The countries of Central and Eastern Europe have displayed widely disparate trade performance since the beginning of the transition. Hungary and the Czech Republic have had some success moving into the production and export of more technologically-sophisticated, higher value-added goods, while Bulgaria and Slovakia have continued to specialize, sometimes increasingly, in low-skill, low-

⁹¹ Apart from bursts associated with privatization. In addition, foreign investment has been constrained by the sluggishness of the European economy as a whole, even though export growth has remained high. The burst of DFI provoked by trade policy, privatization, and financial incentives was followed by a slump. This time profile that now seems to be occurring in Eastern Europe in a more compressed fashion. For example, in the Czech Republic, as in Iberia, DFI inflows appear to have slowed and to have grown increasingly dependent on the pace of privatization.

⁹² While Spanish exports have risen relative to 1986-91 levels; they were unusually stagnant during this period. Portuguese export growth has fallen by a third relative to 1986-91 levels, by two thirds relative to 1977-85.

value-added goods. Poland and Romania are intermediate cases. In Poland, different parts of the economy show each of these tendencies. In Romania, performance is very different in different periods -- significantly better after 1994 than before.

In accounting for these patterns, our analysis points to the importance of direct foreign investment and outward processing trade. DFI has been an engine of technological and organization learning, but it has been significant only in Hungary, the Czech Republic and, most recently, Poland. Outward-processing trade is widely spread and helps to explain the strong export performance of the region. But the technological and organizational implications of OPT are less obviously favorable: in particular, it does not encourage the development of differentiated, price-insensitive export products that offer countries insulation from foreign competition.

Thus, it appears that "the integration of Central and Eastern Europe into the international division of labor" is taking different forms in different countries. DFI is integrating the more advanced economies into multinational production networks, not merely as manufacturers of components but as integrated manufacturers with the capacity to undertake product development and R&D. DFI-based production is largely found in sectors like electronics and motor vehicles characterized by strong backward linkages. In the region's less advanced economies, where DFI is largely absent, integration into the world economy takes the form of outward processing and assembly which affords less opportunity for investment in human capital, employment of skilled labor, and local R&D. It is found in low-wage, labor-intensive, technologically-unsophisticated sectors like textiles, apparel and footwear thought to afford few domestic spillovers.⁹³

How can governments manage this process? A realistic strategy must acknowledge three facts. First, these economies are latecomers. While countries

⁹³ This bifurcation resembles the pattern evident until recently in the contrasting experiences of Spain and Portugal.

like Czechoslovakia were once among the high-income elite and even under central planning possessed some capacity to produce technologically-sophisticated goods (mainly in connection with military needs), there is a significant technology gap between high-value-added industries in Eastern Europe and their counterparts in Western Europe and Asia. As latecomers, Eastern Europe's essential task is not to invent new products and processes but to tap the existing stock of technological knowledge and adapt it to local conditions.

In addition, these countries must integrate into an existing economic order. In an earlier era when many countries restricted inward foreign investment and few provided a hospitable environment for multinationals, countries like Japan and Korea could license foreign technologies; but today when economic liberalization is sweeping the world and many countries are competing for foreign investment, global corporations have better alternatives than sharing their proprietary knowledge. A licensing strategy that was feasible two decades ago is not feasible today. This leaves no alternative to DFI and OPT.

Finally, Eastern Europe possesses a distinctive political inheritance. Two generations of totalitarianism have left its citizens leery of strong governments and organizations. Bureaucrats, managers, and trade union leaders are not held in high esteem. Attempts to provide "economic governance" would not enjoy public support or be resistant to capture.

The countries of Central and Eastern Europe thus have no alternative to what we term the "Iberian model." This means capitalizing on proximity to Western European markets, access to which can be locked in by accession to the European Union. It means acquiring technological and organization know-how through direct foreign investment and outward-processing trade. For the less advanced countries of the region, where location, infrastructure and politics imply that the prospects are less for attracting DFI, it means exploiting their comparative advantage in low-wage, labor-intensive sectors like textiles and apparel.

Governments can contribute to this process. Those of the European Union can agree to a timetable for the accession of the most advanced Eastern European

countries in a manner that does not saddle the latter with expensive social programs and restrictions on their sales of "sensitive" products. Those of Eastern Europe can make the environment for DFI and OPT more attractive and encourage intellectual and organizational spillovers by privatizing infrastructure and services and opening these sectors to foreign investment. They can pursue stable policies, improve infrastructure, and invest in human capital. They can place domestic producers in a competitive environment that provides incentives for learning. Miracle growth like East Asia's will result. But if the goal is convergence with the West at Spanish and Portuguese rates, there are grounds for hope.

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Table 1. Similarity of CEEC Exports to the EU over Time

Country	Total			Without Agriculture		
	92/88	96/92	96/88	92/88	96/92	96/88
CSFR	76.3%	82.2%	66.3%	76.4%	82.6%	67.3%
Czech Republic		79.1%	66.6%		79.5%	67.6%
Slovakia		76.7%	59.1%		80.1%	65.4%
Hungary	83.0%	72.7%	64.5%	83.2%	72.0%	64.3%
Poland	80.9%	80.3%	65.6%	80.6%	81.5%	67.4%
Bulgaria	68.5%	80.3%	61.6%	67.3%	81.3%	56.9%
Romania	64.4%	81.7%	56.4%	63.8%	82.5%	73.6%
CEEC6 Region	82.5%	84.3%	71.5%	82.3%	85.3%	65.3%
CEEC6 Average	75.9%	80.2%	64.3%	75.6%	80.8%	
Portugal	86.6%	84.4%	78.1%	86.6%	84.2%	78.1%
Spain	89.3%	86.6%	86.6%	89.1%	94.4%	87.0%

Country	Without Sensitive Sectors			Without Petroleum		
	92/88	96/92	96/88	92/88	96/92	96/88
CSFR	74.3%	82.0%	63.5%			
Czech Republic		81.0%	65.4%			
Slovakia		76.6%	57.1%			
Hungary	50.8%	50.1%	42.4%			
Poland	58.1%	46.2%	56.1%			
Bulgaria	70.1%	76.5%	62.1%			
Romania	53.6%	72.9%	54.8%	82.0%	81.8%	70.8%
CEEC6 Region	78.4%	81.8%	67.2%	85.9%	84.3%	74.9%
CEEC6 Average	64.2%	68.2%	57.7			
Portugal	82.3%	67.4%	67.3%			
Spain	89.3%	88.0%	87.6%			

Table 2. Similarity of Export Structure Across Countries

	1988						
	CSFR	Czech Rep.	Hungary	Poland	Bulgaria	Romania	Slovakia
CSFR							
Czech Rep.							
Hungary	50.4%						
Poland	39.0%		53.7				
Bulgaria	56.5%		64.4%	36.2%			
Romania	40.2%		44.8%		62.0%		
Slovakia							
Spain	29.0%		14.4%	26.2%	10.5%	9.2%	
Portugal	42.2%		57.0%	40.3%	37.4%	36.2%	

	1996						
	CSFR	Czech Rep.	Hungary	Poland	Bulgaria	Romania	Slovakia
CSFR							
Czech Rep.	98.5%						
Hungary	67.1%	xx.x%					
Poland	77.5%	xx.x%	62.8%				
Bulgaria	42.9%	33.5%	42.6%	64.7%			
Romania	46.3%	38.0%	49.4%	76.2%	85.8%		
Slovakia	91.4%	83.1%	63.7%	79.4%	59.9%	60.4%	
Spain	63.9%	58.7%	39.5%	45.1%	6.0%	6.2%	68.5%
Portugal	73.7%	66.8%	63.0%	75.6%	49.0%	64.6%	81.2%

	Change from 1988 to 1996						
	CSFR	Czech Rep.	Hungary	Poland	Bulgaria	Romania	Slovakia
CSFR							
Czech Rep.							
Hungary	16.8%						
Poland	38.5%		9.1%				
Bulgaria	-13.7%		-21.8%	28.5%			
Romania	6.1%		4.6%	47.4%	23.8%		
Slovakia							
Spain	34.9%		25.0%	18.9%	-4.5%	-3.0%	
Portugal	31.6%		6.0%	35.3%	11.7%	28.4%	

**Table 3. Share of Top 5 and Top 10 Exports in Total Exports,
CEEC Countries to EU**

	Top Five			Top Ten		
	1988	1992	1996	1988	1992	1996
CSFR	37%	37%	39%	56%	56%	60%
Czech R			36%			60%
Slovakia			47%			65%
Hungary	39%	39%	46%	56%	57%	62%
Poland	39%	38%	43%	57%	57%	64%
Bulgaria	35%	39%	49%	52%	57%	66%
Romania	65%	62%	62%	77%	75%	77%
Total	36%	34%	39%	53%	52%	58%
Average	43%	43%	46%	60%	60%	65%
Portugal	51%	54%	53%	72%	71%	69%
Spain	45%	51%	49%	58%	63%	61%

Table 4. Share of Labour Intensive Exports in Total Exports to EU

SITC 60-65						
	1988	1992	1996	92/88	96/92	96/88
CSFR	11.6%	11.0%	9.8%	-0.7%	-1.2%	-11.0%
Czech R			9.3%			
Slovakia			11.1%			
Hungary	6.4%	5.7%	4.7%	-0.7%	-1.0%	-5.7%
Poland	4.6%	7.3%	9.5%	2.7%	2.2%	-7.3%
Romania	5.1%	4.4%	4.3%	-0.6%	-0.1%	-4.4%
Bulgaria	4.8%	7.6%	6.1%	2.8%	-1.5%	-7.6%
TOTAL	6.6%	7.8%	7.9%	1.3%	0.1%	-7.8%
Portugal	17.2%	14.9%	13.4%	-2.3%	-1.5	-14.9
Spain	7.7%	7.1%	6.7%	-0.7%	-0.3	-7.1
SITC 80-85						
	1988	1992	1996	92/88	96/92	96/88
CSFR	10.4%	15.5%	13.6%	5.1%	-1.9%	-15.5%
Czech R			12.0%			
Slovakia			18.3%			
Hungary	19.5%	23.1%	16.0%	3.6%	-7.1%	-23.1%
Poland	15.0%	21.6%	24.8%	6.6%	3.2%	-21.6%
Romania	32.8%	55.5%	53.5%	22.7%	-2.0%	-55.5%
Bulgaria	11.2%	25.5%	25.1%	14.3%	-0.4%	-25.5%
TOTAL	18.6%	22.8%	22.2%	4.2%	-0.6%	-22.8%
Portugal	29.3%	33.0%	25.3%	3.7%	-7.7%	-33.0%
Spain	5.5%	4.5%	4.5%	-1.0%	0.0%	-4.5%
Combined						
	1988	1992	1996	92/88	96/92	96/88
CSFR	22.0%	26.4%	23.3%	4.4%	-3.1%	-26.4%
Czech R			21.3%			
Slovakia			29.4%			
Hungary	25.9%	28.8%	20.7%	2.9%	-8.1%	-28.8%
Poland	19.6%	28.9%	34.3%	9.3%	5.4%	-28.9%
Romania	37.9%	59.9%	57.9%	22.1%	-2.0%	-59.9%
Bulgaria	16.0%	33.1%	31.2%	17.0%	-1.9%	-33.1%
TOTAL	25.2%	30.7%	30.1%	5.5%	-0.5%	-30.7%
Portugal	46.6%	48.0%	38.8%	1.4%	-9.2%	-48.0%
Spain	13.3%	11.5%	11.2%	-1.7%	-0.3%	-11.5%

Note: SITC 60-65 includes leather goods, rubber goods, cork and wood products, paper and paper products and textiles.

SITC 80-85 includes prefab buildings, furniture, luggage, apparel and clothing, and footwear.

Table 5. Share of CEEC Exports to the EU by Factor Intensity
(Top and Bottom 30 out of 89 3-digit NACE Manufacturing Categories)

Export Share of	Portugal	Spain	Poland	Czech R.	Slovakia	CSFR	Hungary	Romania	Bulgaria	CEEC 6
<u>Capital Top 30</u>										
1988	35.4%	59.2%	41.0%			43.3%	26.9%	30.9%	45.8%	36.5%
1992	29.3%	61.8%	36.0%			40.5%	23.2%	17.7%	35.4%	33.1%
1995 EU15	33.0%	62.2%	36.7%	34.3%	46.9%	37.7%	38.6%	26.4%	50.3%	37.0%
1996 EU15	36.7%	62.0%	34.1%	33.1%	46.1%	36.6%	38.9%	20.1%	39.6%	34.8%
1992-88	-6.1%	2.5%	-5.0%			-2.8%	-3.7%	-13.2%	-10.4%	-3.5%
1996-92	7.4%	0.3%	-1.9%			-3.9%	15.7%	2.4%	4.2%	1.8%
<u>Capital Bottom 30</u>										
1988	50.6%	18.9%	34.1%			27.7%	35.5%	53.9%	37.8%	37.1%
1992	54.0%	16.9%	40.0%			35.4%	42.6%	68.5%	47.5%	
1995 EU15	48.6%	18.1%	39.5%	34.6%	31.3%	33.7%	33.2%	60.4%	35.6%	38.2%
1996 EU15	45.7%	17.5%	41.3%	34.4%	30.5%	33.3%	32.2%	65.3%	44.9%	39.0%
1992-88	3.4%	-2.0%	5.9%			7.7%	7.1%	14.6%	9.6%	4.8%
1996-92	-8.3%	0.6%	1.3%			-2.1%	-10.3%	-3.3%	-2.5%	-2.9%
<u>Labour Top 30</u>										
1988	50.7%	18.8%	29.9%			23.1%	34.7%	36.9%	30.4%	30.9%
1992	53.5%	16.9%	32.8%			27.5%	37.8%	52.9%	42.4%	34.4%
1995 EU15	48.3%	18.2%	32.5%	30.0%	25.9%	28.9%	30.6%	52.8%	33.9%	33.0%
1996 EU15	45.0%	17.5%	33.3%	29.8%	25.1%	28.5%	30.6%	58.0%	42.4%	33.8%
1992-88	2.8%	-1.9%	2.9%			4.4%	3.1%	16.1%	12.1%	3.5%
1996-92	-8.6%	0.7%	0.5%			1.0%	-7.2%	5.1%	-0.1%	-0.6%
<u>Labour Bottom 30</u>										
1988	30.8%	54.3%	45.3%			39.0%	41.7%	31.8%	48.5%	40.5%
1992	25.6%	55.3%	37.8%			38.0%	33.5%	18.7%	37.1%	35.3%
1995 EU15	30.4%	56.2%	35.0%	28.8%	46.5%	33.5%	39.5%	27.9%	51.7%	35.5%
1996 EU15	34.8%	55.0%	31.5%	26.1%	44.7%	31.1%	39.0%	21.4%	41.0%	32.4%
1992-88	-5.2%	0.9%	-7.4%			-1.0%	-8.3%	-13.1%	-11.5%	-5.2%
1996-92	9.2%	-0.3%	-5.4%			-6.9%	5.5%	2.7%	4.0%	-2.9%
<u>Energy Top 30</u>										
1988	27.1%	27.0%	32.2%			44.4%	24.6%	30.4%	35.0%	33.0%
1992	23.8%	23.4%	33.2%			41.3%	22.1%	21.1%	31.9%	32.2%
1995 EU15	27.9%	24.9%	33.3%	35.9%	44.3%	38.1%	23.1%	31.9%	51.3%	33.4%
1996 EU15	24.7%	23.0%	28.8%	31.8%	41.1%	34.3%	20.7%	25.5%	39.5%	28.9%
1992-88	-3.3%	-3.5%	1.0%			-3.1%	-2.5%	-9.4%	-3.1%	-0.8%
1996-92	1.0%	-0.4%	-4.4%			-7.0%	-1.4%	4.4%	7.6%	-3.3%
<u>Energy Bottom 30</u>										
1988	42.4%	48.3%	28.9%			28.6%	31.7%	29.5%	26.6%	29.5%
1992	43.7%	52.3%	32.9%			35.2%	38.0%	40.6%	39.3%	35.6%
1995 EU15	40.2%	49.1%	34.3%	32.8%	33.2%	32.9%	43.7%	42.0%	28.1%	36.3%
1996 EU15	45.3%	50.2%	37.2%	33.9%	35.3%	34.3%	45.0%	46.8%	35.3%	38.9%
1992-88	1.3%	4.1%	4.0%			6.6%	6.4%	11.1%	12.8%	6.1%
1996-92	1.6%	-2.2%	4.3%			-0.9%	7.0%	6.3%	-4.0%	3.2%

Table 5 (concluded). Share of CEEC Exports to the EU by Factor Intensity
(Top and Bottom 30 out of 89 3-digit NACE Manufacturing Categories)

Export Share of	Portugal	Spain	Poland	Czech R.	Slovakia	CSFR	Hungary	Romania	Bulgaria	CEEC 6
<u>RD Top 30</u>										
1988	24.4%	52.5%	17.1%			21.0%	17.3%	10.8%	22.1%	17.0%
1992	26.5%	59.2%	14.8%			26.3%	25.6%	9.1%	15.8%	20.1%
1995 EU15	29.9%	55.2%	21.2%	34.5%	29.4%	33.1%	44.5%	10.3%	12.1%	28.5%
1996 EU15	35.8%	57.4%	25.3%	38.5%	34.6%	37.5%	49.5%	11.4%	12.9%	33.0%
1992-88	2.1%	6.7%	-2.3%			5.3%	8.3%	-1.7%	-6.3%	3.2%
1996-92	9.3%	-1.8%	10.4%			11.2%	23.9%	2.4%	-2.8%	12.9%
<u>RD Bottom 30</u>										
1988	63.2%	21.8%	48.4%			40.8%	56.2%	59.8%	49.7%	50.8%
1992	59.7%	17.8%	49.5%			32.1%	50.7%	68.3%	51.6%	46.2%
1995 EU15	55.7%	21.8%	43.9%	26.8%	29.9%	27.6%	31.9%	58.7%	38.2%	37.3%
1996 EU15	50.4%	20.4%	43.0%	24.0%	28.7%	25.2%	29.9%	62.2%	46.7%	36.1%
1992-88	-3.5%	-3.9%	1.1%			-8.7%	-5.5%	8.5%	1.8%	-4.5%
1996-92	-9.3%	2.6%	-6.4%			-6.9%	-20.9%	-6.0%	-4.9%	-10.1%
<u>Skill Top 30</u>										
1988	26.3%	24.2%	15.1%			24.2%	16.7%	9.0%	25.5%	16.7%
1992	23.8%	24.4%	12.5%			22.4%	22.8%	8.1%	17.6%	17.5%
1995 EU15	28.4%	23.1%	16.8%	28.9%	26.1%	28.2%	28.9%	8.9%	13.4%	22.1%
1996 EU15	25.4%	23.0%	19.1%	29.5%	24.5%	28.1%	34.2%	9.5%	14.5%	24.4%
1992-88	-2.5%	0.3%	-2.6%			-1.8%	6.1%	-0.9%	-7.9%	0.9%
1996-92	1.7%	-1.4%	6.5%			5.7%	11.4z-%	1.5%	-3.1%	6.9%
<u>Skill Bottom 30</u>										
1988	56.1%	18.3%	36.4%			36.7%	36.7%	61.5%	25.3%	41.2%
1992	58.0%	14.5%	47.2%			40.6%	40.4%	73.4%	44.2%	45.8%
1995 EU15	48.7%	13.4%	47.1%	37.2%	35.6%	36.7%	28.8%	63.1%	35.1%	41.0%
1996 EU15	45.1%	13.4%	47.5%	35.1%	34.0%	34.8%	26.6%	66.9%	44.3%	40.3%
1992-88	2.0%	-3.8%	10.8%			3.9%	3.7%	11.9%	19.0%	4.7%
1996-92	-12.9%	-1.0%	0.4%			-5.8%	-13.8%	-6.5%	0.1%	-5.5%

Table 6. Ratios of CEEC to Non-CEEC EU Import Unit Values

Total Adjusted Ratio of Unit Values to XEC-CEEC6												
Weights	1988	1990	1991	1992	1993	1994	1995	1996	90-91 to 88	93-92 to 90-91	95-96 to 90-91	96 TO 88
Poland												
1988	84.6	79.5	79.7	81.9	84.6	84.0	86.6	84.4	-5.9%	1.6%	7.4%	-0.2%
1992	74.9	74.3	74.3	78.2	78.8	78.7	82.6	81.7	-0.9%	2.7%	10.6%	9.0%
1996	65.7	63.9	64.7	68.8	69.1	71.0	76.0	76.0	-2.2%	4.4%	18.2%	15.6%
Hungary												
1988	106.5	106.6	105.7	110.8	111.1	121.6	117.5	113.2	-0.3%	1.6%	8.7%	6.3%
1992	95.7	98.0	96.0	102.5	101.3	112.5	109.8	108.0	1.4%	1.3%	12.3%	12.9%
1996	88.4	86.5	82.1	92.9	91.1	100.2	102.2	101.3	-4.7%	1.2%	20.7%	14.5%
Romania												
1988	87.9	92.5	90.7	97.4	87.0	90.1	96.5	97.2	4.2%	1.7%	5.7%	10.5%
1992	83.5	91.8	84.5	81.4	80.5	82.5	88.2	94.1	5.5%	-9.6%	3.4%	12.6%
1996	82.9	95.5	83.3	80.3	79.1	82.1	90.9	95.9	7.9%	-14.4%	4.4%	15.6%
Bulgaria												
1988	114.0	107.5	105.7	117.9	102.7	106.5	113.5	104.0	-6.5%	4.0%	2.1%	-8.8%
1992	93.7	95.8	94.9	96.9	95.5	102.1	104.6	100.4	1.8%	0.1%	7.5%	7.2%
1996	82.1	78.3	79.2	82.1	80.9	89.2	90.2	89.5	-4.1%	3.0%	14.1%	9.1%
CSFR												
1988	71.6	70.2	66.5	69.0	72.0	75.3	82.7	82.6	-4.5%	-3.5%	20.9%	15.4%
1992	64.7	63.5	61.4	65.5	72.5	72.7	76.6	77.9	-3.5%	-0.1%	23.7%	20.3%
1996	55.8	54.6	55.7	57.5	59.6	63.9	69.8	72.1	-1.2%	3.6%	28.6%	29.1%
CEEC6												
1988	81.2	81.0	79.9	82.0	82.5	84.2	86.9	86.2	-0.9%	-0.1%	7.6%	6.2%
1992	71.0	72.6	71.5	74.4	75.6	77.6	81.1	81.6	1.4%	0.4%	12.9%	14.8%
1996	62.2	63.9	63.6	66.7	67.7	71.0	75.4	76.7	2.4%	1.9%	19.2%	23.2%
Agriculture Adjusted Ratio of Unit Values to XEC-CEEC6												
	1988	1990	1991	1992	1993	1994	1995	1996	90-91 to 88	93-92 to 90-91	95-96 to 90-91	96 TO 88
Poland												
1988	98.0	95.0	92.4	95.7	101.2	97.5	95.8	90.7	-4.4%	-1.0%	7.4%	-7.4%
1992	84.9	89.9	88.7	91.7	91.6	86.7	85.3	80.7	5.2%	0.3%	10.6%	-5.0%
1996	85.9	87.9	86.4	90.4	88.2	87.6	89.2	83.4	1.5%	0.6%	18.2%	-2.9%
Hungary												
1988	140.5	134.8	132.2	137.7	147.3	157.2	140.2	125.8	-5.0%	0.1%	8.7%	-10.5%
1992	129.7	125.2	122.4	126.1	135.7	143.8	133.3	121.5	-4.6%	-0.8%	12.3%	-6.3%
1996	131.7	131.2	125.1	129.3	132.8	140.2	134.6	123.2	-2.7%	-3.1%	20.7%	-6.5%
Romania												
1988	119.3	123.8	123.6	146.7	116.7	119.1	131.7	126.9	3.7%	9.2%	5.7%	6.4%
1992	181.4	154.9	153.8	145.8	131.7	145.6	147.9	168.9	-14.9%	-3.3%	3.4%	-6.9%
1996	207.9	190.5	159.5	156.8	112.7	136.3	171.8	173.2	-15.8%	-17.0%	4.4%	-16.7%
Bulgaria												
1988	162.5	164.3	168.4	188.9	159.6	169.3	176.2	157.6	2.4%	8.7%	2.1%	-3.0%
1992	155.1	167.9	170.0	167.5	165.7	175.3	182.9	164.2	8.9%	0.5%	7.5%	5.9%
1996	127.8	125.5	133.0	132.8	129.3	136.9	148.2	135.0	1.1%	5.9%	14.1%	5.6%
CSFR												
1988	102.3	91.4	81.5	84.6	89.0	96.1	102.3	98.2	-15.5%	-9.1%	20.9%	-4.0%
1992	104.4	88.2	77.9	77.8	79.3	81.0	83.8	81.2	-20.4%	-11.8%	23.7%	-22.2%
1996	102.3	85.6	76.7	79.8	81.6	86.3	89.4	87.0	-20.7%	-8.6%	28.6%	-15.0%
CEEC6												
1988	105.5	102.7	100.8	102.1	103.1	104.2	101.6	97.4	-3.5%	-1.3%	7.6%	-7.6%
1992	96.3	94.7	92.5	92.4	95.9	95.0	93.5	89.3	-2.8%	-2.3%	12.9%	-7.3%
1996	95.0	93.1	90.3	90.3	93.1	95.1	93.8	89.4	-3.4%	-3.0%	19.2%	-5.9%
Manufacturing Adjusted Ratio of Unit Values to XEC-CEEC6												
	1988	1990	1991	1992	1993	1994	1995	1996	90-91 to 88	93-92 to 90-91	95-96 to 90-91	96 TO 88
Poland												
1988	75.6	69.1	71.2	72.6	73.4	75.0	80.5	80.2	-7.2%	4.0%	7.4%	6.1%
1992	71.0	68.1	68.6	73.0	73.8	75.6	81.5	82.0	-3.7%	3.9%	10.6%	15.5%
1996	62.0	59.4	60.6	64.7	65.5	67.8	73.5	74.6	-3.1%	5.5%	18.2%	20.4%
Hungary												
1988	86.6	90.1	90.3	95.2	90.0	100.9	104.3	105.9	4.1%	3.0%	8.7%	22.2%
1992	83.4	88.2	86.5	94.0	89.0	101.2	101.3	103.1	4.7%	2.3%	12.3%	23.6%
1996	80.7	78.5	74.4	86.4	83.6	93.0	96.4	97.3	-5.2%	2.4%	20.7%	20.7%
Romania												
1988	70.3	75.5	72.8	70.6	70.8	74.3	77.3	81.0	5.4%	-5.0%	5.7%	15.1%
1992	74.1	86.2	78.3	75.7	75.9	76.9	82.9	87.4	11.1%	-10.6%	3.4%	18.0%
1996	75.5	90.4	79.2	76.1	77.3	79.1	86.5	91.7	12.3%	-14.1%	4.4%	21.4%
Bulgaria												
1988	81.3	69.0	63.3	70.0	64.3	64.1	71.2	67.8	-18.6%	-3.5%	2.1%	-16.5%
1992	69.0	66.8	64.7	68.5	67.3	72.7	73.2	74.7	-4.6%	-0.3%	7.5%	8.3%
1996	71.8	67.7	67.1	70.6	70.0	78.5	77.2	79.3	-6.1%	1.8%	14.1%	10.5%
CSFR												
1988	62.0	63.6	61.8	64.1	66.6	68.7	76.6	77.7	1.2%	-1.0%	20.9%	25.4%
1992	58.4	59.5	58.8	63.5	71.4	71.4	75.5	77.4	1.4%	2.7%	23.7%	32.5%
1996	51.8	52.0	53.9	55.6	57.7	62.0	68.1	70.8	2.2%	5.4%	28.6%	36.6%
CEEC6												
1988	68.1	69.3	68.6	71.2	71.3	73.4	78.9	80.2	1.3%	0.8%	7.6%	17.8%
1992	63.9	66.4	65.5	69.2	69.8	72.7	77.6	79.4	3.3%	1.5%	12.9%	24.3%
1996		59.9	59.9	63.4	64.2	67.6	72.8	74.9	3.8%	2.9%	19.2%	#VALUE!

Notes to Table 6

1. Data was drawn from the EUROSTAT database, and covers imports into the European Union. Sectoral weights are taken from the sector's share in the value of total imports.
2. Sectoral weights are taken from the sector's share in the value of the individual countries total, agricultural and manufacturing imports, respectively, to the EU.
3. XEC represents all imports from countries outside the European Union. XEC-CEEC covers this total less imports to the EU from the 6 CEEC countries.
4. The Agriculture Indices comprises SITC 0-4, Manufacturing SITC 5-8.
5. Ratio indices are the ratio of unit values for each individual sector relative to that sector's unit value for XEC-CEEC, summed over all relevant sectors, using country weights.
6. Unit value indices were calculated from SITC 3, Revision 3 data at the 3 digit level. The following sectors were excluded from the relevant indices were appropriate because of the presence of substantial outliers in these sectors which distorted the results.

289 Ores & concentrates of precious metals; waste, scrap
351 Electric current
667 Pearls, precious & semi-precious stones
681 Silver, platinum, other metals of the platinum group
752 Automatic data processing machines, n.e.s.
776 Cathode vales & tubes; diodes; integrated circuits
792 Aircraft & associated equipment; spacecraft, etc.
883 Cinematograph films, exposed & developed
896 Works of art, collectors' pieces & antiques
897 Jewellery & articles of precious material, n.e.s.
898 Musical instruments, parts; records, tapes & similar
899 Miscellaneous manufactured articles, n.e.s.
911 Postal packages not classified according to kind
931 Special transactions & commodities not classified
961 Coin (other than gold coin), not being legal tender
971 Gold, non-monetary (excluding gold ores & concentrates)
972
998
999
7. The 1993 drop in Bulgarian agricultural and raw material ratio is caused by a large drop in petroleum oils (334) and animal feedstuffs (081), from 36 in 1992 to 14 in 1993 and from 76 to 21, respectively.
8. The 1995 Romania figure for agriculture and raw materials is adjusted by removing a one time jump in natural abrasives (277) from 0 in previous years.

Table 7. Ratio of OTP to Normal Export Unit Values
35 Key Sectors

		1988	1992	1994	1996
POLAND					
Averages :	Simple	3.4	2.1	2.6	2.2
	w/o Ad Hoc Outliers	2.4	2.1	2.0	1.9
	w/o 5 Outliers	1.9	1.7	1.3	1.5
HUNGARY					
Averages :	Simple	2.6	2.4	2.1	2.0
	w/o Ad Hoc Outliers	2.7	1.9	1.7	1.7
	w/o 5 Outliers	2.1	1.6	1.6	1.6
ROMANIA					
Averages :	Simple	1.5	2.2	2.3	5.5
	w/o Ad Hoc Outliers	1.4	2.2	1.7	1.7
	w/o 5 Outliers	1.6	2.1	1.4	1.5
BULGARIA					
Averages :	Simple	2.1	4.5	3.4	3.3
	w/o Ad Hoc Outliers	1.9	2.1	3.1	2.2
	w/o 5 Outliers	1.8	1.8	2.3	1.3
CSFR					
Averages :	Simple	3.0	3.3	2.0	2.3
	w/o Ad Hoc Outliers	1.6	1.9	1.6	1.5
	w/o 5 Outliers	1.6	1.9	1.7	1.3
		1994	1996	1994	1996
CZECH REPUBLIC					
Averages :	Simple	2.0	2.4	2.4	2.3
	w/o Ad Hoc Outliers	1.9	2.1	2.0	2.2
	w/o 5 Outliers	1.9	1.5	1.4	1.6
SLOVAKIA					
		1988	1992	1994	1996
CEEC6					
Averages :	Simple	3.9	3.0	1.9	2.8
	w/o Ad Hoc Outliers	2.5	2.2	1.7	1.7
	w/o 5 Outliers	2.1	1.8	1.6	1.5

**Table 8. Distribution of CEEC Manufactured Exports to EU
by Price Sensitivity of Sectors**

	MANUFACTURING (5-8)							CHANGE		
	1988	1990	1991	1992	1993	1994	1995	1995-88	1995-90	1995-92
CEEC6										
Top 56	16.6%	15.9%	17.5%	18.6%	19.3%	18.2%	19.0%	2.5%	3.2%	0.4%
Mid 55	29.3%	31.9%	33.1%	32.4%	31.1%	32.3%	33.0%	3.7%	1.1%	0.6%
Bot 55	54.1%	52.2%	49.4%	49.0%	49.6%	49.5%	47.9%	-6.2%	-4.3%	-1.0%
POLAND										
Top 56	17.8%	14.9%	14.6%	16.8%	19.6%	18.1%	18.3%	0.5%	3.5%	1.5%
Mid 55	40.9%	38.9%	37.8%	36.5%	31.7%	32.7%	32.9%	-8.1%	-6.0%	-3.6%
Bot 55	41.3%	46.2%	47.6%	46.7%	48.7%	49.2%	48.8%	7.5%	2.6%	2.1%
HUNGARY										
Top 56	16.6%	16.9%	19.5%	18.7%	16.8%	17.5%	18.3%	1.8%	1.4%	-0.4%
Mid 55	31.9%	33.9%	33.6%	33.4%	33.6%	35.7%	39.8%	7.9%	5.9%	6.4%
Bot 55	51.6%	49.2%	46.9%	47.9%	49.5%	46.8%	41.9%	-9.6%	-7.3%	-6.0%
ROMANIA										
Top 56	8.9%	5.2%	6.2%	5.5%	5.6%	5.6%	6.4%	-2.6%	1.2%	0.9%
Mid 55	17.3%	20.5%	21.9%	21.2%	23.2%	21.9%	23.3%	6.0%	2.8%	2.1%
Bot 55	73.7%	74.3%	71.9%	73.3%	71.2%	72.5%	70.3%	-3.4%	-4.0%	-3.0%
BULGARIA										
Top 56	22.7%	21.1%	21.6%	19.0%	21.7%	17.1%	17.3%	-5.4%	-3.8%	-1.7%
Mid 55	25.0%	23.8%	29.5%	30.7%	32.1%	35.8%	27.9%	2.9%	4.0%	-2.8%
Bot 55	52.3%	55.0%	48.9%	50.3%	46.2%	47.1%	54.8%	2.5%	-0.2%	4.5%
CZECH REP										
Top 56					26.1%	24.7%	21.8%			
Mid 55					32.1%	33.9%	29.7%			
Bot 55					41.8%	41.5%	48.6%			
SLOVAKIA										
Top 56					16.5%	17.1%	25.6%			
Mid 55					27.4%	29.6%	34.7%			
Bot 55					56.1%	53.3%	39.6%			
CSFR										
Top 56	21.0%	21.5%	22.8%	24.0%	24.2%	22.8%	24.6%	3.6%	3.1%	0.6%
Mid 55	24.7%	27.2%	31.3%	30.8%	31.2%	32.8%	33.4%	8.7%	6.1%	2.6%
Bot 55	54.3%	51.3%	45.9%	45.2%	44.7%	44.3%	42.0%	-12.3%	-9.3%	-3.2%

Top 56 Not Price Sensitive

Mid 55 Moderately Price Sensitive Sectors

Bot 55 Highly Price Sensitive Sectors

Based on analysis of price sensitivity in 18 countries, see Karl Aiginger and Yvonne Wolfmayr-Schnitzer
"The Competitiveness of Transition Countries" WIFO, Vienna, Austria October 1996

Table 9. Correlation Between Change in Units (Tons) and Unit Value Ratios

Correlations	Including Outliers				Excluding Outliers of Change over 100%			
	88-91/92	91/92-96	88-96	90/91-95/96	88-91/92	91/92-96	88-96	90/91-95/96
POLAND								
Total	-1.9%	3.8%	-6.2%	-3.4%	-3.1%	19.4%	7.2%	11.6%
Agriculture/Raw materials	-2.6%	4.7%	-8.7%	-9.5%	22.0%	28.2%	5.5%	14.0%
Manufacturing	-1.9%	-14.4%	-7.3%	0.8%	-30.9%	1.9%	2.2%	3.5%
HUNGARY								
Total	-11.3%	-4.3%	-7.1%	-2.8%	-11.9%	14.5%	9.8%	17.6%
Agriculture/Raw materials	-12.3%	-4.7%	-5.3%	2.8%	-26.7%	5.1%	-12.4%	15.0%
Manufacturing	-12.6%	-5.5%	-9.7%	-3.9%	-19.0%	21.5%	26.7%	19.6%
ROMANIA								
Total	-3.5%	-7.9%	-6.9%	-7.2%	18.0%	25.1%	12.4%	41.6%
Agriculture/Raw materials	-7.1%	-7.7%	-16.1%	-8.4%	47.4%	30.7%	24.4%	39.2%
Manufacturing	-5.5%	-10.5%	-7.0%	-10.2%	-10.7%	14.3%	-12.1%	42.4%
BULGARIA								
Total	-8.7%	-1.4%	-2.4%	-7.1%	37.9%	26.7%	31.7%	20.3%
Agriculture/Raw materials	-12.1%	3.8%	-8.1%	-11.7%	38.1%	33.0%	36.1%	19.2%
Manufacturing	-8.1%	-2.7%	-2.3%	-5.0%	39.6%	19.7%	27.8%	20.8%
CZECHOSLOVAKIA								
Total	-4.4%	-8.7%	-6.5%	-6.9%	34.6%	25.5%	-18.2%	13.4%
Agriculture/Raw materials	-9.2%	-6.0%	-10.4%	-4.8%	38.1%	28.7%	-46.1%	18.9%
Manufacturing	1.6%	-13.4%	-2.3%	-9.2%	17.7%	12.4%	3.2%	-10.7%
CEE6								
Total	-8.5%	-7.9%	-6.7%	-8.6%	6.0%	9.3%	9.6%	9.1%
Agriculture/Raw materials	-9.9%	4.9%	-10.0%	-5.4%	4.4%	10.0%	5.7%	10.9%
Manufacturing	-9.4%	-12.3%	-12.0%	-14.3%	-10.9%	-6.7%	7.3%	-9.3%

Table 10. Share of Sensitive Sectors in CEEC Exports to the EU

	Agriculture and Food			Chemicals			Other Sensitive Sectors*			Petroleum		
	88	92	96	88	92	96	88	92	96	88	92	96
CSFR	5.4%	3.3%		5.0%	3.3%		26.1%	25.0%				
Czech Republic			1.7%			2.9%			16.0%			
Slovakia			1.4%			3.0%			19.0%			
Hungary	22.7%	17.0%	9.1%	4.5%	3.8%	2.9%	25.0%	24.5%	17.3%			
Poland	15.9%	11.4%	7.3%	2.0%	2.4%	2.2%	17.4%	22.2%	21.7%			
Bulgaria	14.6%	11.2%	6.3%	8.3%	3.0%	5.6%	18.6%	32.4%	37.5%			
Romania	4.0%	3.8%	2.4%	2.8%	2.2%	1.5%	25.9%	48.4%	55.8%	29.8%	1.0%	0.6%
Total	12.5%	9.6%	5.3%	3.6%	3.0%	2.6%	22.7%	25.9%	24.1%	8.6%	1.0%	0.7%

*Textiles, iron, steel, clothing, footwear.

Table 11. EU Tariffs and NTBs Faced by CEECs Prior to Europe Agreements (1991)

	Bulgaria	CSFR	Hungary	Poland	Romania
Simple Avg. Tariffs					
Industrial Total	6.9	7.0	0.1	0.1	0.0
Five Year Group	8.6	8.7	0.0	0.0	0.0
MFA Group	10.8	10.7	0.1	0.0	0.1
Steel Group	5.4	5.6	0.0	0.1	0.0
Other Products (Ag)	11.6	11.7	9.4	10.5	8.6
Weighted NTB Coverage (per cent of exports)					
Industrial Total	22.5	24.0	24.2	23.6	28.4
Five Year Group	18.8	20.6	21.0	21.7	23.7
MFA Group	90.6	87.6	85.1	88.8	86.2
Steel Group	74.6	64.4	58.2	57.4	68.2
Other Products (Ag)	48.3	52.5	57.7	48.6	59.8
Share in Total and Industrial Exports to EU (per cent)					
Industrial Total	73.0	92.0	73.0	81.0	94.0
Five Year Group	16.3	26.5	24.3	23.6	31.4
MFA Group	20.9	13.6	21.4	17.6	28.2
Steel Group	11.4	10.5	4.2	4.5	3.6
Other Products (Ag.)	27.0	8.0	27.0	19.0	6.0

Table 12: Foreign Direct Investment into the CEEC 6 and Iberia
(in millions of US\$)

	1988	1990	1992	1994	1995	1996	1997
Bulgaria							
Foreign Direct Investment (flow)	-	4	41	105	90	109	
Stock (Cumulative Flow) of FDI		4	101	262	353	462	462
Share of CEEC 6 Stock		0.2%	1.3%	1.5%	1.2%	1.2%	1.0%
Ratio of FDI Flows to GDP	0.0%	0.0%	0.5%	1.1%	0.7%	1.2%	9.3%
Czech Republic							
Foreign Direct Investment (flow)				878	2,568	1,435	-
Stock (Cumulative Flow) of FDI		-	-	1,533	4,100	5,535	5,535
Share of CEEC 6 Stock		0.0%	0.0%	8.8%	14.2%	14.8%	12.4%
Ratio of FDI Flows to GDP				0.1%	0.2%	0.1%	0.0%
Hungary							
Foreign Direct Investment (flow)	-	900	1,479	1,144	4,519	1,982	1,700
Stock (Cumulative Flow) of FDI		1,200	4,141	7,635	12,154	14,136	15,836
Share of CEEC 6 Stock		63.4%	52.5%	43.6%	42.0%	37.7%	35.6%
Ratio of FDI Flows to GDP	0.0%	2.5%	4.0%	2.8%	10.0%	4.4%	3.4%
Poland							
Foreign Direct Investment (flow)	15	89	678	1,875	3,659	4,498	6,600
Stock (Cumulative Flow) of FDI		115	1,084	4,674	8,333	12,831	19,431
Share of CEEC 6 Stock		6.1%	13.7%	26.7%	28.8%	34.2%	43.6%
Ratio of FDI Flows to GDP	0.0%	0.2%	0.8%	2.0%	3.1%	3.4%	4.8%
Romania							
Foreign Direct Investment (flow)	-	110	77	341	419	263	
Stock (Cumulative Flow) of FDI		110	397	832	1,251	1,514	1,514
Share of CEEC 6 Stock		5.8%	5.0%	4.8%	4.3%	4.0%	3.4%
Ratio of FDI Flows to GDP	0.0%	0.3%	0.4%	1.1%	1.2%	0.7%	0.0%
Slovak Republic							
Foreign Direct Investment (flow)				203	183	281	406
Stock (Cumulative Flow) of FDI		-	-	402	585	865	1,271
Share of CEEC 6 Stock		0.0%	0.0%	2.3%	2.0%	2.3%	2.9%
Ratio of FDI Flows to GDP				0.0%	0.0%	0.0%	0.1%
CSFR							
Foreign Direct Investment (flow)	-	207	1,103	1,082	2,750	1,716	406
Stock (Cumulative Flow) of FDI		464	2,167	4,102	6,852	8,568	8,973
Share of CEEC 6 Stock		24.5%	27.5%	23.4%	23.7%	22.8%	20.2%
Ratio of FDI Flows to GDP	0.0%	0.5%	3.0%	0.1%	0.2%	0.1%	0.1%
CEEC 6							
Foreign Direct Investment (flow)	15	1,310	3,378	4,547	11,437	8,568	7,006
Stock (Cumulative Flow) of FDI		1,893	7,891	17,505	28,942	37,510	44,516
Ratio of FDI Flows to GDP	0.0%	3.4%	8.7%	7.1%	15.2%	9.8%	20.7%
Portugal							
Foreign Direct Investment (flow)	922	2,610	1,873	1,270	685	618	
Stock (Cumulative Flow) of FDI		5,268	9,590	12,394	13,079	13,697	13,697
Ratio of FDI Flows to GDP	1.9%	3.9%	2.0%	1.5%	0.7%	0.6%	0.4%
Spain							
Foreign Direct Investment (flow)	7,021	13,984	13,276	9,359	6,118	6,396	
Stock (Cumulative Flow) of FDI		29,433	55,201	72,704	78,822	85,218	85,218
Ratio of FDI Flows to GDP	2.0%	2.8%	2.3%	1.9%	1.1%	1.1%	1.2%

NOTE:

Average Ratio of FDI Flows to GDP
Portugal
Spain

Average
1976-8 1986-9 1992-96
0.6% 2.3% 1.1%
0.8% 2.1% 1.6%

Source: World Economic Outlook, IMF; Balance of Payments Yearbook, IMF

Table 13. OPT Exports

	Percent Growth of OPT Exports to the EU			Country Shares of CEEC OPT Exports to the EU			Share of OPT in Total Exports to the EU		
	92/88	96/92	96/88	1988	1992	1996	1988	1992	1996
CSFR	502%	114%	1078%	9.6%	19.9%	23.7%	4.8%	11.0%	
Czech R						18.0%			11.7%
Slovakia						5.7%			10.9%
Hungary	126%	14%	158%	34.5%	26.9%	17.2%	17.5%	20.5%	13.2%
Poland	316%	69%	600%	26.1%	37.5%	35.3%	8.5%	16.2%	17.3%
Romania	32%	169%	254%	28.2%	12.9%	19.3%	13.9%	27.9%	30.6%
Bulgaria	433%	167%	1321%	1.6%	3.0%	4.5%	4.0%	10.1%	15.2%
CEEC6	190%	79%	418%				10.5%	16.2%	15.8%
Addenda	Percent Growth in OPT Exports to the EU			CEEC Market Share of OPT Exports to the EU					
World, of which:	109%	34%	180%	1988	1992	1996			
-- non-CEEC	85%	19%	121%	23%	32%	42%			

Table 14. Spanish and Portuguese macroeconomic performance

	Income Indicators							
	Growth Rate of Real GDP			Growth Rate of Real GDP per Capita				
	1977-85	1986-91	1992-96	1977-96	1977-85	1986-91	1992-96	1977-96
Spain	1.5	4.1	1.3	2.2	0.7	3.9	1.2	1.8
Portugal	2.6	4.5	1.5	2.9	2.0	4.7	1.4	2.6

	Trade Indicators							
	Growth Rate of Exports		Ratio of imports + exports to GDP					
	1977-85	1986-91	1992-96	1977-96	1976	1986	1992	1996
Spain	23.2	6.7	14.9	16.1	0.32	0.38	0.38	0.50
Portugal	37.0	16.4	9.3	23.9	0.44	0.63	0.65	0.74

	Investment and Savings Indicators							
	Savings to GDP		Gross fixed capital formation to GDP					
	1977-85	1986-91	1992-96	1977-96	1977-85	1986-91	1992-96	1977-96
Spain	21%	22%	20%	21%	21%	23%	20%	22%
Portugal	23%	26%	21%	23%	30%	27%	24%	27%

	Productivity and Competitiveness Indicators	
	Growth in Total Factor Productivity	Growth in TFP less Real compensation per employee
Spain	10.7%	10.7%
Portugal	10.7%	10.7%