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The internationalisation of production in Europe: Causes and effects of foreign direct investment and non-equity forms of international production

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Editorial Policy

Editor
Armin Riess

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Preface

The internationalisation of production is not a new phenomenon, but it has accelerated notably in the past decades thanks to further trade liberalisation, policy shifts in favour of foreign ownership in many countries, and leaps in communication technologies. Foreign direct investment and the formation of transnational corporations stand at the centre of this process. However, the cross-border activities of transnational corporations do not rest on foreign direct investment alone. Non-equity relationships between firms of different countries have become increasingly important too, notably in the form of partnerships, contract manufacturing, and technology agreements. In sum, we are witnessing an ever-expanding internationalisation of production, with different stages of production processes spread across a number of countries in line with countries' comparative advantages.



Philippe Maystadt
President

The European Investment Bank has a keen interest in this topic. To begin with, many of the Bank's private sector borrowers are transnational corporations. We thus need to be aware of the underlying currents that make them move the way they do. Furthermore – and no doubt of even greater importance – there is the Bank's inherent interest in the performance of the EU economy and its mandate to support it. As the internationalisation of production is increasingly affecting the workings of the EU economy, a sound understanding of these effects should help strengthen the contribution that the Bank makes to the performance of the EU economy via its lending to enterprises involved in international production. And then, it is worth recalling that the prime objective of the Bank is to contribute to a steady and regionally balanced development of the European Union. It is thus of particular importance for the strategic orientation of the Bank to identify how the internationalisation of production affects the distribution of income across people and regions in the European Union.

The contributions to this volume of the *EIB Papers* – drawing on presentations made at the *2004 EIB Conference on Economics and Finance* – address causes and effects of the internationalisation of production (Volume 9, Number 1) and present EU country case studies (Volume 9, Number 2). One of the fundamental questions is where the activity of transnational corporations originates (home countries) and where it is destined (host countries). Another relates to the determinants of foreign direct investment and the motives that make firms decide to become transnational in the first place. Since the internationalisation of production has expanded over time, another key question is how these determinants and motives have evolved. A related issue is why some countries seem to be more attractive destinations for transnational corporations than others and, equally intriguing, why some regions within a country are preferred to others. In the European context, a key issue is how EU integration has affected the internationalisation of production across European countries and *vis-à-vis* the outside world.

The observation that the internationalisation of production has been welcomed by a growing number of countries points to high expectations regarding the positive economic effects on host economies. But rather than just taking these expectations at face value, it seems pertinent to look more closely at the evidence of how foreign direct investment

affects economic growth. A particularly interesting question is whether transnational corporations bring benefits that spill over to the economy at large (i.e. outside the foreign-owned firms themselves) and how economic policies should respond to such spillovers.

Economic growth is clearly an important but not the only dimension of economic welfare. There is also the question of the link between the activities of transnational corporations, on the one hand, and employment in home and host countries on the other hand. Crudely put: do the activities of transnational corporations simply shift jobs from home to host countries or do all countries gain?

Even if one concludes that all countries gain on this front, distributional concerns remain. For instance, the internationalisation of production may lead to a more uneven income distribution. This issue reaches beyond the broad distinction between wages, interest and profits; it extends, in particular, to the relative income position of unskilled labour. What is more, the internationalisation of production may adversely affect the regional distribution of income within countries even if all countries are net winners – an issue of particular importance from an EU regional development viewpoint.

To conclude, the internationalisation of production in Europe has gathered pace and is bound to remain with us, if not increase, in the years ahead. Clearly, the process does not come without challenges and shapes the strategic orientation of the European Investment Bank. I am convinced that the *EIB Papers* once again address a topic that is not only highly relevant for the Bank but also of considerable interest for the general public in an enlarged European Union.

A handwritten signature in blue ink, appearing to read 'J. Mays', with a stylized initial 'J' and a long horizontal stroke at the end.

The internationalisation of production in Europe:

Causes and effects of foreign direct investment and non-equity forms of international production

The 2004 EIB Conference on Economics and Finance, which was held at the EIB headquarters in Luxembourg on January 22, examined the impact of cross-border activities of transnational corporations on economic growth, productivity, employment, and regional development in Europe. Presentations covered theoretical aspects and empirical evidence pertaining to these activities as well as country case studies, reflecting the experience of old and new EU member states.

Speakers included:

Frank BARRY,
of the University College Dublin

Gábor HUNYA,
of the WIIW, Vienna

Ari KOKKO,
of the Stockholm School of Economics

Jozef KONINGS,
of the Katholieke Universiteit, Leuven

Thierry MAYER,
of the Université de Paris Sud

Philippe MAYSTADT,
President of the EIB

Magdolna SASS,
of the Institute of Economics
of the Hungarian Academy of Sciences

Kristian UPPENBERG,
of the EIB

Zbigniew ZIMNY,
of the United Nations Conference on Trade
and Development – UNCTAD



ABSTRACT

Introducing this volume of the EIB Papers and linking the various contributions, this paper emphasises that the internationalisation of production in Europe, which creates cross-border production networks, is an increasingly important element of globalisation, has been spreading to new EU members, and brings benefits very similar to those of globalisation in general. Popular fears that the geographical reorganisation of production comes at the expense of countries that see some of their activities moving to other countries are largely unfounded. In particular, “races to the bottom” in wages, tax revenues, and environmental standards do not seem to take place. On the contrary, the move appears to be up rather than down. That said, like any structural change, the internationalisation of production brings distributional challenges that need to be dealt with.

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The internationalisation of production: moving plants, products, and people

“When I use a word,” Humpty Dumpty said in a rather scornful tone, “it means just what I choose it to mean – neither more nor less”

Lewis Carroll, *Through the Looking-Glass*

1. The internationalisation of production: what it is and what it means

When we use the term “internationalisation of production”, we try to leave less scope for interpretation than *Humpty Dumpty*. For that reason, we simply note that when a firm organises its production of goods and services so that it takes place in more than one country, production becomes international. Two typical cases can be distinguished. On the one hand, there are transnational corporations (TNCs) that produce more or less identical goods and services in different countries with the aim of serving national or regional markets. In this case, the production of a TNC in plants outside its home country is a profit-maximising alternative to producing at home and exporting or to licensing foreign firms to produce its products. The cross-border investment undertaken by a TNC for this purpose is thus market seeking, and it has come to be known as “horizontal foreign direct investment”. On the other hand, there are TNCs that carry out different stages of a production process in different countries with the aim of selling their output world-wide, i.e. in the global market place. Here, the decision to break down the production process into distinct stages and to locate them in countries where they can be carried out at minimum costs is a profit-maximising alternative to producing everything in one location. The investment undertaken by a TNC for this purpose is thus export oriented, and it is commonly called “vertical foreign direct investment”.

There is ample evidence that the internationalisation of production has increased rapidly and, indeed, it is perhaps the most striking and distinguishing characteristic of the process of globalisation that we have witnessed over the last two decades.¹ This transpires clearly from the contribution of **Zbigniew Zimny** to this volume of the *EIB Papers*. To sketch some of the key trends: since the beginning of the 1980s, the share of TNC affiliates in global value added is estimated to have increased from 6 to 11 percent, the stock of their productive assets has gone up from 6 1/2 percent of global GDP to 22 percent, and foreign direct investment (FDI) flows have risen from the equivalent of 2 percent of global gross fixed capital formation to 10 percent. Not surprisingly, the importance of TNCs has also increased in terms of the employment they provide and, indeed, the number of people working for TNC affiliates has almost tripled since the beginning of the 1980s. As a result, TNC affiliates are estimated to account for 14 and 20 percent of manufacturing jobs in the



Armin Riess



Kristian Uppenberg

¹ A word of caution should be added. Although we know what the internationalisation of production means, we need to be aware of the shortcomings in measuring it. While this applies to the level of TNC activity (e.g. output, exports, and employment), deficiencies in the data on FDI flows and stocks are particularly prominent. They become obvious in bilateral FDI statistics, for instance, when the inflows of a country do not match the outflows of its partner country. To glimpse at the reasons why data are not necessarily comparable across countries (for details see IMF 2003), it is useful to note that countries could differ, in particular, in terms of how they treat indirectly-owned enterprises, record inverse investment (i.e. instances when a foreign affiliate makes a loan to its parent), measure direct investment earnings, and value flows and stocks (book or market value).

United States and Europe, respectively. Zimny also emphasises that cross-border investment of TNCs is not the only aspect of the internationalisation of production. In addition, there are non-equity relationships between firms of different countries – such as franchising, technology partnerships, and contract manufacturing – that contribute to the expansion of cross-border production networks.

But what is driving the internationalisation of production? The paper by **Uppenberg and Riess** examines this question in more detail. At the risk of simplifying a little, we can narrow things down to two broad sets of factors. One comprises a variety of developments and policy measures that have reduced, if not removed, barriers to trade and capital flows. For instance, the creation of the Single European Market has arguably been a major impetus to the internationalisation of production, enticing a growing number of firms from one EU country to set up production facilities in another, but also prompting non-EU firms to open plants in the EU. The second set of factors includes those that have made it easier for firms to coordinate the activities of their geographically spread plants. A key aspect here has been the dramatic fall in communication cost resulting from advancements in information and communication technologies. Another driver, in particular for the spreading of distinct production stages over different countries according to comparative advantages, has been the fall in transport costs.

The growing importance of international production networks raises concerns that are familiar from the debate about the pros and cons of globalisation.

The way we have sketched the internationalisation of production leaves no doubt that its growing importance is part and parcel of a wider trend towards economic integration. It is thus raising concerns that are familiar from the debate about the pros and cons of globalisation. Economists largely agree that globalisation is welfare-enhancing, increasing the standard of living in countries that take part in it (for a recent defence of globalisation see Bhagwati 2004, for instance). In practical terms, the improved division of labour resulting from the free flow of goods, capital, and people increases global production and consumption possibilities for any given level of resources. But it is also clear that the economic adjustment triggered by globalisation does not proceed without friction and, as a result, the income of some people is bound to suffer, if only temporarily.

The question of who gains and who loses ultimately concerns individuals or certain segments of society. This is obvious from the double-faced image that TNCs have in both the country from where they originate (home country) and the country where they set up affiliates (host country). In home countries, some see TNCs with pride as globally competitive national champions; others consider them greedy scoundrels, who instead of creating jobs at home relocate production to other countries.² In host countries too, TNCs are looked at with ambiguity, being praised by some for bringing jobs, capital, and technology; others blame them for coming at the expense of indigenous firms, job security, and national sovereignty. Although we have said that it is ultimately necessary to tackle the issue of winners and losers at a fairly disaggregated level, a convenient way to approach the issue is to examine how the creation of cross-border production networks affects the home country of the TNC, on the one hand, and the host country on the other.

² What is more, on this side of the Atlantic, it happens that politicians argue in favour of creating globally competitive national champions while at the same time calling them unpatriotic when they invest abroad rather than at home. On the other side of the Atlantic, the “outsourcing” US transnational corporation has been likened to Benedict Arnold, the traitor in the struggle of the American colonies for independence from England.

This largely sets the plan for the rest of this paper. In the next section, we will argue why the internationalisation of production is good for host countries and its citizens. Switching the perspective, we will then reason why the same process is good for home countries too. Finally, we get worried about races to the bottom sometimes associated with the internationalisation of production – only to conclude that there is probably little to worry about.

2. Why it is good for host countries and its citizens

A boost to economic growth and development is the main benefit that host countries expect to derive from the presence of TNC affiliates. Reviewing the theoretical and empirical literature on this, Uppenberg and Riess (this volume) conclude that while there is ample evidence for a positive correlation between host-country economic growth and inward FDI, it is much harder to tell whether an increase in FDI causes higher economic growth, or *vice versa*. Mirroring findings from the empirical growth literature, it may well be that economic growth and FDI are jointly driven by other factors such as a favourable economic policy environment, good infrastructure, and a well-educated workforce.

One of the main benefits that countries hosting international production expect to derive is a boost to economic growth and development.

Cognisant of these broad conclusions, it is nevertheless true that the potential for FDI to spur economic growth is probably higher in capital-importing countries,³ notably when – in addition – there is considerable scope for improving the efficiency of using and allocating resources. This characterisation obviously applies to the countries of Central and Eastern Europe (CEE), which have all staged an impressive transformation from plan to market in a relatively short period of time. Examining the experience of Hungary, **Magdolna Sass** (Volume 9, Number 2) emphasises that Hungary was the first CEE country to open itself to foreign direct investors (even before the collapse of communism) and to privatise large state-owned enterprises to foreign strategic investors. She also highlights that due to limited national savings, FDI was the main engine of capital accumulation, economic growth, and industrial restructuring. Furthermore, she points out that FDI was instrumental in Hungary's impressive export performance since the beginning of the 1990s. In this context, she observes that imports have risen too, in part because they constitute intermediates for the export industries. The latter indicates that Hungary has become part of the vertical specialisation that has emerged, in particular between Germany and Austria, on the one hand, and CEE countries like Poland, the Czech and Slovak Republics, and Hungary on the other hand (Marin 2004).

The relation of EU-15 countries with CEE is characterised by geographical proximity and a considerable wage-cost differential. In general, these are ideal conditions for integrating new EU member states into EU-wide production networks. But obviously, the potential for integration is larger in the case of some CEE countries than for others. Reviewing the experience of Estonia, Latvia, and Lithuania, **Gábor Hunya** (Volume 9, Number 2) observes that foreign investors in the Baltic states have largely focused on non-traded services, by definition not an integral part of international production networks. That said, the Baltic countries have nevertheless experienced both rapid economic growth and, relative to GDP,

3 We note here that the bulk of FDI flows between advanced countries, which tend to be net exporters of capital. For details see Zimny (this volume).

above-average FDI inflows. Evidently, coincidence does not prove causality. But with FDI estimated to have financed around one-fifth of gross fixed capital formation, it is sensible to suggest that growth would have been less impressive in the absence of FDI – unless one assumes not only that other capital flows would have materialised in the absence of FDI but that they could have played the same role as FDI. This takes us to one of the salient features of FDI that clearly sets it apart from other capital inflows.

One of the channels through which FDI may boost economic growth is when the presence of foreign-owned firms creates positive externalities, such as knowledge and technology spillovers to indigenous firms and the stimulation of competition among them. Uppenberg and Riess (this volume) note that the empirical support for the presence of such externalities is mixed. A key finding of the empirical literature is that the scope for externalities varies across industries – even firms – and, more important, very much depends on whether economic conditions in host countries provide an environment that enables indigenous firms to learn from and positively respond to the presence of foreign-owned firms (Blomström and Kokko 2003a, 2003b). This strongly suggests that the growth-enhancing and transformation-accelerating impact of FDI does not materialise automatically, but that appropriate economic policies need to accompany the inflow of FDI.

This is abundantly clear from the experience of Ireland, which **Frank Barry** discusses in his contribution (Volume 9, Number 2). Ireland can be considered an example *par excellence* for the success of an FDI-based development strategy, and many countries around the world – including the new EU members in CEE – strive to follow the Irish model. It is probably less well known, but clear from Barry's paper, that Ireland, though successful in attracting FDI since the 1960s, started to converge to higher living standards only towards the end of the 1980s, i.e. more than one and a half decades after its accession to the EU. While it is true that inward FDI to Ireland accelerated in the 1990s, the reorientation of economic policies in the second half of the 1980s – characterised by fiscal prudence, the maintenance of labour-market flexibility, and a focus on science-oriented human capital formation – seems to have been the more decisive factor for the birth of the "Celtic Tiger".

The success of Ireland inevitably brings up the role of FDI incentives. There seems to be agreement that Ireland's low-corporate-tax strategy was instrumental in attracting TNCs to the country. But it is also true that, in practice, this strategy did not discriminate much between foreign and indigenous investors, and remaining biases in favour of some types of activities are due to be phased out, resulting in a low, harmonised corporate tax for all firms. We will address the issue of tax competition between countries below. Here we shall simply claim that offering specific FDI incentives is perhaps not a promising policy strategy. At first glance, this may come as a surprise in light of the positive externalities expected to arise from the presence of TNCs. In principle, externalities – and other market failures – provide a classic case for public policies aimed at correcting market failure, here: to ensure that the private returns to foreign direct investors are aligned with the social returns. The arguments against specific FDI incentives go beyond the difficulties of identifying those investors that create externalities and of properly measuring them. Another concern is that by providing incentives, host countries pass on the benefit of the externality, if not more, to foreign investors (for more details see Uppenberg and Riess, this volume).

The experience of many countries shows that the growth-enhancing impact of FDI does not materialise automatically, but that sound economic policies need to accompany the inflow of FDI.

But are there not more benign policy instruments to attract and benefit from foreign investors? Barry (this volume) highlights the role of Ireland's Industrial Development Agency (IDA). In his account, the role of IDA comes across as a very successful example of well-designed industrial policies, with IDA correctly foreseeing goods and services with a global growth potential, identifying the human skills needed to produce them, convincing the government to develop such skills, and persuading leading TNCs to locate in Ireland. With hindsight, there is no doubt that Ireland was successful in mapping the development of its human capital with the requirements of dynamic sub-sectors in pharmaceuticals, software development, and electronics – for example. Still, one wonders what would have happened to the many science graduates, for example, had TNCs located elsewhere. That they opted for Ireland is undoubtedly also because of language and cultural links between Ireland and the United States – home of many TNCs operating in Ireland.

With specific FDI incentives potentially a waste of resources and IDA-type policies a hard act to follow in other countries, what shall we then conclude with respect to the role of economic policies in fostering FDI and ensuring that host countries benefit from it? Two broad conclusions emerge from the contributions to this volume of the *EIB Papers*. One is that government expenditure should focus on raising economic productivity across the economy, for instance by supporting the investment of foreign-owned and indigenous firms in R&D and human capital and by ensuring a modern infrastructure. The other conclusion follows straight from Ireland's experience, specifically from its disappointing economic performance prior to the reorientation of economic policies in the second half of the 1980s: avoiding fundamental policy mistakes has greater value than fine-tuning FDI promotion policies.

In addition to influencing host-country economic growth, the internationalisation of production relates to the distribution of income across different types of incomes, people and regions.⁴ To concentrate on the regional dimension, two related questions come to mind: first, does the free flow of FDI exacerbate regional disparities and, second, is there scope for steering FDI to less developed regions?

The internationalisation of production also relates to the distribution of income across different types of incomes, people and regions.

As to the impact of FDI on regional imbalances, **Ari Kokko** and **Patrik Gustavsson** point out that the liberalisation of international trade and investment tends to strengthen centripetal forces and, as a result, economic activity is likely to become geographically more concentrated. One channel through which this takes place is FDI, in particular cross-border mergers and acquisitions, with TNCs gravitating to regions with locational advantages such as favourable factor endowment, proximity to major consumer markets, and a sound economic environment; by implication, economic activity in disadvantaged regions may fall further behind. Yet, looking at developments in the regional distribution of manufacturing employment in Sweden in the 1990s, the authors find only a modest increase in the share of employment in core regions relative to the periphery.⁵

4 Concerning the link between regional income disparities and the relative income position of people, we should note that regional income comparisons usually rest on GDP per capita data. As there is considerable cross-regional commuting, however, the average disposable income of people will differ less across regions than GDP per capita. A study by Behrens (2003) on EU countries suggests that regional disparities based on incomes are up to one-third smaller than the ones derived from GDP data.

5 More striking is that the share of employment in foreign-owned firms doubled, reaching one-third of total manufacturing employment by the beginning of the new millennium.

Another message of Kokko and Gustavsson is that liberalisation is likely to have a particularly large impact on the regional distribution of FDI if the degree of freeing trade and investment flows is large. Obviously, the regime shift in transition economies is a case in point, and it is thus not surprising that Sass (this volume) emphasises both the high regional concentration of FDI in Hungary (with about 80 percent of the FDI stock located in the Budapest region, the western part of the country along the Austrian border, and in the north-western part of the country) and the rise in regional income and employment disparities.

Empirical evidence suggests that regional policies are largely ineffective in influencing the geographical distribution of FDI within a country.

This takes us to the question of whether regional policies could steer FDI to the less developed regions within a country. The answer coming from the contribution of **Thierry Mayer** (Volume 9, Number 2) is unambiguous: they cannot. Examining the location choices of foreign investors in France, he shows that foreign investors are, to a large extent, not sensitive to public investment incentives and are primarily driven by conventional forces such as the market potential, labour costs and agglomeration effects in the region considered for investment. Examining the case of Sweden, Kokko and Gustavsson (this volume) arrive at similar conclusions as to the ineffectiveness of regional policies in directing FDI to less developed provinces. However, they also observe that other studies (Basile *et al.* 2003, Clark 2000, Mihir *et al.* 2003, Taylor 2000) reach the opposite finding, namely that FDI flows are attracted to countries and regions where subsidies are available.

A variety of reasons could explain why empirical findings as to the effectiveness of regional policies in directing FDI differ. For instance, Breuss *et al.* (2001) point out that regional policy can have a variety of effects. To illustrate, it could reduce transport costs to and from remote regions or firm set-up and production costs in remote regions. How this influences location choices depends on the nature of investment. In the case of vertical FDI, both a fall in transport costs and a decline in firm set-up and production costs work in favour of investment in remote regions. However, in the case of horizontal FDI, a fall in transport costs would change the cost-benefit trade-off against FDI in remote regions, while reducing firm set-up and production cost would improve it. In light of this, observed differences in the effectiveness of regional support on FDI across regions and countries could well reflect differences in the regional policy mix and the type of investment that potential investors consider.

Kokko and Gustavsson (this volume) offer another possible explanation. They note that the relative strength of agglomeration forces and subsidies probably varies between countries and regions, and – at the same time – there is substantial cross-industry variation in the relative importance of agglomeration forces. This implies that in some circumstances relatively moderate regional investment incentives can influence location choice while in others they need to be large to overcome other forces determining the location of FDI in a country (Mayer, this volume).

To conclude, host countries stand to gain from participating in the internationalisation of production, although gains may not spread evenly. But are these gains coming at the expense of home countries? This is the question to which we turn next.

3. And why it is good for home countries too

The most contentious question for the home country is how the foreign investment of national TNCs affects home-country output, employment, and wages.⁶ Without doubt, EU enlargement has renewed interest in this question, as evidenced by growing fears that TNCs from high-wage EU countries relocate their activities to new EU member states. In addressing the issue, it is crucial to be clear about the counterfactual; in other words, one needs to envision what would have happened to home-country output, employment, and wages in the absence of FDI. To illustrate, if a TNC shifts part of its production to a newly created foreign affiliate, the direct effect is a decline in output of the parent firm. But to infer from this that the underlying foreign investment comes at the expense of home-country output assumes that the level of output in the parent firm would have remained unchanged otherwise, which is unlikely to be true.

To assess the impact of outward FDI on the home country, we need to ask what would have happened to home-country output, employment and wages in the absence of FDI.

Spinning this thread a little further, we need to ask whether the production shifted abroad complements or substitutes for home-country production, and here it is useful to come back to the distinction between horizontal and vertical FDI. Horizontal FDI is market seeking and, in essence, an alternative to producing at home and exporting to the country that hosts the TNC affiliate. This seems to be a clear case where production abroad substitutes for home production. Even here, however, things can be less straightforward as they seem because exporting may not really be a viable alternative if high transport costs make exports from the home country uncompetitive relative to host-country or third-country production. The market-seeking investment that overcomes prohibitive transport cost increases the overall output of the TNC and may raise demand for inputs provided by the TNC parent.

Vertical FDI, which reflects firms' strategy of finding for each distinct production stage the country where this stage can be carried out at least costs (after accounting for transport and intra-firm coordination costs), is also unlikely to hurt home-country output and employment – contrary to widespread fears. To see why, it is useful to distinguish between direct and indirect effects of relocating part of the production abroad and to think of the relevant counterfactual. Obviously, if the said production stage used to be carried out in the home country, the direct effect of vertical FDI is a drop in the output of the parent firm. However, if the firm did not locate its production where it can be carried out at least costs, it would risk being pushed out of the market altogether, with a complete loss of output and employment in the home country. And then, there are positive indirect effects of vertical FDI that arise precisely because firms cease the opportunity to arrange the geographical distribution of their production in a cost-minimising way. Suppose only the home-country TNC shifts part of its production abroad, thereby reducing its overall production cost. In this case, it will gain market share and expand total output, including intermediate products produced by the parent firm in the home country (e.g. headquarter services). Of course, competition will force TNCs from other countries to relocate part of

⁶ In what follows we draw on Barba Navaretti and Venables (2004) unless otherwise indicated. Another home-country effect, not discussed here, is the possible sourcing of technology through outward FDI. The typical illustration is that of computer- and information-technology firms locating in Silicon Valley to access technology and to transfer it to the home country. Reviewing the empirical literature, Barba Navaretti and Venables (2004) observe that the evidence for technology sourcing is mixed. A recent contribution to the debate (Love 2003) finds little support for the technology-sourcing hypothesis.

their production as well and, thus, the home-country TNC will not be alone in realising lower production costs. While this may leave the market share of the home-country TNC unchanged, it benefits from a growing overall market as and when falling production costs result in lower prices and thus higher demand.

In sum, economic reasoning suggests home-country output and employment effects of FDI that are in complete conflict with popular beliefs. On the one hand, while public opinion seems to be dispassionate, sometimes pleased, about market-seeking FDI as it opens or expands new markets for home-country TNCs, economists envisage this type of FDI to substitute foreign for home-country output and employment (unless, that is, exporting is not a viable option). On the other hand, while conventional wisdom seems to take it for granted that cost-reducing FDI is detrimental to economic activity at home, economists expect this type of FDI to complement rather substitute for home-country output and employment. But does empirical evidence support economic reasoning?

Overall, it does. To lead into the topic, we shall start with survey evidence coming from a recent study by Marin (2004) who investigates home-country employment effects of German and Austrian FDI in Eastern Europe.⁷ Given the geographical proximity of Germany and Austria to Eastern Europe, concerns about the possible relocation of jobs are particularly high in these countries. The survey reflects information on 2,200 investment projects of 660 firms, covering all Austrian FDI and four-fifths of German FDI in 1990-2001. Based on firms' answers concerning the motivation of their FDI in Eastern Europe, the author calculates direct job losses in Germany and Austria of 90,000 and 24,000, respectively, which is equivalent to around 0.25 percent of total employment in Germany and 0.75 percent in Austria. Duly recognising the author's warning that such estimates are inevitably crude, it is fair to claim that they indicate everything but an exodus of jobs to Eastern Europe. We will come back to some of the finer points of this study when discussing the broader empirical evidence of home-country effects of outward FDI, to which we now turn.

The empirical literature broadly falls into two categories. One strand of the literature focuses on home-country output effects; the other specifically investigates employment effects. In exploring output effects, researchers have looked at the link between exports of TNC parents and the sales of their foreign affiliates. Controlling for factors that affect both parent exports and affiliate sales (such as the overall level of economic activity and trade liberalisation), results commonly point at a positive association between the two, which suggests that activities transferred to affiliates complement parents' output. This seems to be true especially for affiliates in low-income countries and parents in high-income countries, implying – contrary to conventional wisdom – that home-country output is threatened the least when labour-intensive production stages are relocated to low-wage countries. A qualification of these results comes from studies that distinguish between particular types of foreign affiliates. For instance, if the production of affiliates is not part of a vertical production chain, it tends to substitute for rather than complement home output. The same has been found for affiliates producing final goods without processing intermediates supplied by their parents.

⁷ In addition to new EU members from CEE as well as Bulgaria and Romania, Marin includes countries such as Croatia, Russia, and Ukraine in her definition of Eastern Europe.

Given the positive effect of outward FDI on home-country output, notably in the case of vertical FDI, it is reasonable to expect a positive impact on home-country employment too. The empirical literature concentrating on the link between outward FDI and home-country employment largely meets this expectation. The approach commonly taken investigates whether employment in TNC affiliates complements or substitutes for employment in TNC parent firms, and it infers a complementary relationship if a fall in wages paid by affiliates increases employment in parent firms; in contrast, if parent-firm employment declines in response to falling affiliate wages, employment in affiliates is taken to substitute for parent-firm employment. The paper by **Jozef Konings** is one contribution to this literature.

Using data for the period 1993-98, Konings addresses, in particular, concerns that TNCs from high-wage EU-15 countries relocate jobs to low-wage CEE economies. The descriptive part of his analysis reaches three key conclusions. First, the share of affiliate employment in total employment of European TNCs increased and, by extension, the share of employment in parent firms declined. Second, the employment share of affiliates in CEE did not change very much, which implies that affiliates in the EU-15 account for most of rise in affiliate employment. Third, the rising share of EU-15 affiliates in total TNC employment is largely due to an increased fraction of employment in affiliates located in high-wage economies of the EU-15. Overall, these patterns suggest that most of the job relocation took place between EU parent firms and their affiliates located in high-wage EU-15 countries. Obviously, this is at odds with conventional fears that jobs are exported to low-wage CEE countries.

In his econometric analysis, Konings examines how employment in parent firms responds to changes in wages paid by affiliate firms, distinguishing between affiliates in high-wage and low-wage EU-15 countries and low-wage CEE countries. It transpires that a decline in affiliate wages tends to reduce parent-firm employment. However, the effect is statistically significant only in the case of affiliates in high-wage countries. This implies that job relocation within TNCs is a rich-country affair and that competition from low-wage locations does, on average, not constitute a threat to parent employment.

Konings' finding that employment in affiliates located in low-wage countries does not come at the expense of home-country employment is in line with other studies. What is more, a number of studies indicate that a decline in affiliate wages is even associated with an increase in parent-firm employment. The aforementioned paper by Marin (2004) is one of them. More specifically, her estimates show that, on average, a 10-percent decline in affiliate wages in CEE countries leads to a 1.6-percent increase in parent-firm employment in both Austria and Germany.

... in fact, there is evidence that outward FDI supports home-country output and employment, in particular when FDI is in search of lower production cost.

There is one feature of the empirical literature on the link between employment in parent firms and their foreign affiliates that must be mentioned. The literature does not investigate the home-country employment effect of the investment decision as such, i.e. the direct effect of outward FDI. Rather, what it concentrates on is the degree of job relocation in response to changes in affiliate-firm wages conditional on the foreign investment haven taken place already. As we have pointed out above, leaving aside the appropriate counterfactual, the direct effect on home-country employment of transferring part of the production abroad is negative. A recent study by Barba Navaretti and Castellani (2003) tries to account for the direct employment effect of the foreign investment

while setting the right counterfactual. They compare the employment dynamics of Italian firms that have been investing abroad for the first time with the employment dynamics of firms that have not. They do not find that changes in employment of first-time foreign investors are significantly different from indigenous firms, which again suggests that outward FDI is not to the detriment of home-country employment.

This takes us to the last issue in this section, namely the implications of outward FDI for the distribution of income, specifically the position of low-skilled workers. From the perspective of high-wage home countries, the increasing internationalisation of production means that more and more of the low-skill-intensive production stages are transferred to low-wage countries, leaving high-wage countries to focus on high skill-intensive activities. As a result, one would expect home-country demand for skilled labour to increase and for unskilled labour to fall and, hence, income distribution to change in favour of skilled labour.⁸ But is there empirical evidence for such a skill upgrading of production in high-wage countries?

The answer seems to depend on whether the underlying empirical approach rests on industry-level data or firm-level data. Studies using industry-level data do not point to an increase in the demand for skilled labour. By contrast, analyses based on firm-level data suggest a positive and statistically significant impact on the skill-intensity of TNC production in high-income home countries. There are also indications that skill upgrading in home countries rises with the share of affiliate employment in low-wage host countries. A different and very intriguing picture emerges from the study by Marin (2004). She finds that German and Austrian outward FDI to Eastern Europe is skill- and R&D-intensive, which suggests a relative scarcity of human capital in Germany and Austria.

To conclude, the widely-held view that outward FDI impairs home-country output and employment is mistaken. On the contrary, economic reasoning and empirical evidence suggest that outward FDI supports output and employment at home and, thus, is a good strategy not only for investing firms but for the home country at large. Interestingly enough, the favourable feedback on home-country activities may be particularly high when it is least expected, namely in the case of cost-reducing vertical FDI to low-wage countries. Though not examined here, there are also indications that foreign investment enhances the productivity of investing firms relative to those that do not venture abroad. That said, like other aspects of economic integration, outward FDI to countries well endowed with low-skilled labour is likely to change the distribution of income, weakening the income position of the unskilled in the home country. This may have many policy implications. One is surely public support for human capital investment to ensure that initial losers of globalisation become winners before too long.

Overall, this section and the previous one convey a fairly upbeat message about the benefits of international production, and apart from distributional concerns there seems to be little to worry about. Or is there?

8 Note that the deterioration in the income position of the unskilled comes about through lower wages (when labour markets clear) or unemployment (when there is downward rigidity of wages), or a combination of the two.

A key policy challenge for high-income countries is how to respond to the decline in demand for unskilled labour possibly resulting from outward FDI.

4. Races to the bottom that do not seem to have taken off

Like other facets of globalisation, the internationalisation of production is often feared to end in a “race to the bottom”. In fact, critics see the race taking place in many fields: wages – more generally standards in the workplace – tumbling in response to global competition, corporate tax rates plummeting as countries compete for investors, and – for a similar reason – environmental regulations gravitating towards the lowest standard. In essence, we have discussed the “wage race” in the previous sections, arguing that the internationalisation of production seems to encourage a race to the top rather than the bottom, but emphasising as well distributional implications and the need for economic policies to address them. That leaves potential races to the bottom in the fields of corporate taxation and environmental standards.

The impact of company taxation on the direction of FDI flows is clearly high on the political agenda of some EU member states, in particular with the accession of low-tax CEE countries to the EU.⁹ A recent study by Ernst & Young and ZEW (2003) indeed shows low effective average corporate tax rates in CEE countries, ranging from about 13 percent in Lithuania to some 25 percent in Poland, which compares to a rate of 37 percent in Germany, for instance. Austria, which seems to be especially exposed to competition due to its geographical proximity to the new EU members, has already reacted, cutting its statutory corporate tax rate from currently 34 percent to 25 percent from 2005 on; with this cut, the Austrian effective average tax rate is estimated to fall to 21 percent. Are other countries bound to follow and, more important, is there a risk of declining tax revenue, widening fiscal deficits, and governments running out of funds to finance public investment and the welfare state?

The work of Devereux, Griffith, and Klemm (2002) and Devereux, Lockwood, and Redoano (2002) on tax reforms in industrial countries and the impact of such reforms on the investment of TNCs provides some guidance in answering these questions: first, the decision of firms where to invest seems to be influenced by effective average tax rates, whereas the decision how much to invest appears to be affected by the effective marginal tax rate; second, over a period of two decades, effective average tax rates have declined in almost all countries, while effective marginal tax rates have hardly changed. The influence of effective average tax rates on the direction of FDI and their decline in recent years can be taken as a sign of tax competition between countries. That said, the work of Devereux *et al.* also shows that despite declining effective average tax rates, corporate tax revenues have remained constant relative to GDP,¹⁰ though they have fallen relative to other tax revenues. Overall, indications are that there is tax competition between countries, but this does not appear to have undermined their capacity to generate corporate tax revenues.

While many countries have lowered company tax rates, this has not undermined their ability to generate company tax revenues.

In any event, the very notion that some EU countries engage in unfair tax competition, even tax dumping, and that corporate tax rates should be harmonised is questionable.

⁹ Financial Times (2004). “Germany and France to call for EU corporate tax revamp”. May 13, 2004.

¹⁰ Tax reforms were generally characterised by cuts in statutory rates coupled with a broadening of the tax base; this helps explain why corporate tax revenues have not changed much relative to GDP.

The heterogeneity of countries in an economically integrated area speaks against harmonising company tax rates across countries.

The case against tax harmonisation at a common rate has been made by Baldwin and Krugman (2004), for instance. Their argument rests on the observation that countries differ, with “core” countries enjoying locational advantages over countries at the “periphery”. Locational advantages include an established infrastructure, proximity to markets, and positive agglomeration externalities. These advantages pull investment to the core and, in fact, enable core countries, within limits, to impose higher taxes on capital than the periphery without deterring investors. In essence, by levying higher taxes, core countries extract the locational rents that would otherwise accrue to investors.

A number of intriguing insights follow from the Baldwin-Krugman analysis. First, differences in locational characteristics of EU countries imply that optimal corporate tax rates vary across countries. Second, low corporate tax rates in the periphery of the EU do not necessarily indicate unfair tax competition. Rather, they can be seen as a strategy of the periphery to offset locational disadvantages. As Kokko and Gustavsson (this volume) put it almost poetically: “...locations with unfavourable climatic conditions (e.g. northern Sweden and Finland) will look for ways to compensate for the handicap of long, cold, and dark winters.” Third, given that the core can afford high tax rates without deterring investors and because agglomeration forces may get stronger pulling more and more FDI to the core, tax rates could race to the top rather than the bottom. Fourth, tax harmonisation at a common rate between the highest and the lowest optimal rate is bound to be welfare reducing for almost all countries. And, finally, setting a tax floor just below the lowest optimal corporate tax rate is welfare improving for the core without hurting the periphery. Clearly, tax-floor harmonisation results in a minimum rate far below the level that policy makers in core EU countries have in mind.

To wrap up our brief discussion of tax competition issues in the EU: although statutory corporate tax rates and effective average rates have fallen, they have not raced to the bottom and the government tax take has not declined; more important, there are good reasons for a variation in tax rates across economically integrated but heterogeneous regions; while some countries continue to argue in favour of harmonising tax rates, the focus of the European Commission (and the OECD) has turned to avoiding harmful tax practices (such as distortions in the taxation of capital income) and increasing transparency by harmonising tax bases.

This takes us, finally, to the claim that the liberalisation of trade and investment makes environmental standards race to the bottom. As far as FDI is concerned, the worry is that firms facing tough environmental standards at home relocate production to “environmental havens”, thereby exerting pressure on home and host countries to soften their environmental regulations. Is this a problem and to what extent is it relevant for FDI in an enlarged EU?

As to the first part of the question, it is worth pointing out that the optimal degree of regulating local environmental pollution differs across countries for a number of reasons, including cross-country variations in income and thus preferences for a clean environment and differences in the marginal ability to absorb pollution. Against this background, a relocation of locally polluting industries to countries with lower environmental standards could well increase global welfare and, as and when the income in host countries grows, the demand for a cleaner environment. Empirical support for a dispassionate, if not positive, assessment of the impact of international production on the environment comes from a variety of sources. For instance, examining US outward FDI, Leonard (1988) found that pollution-intensive investment did not grow more rapidly than other manufacturing

FDI and that the share of pollution-intensive investment in total US FDI to developing countries was not higher than the corresponding share in FDI to advanced countries. And then, the OECD (2002) observes that there is little empirical evidence suggesting that, on average, the activities of TNCs weaken environmental standards. What is more, the World Bank (2001) refers to empirical evidence indicating that a rise in FDI does not coincide with a decline in environmental quality.

There is also reason to be confident that EU enlargement will not trigger an environmental race to the bottom – on the contrary. With accession to the EU, CEE countries have adopted the *acquis communautaire*, which includes a variety of directives aimed at improving environmental quality in the EU. It is true that these directives do not, and perhaps should not, cover all areas that give rise to environmental concerns and that derogations allow new members to phase in the implementation of these directives. However, the additional time to fully comply with EU environmental directives is five to ten years and the risk that TNCs from the EU-15 will seize this period as an opportunity to transfer pollution-intensive industries from west to east is probably small, notably when TNCs already apply environmentally less damaging technologies elsewhere in the EU (Lundan 2004). In any event, EU environmental regulations, even when phased in, are probably more demanding than what new members would have chosen had they not joined the EU. In that sense, environmental standards are pulled up rather than racing to the bottom.

There is reason to expect the internationalisation of production to foster a cleaner environment rather than a race to the bottom.

In the context of environmental issues it is of interest to take a fresh look at the link between transport cost and the growing internationalisation of production. We have pointed out above that low transport costs foster the geographical distribution of different production stages. But it is also well known that transport generates negative externalities, notably noise, congestion and air pollution. Estimates suggest that the external costs of transport are possibly large, amounting to 8 percent of EU-15 GDP (INFRAS 2000). Road transport is reckoned to account for more than 90 percent of total external costs, and light duty vehicles and heavy duty vehicles alone are estimated to be responsible for some 30 percent; aviation and rail are estimated to account for about 6 percent and 2 percent, respectively. Such estimates are surrounded by a fair degree of uncertainty, but they nevertheless raise the question whether the internationalisation of production may have gone too far, thriving on transport costs that do not tell the economic truth. The short answer is no, mainly because a good part of the external transport costs caused by international production seems to be internalised.

We base this judgement on Nash *et al.* (2001), who review case studies on main trans-European transport corridors. Given the large share of road freight in total external cost, this transport mode is of particular importance from the perspective of the internationalisation of production in Europe. As to road freight, Nash *et al.* find only some degree of over-pricing on some corridors, and under-pricing on others (with over-pricing meaning that transport users pay more than the sum of private and external costs of transport; in the case of under-pricing, they pay less). Another result relevant for our topic is that the impact of optimal pricing on the volume and the means of transport is likely to be confined to traffic in urban areas, which is certainly of little importance for the internationalisation of production.

To summarise our reporting from the racetrack: race there is, but it seems to be in a direction that critics of the internationalisation of production do not expect.

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ABSTRACT

This paper describes long-term trends in international production, i.e. the production of goods and services that is under the governance of transnational corporations – either through foreign direct investment (FDI) or non-equity arrangements. It recounts the rapid growth in international production, the increasing importance of non-equity arrangements, and the shift towards services. The paper then examines the geography of FDI, emphasising that EU countries have emerged as a major source and destination of FDI – a process shaped considerably by EU integration. New EU members from Central and Eastern Europe received substantial FDI inflows in the transition from plan to market. Recognising FDI opportunities that emerged for these countries from regional integration, the paper takes a cautionary stance as to whether these countries can expect increased FDI inflows following EU accession.

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Long-term trends in international production

1. Introduction

Since the mid-1980s, international production has grown very rapidly, playing a larger and more important role in the world economy and changing the ways in which economic integration takes place among countries. It has become a key driving force of globalisation, growing faster than other economic aggregates such as national production and international trade. The nature of international production has also changed, responding to rapid technological change, intensified competition and economic liberalisation. These factors, combined with falling transportation and communication costs, are allowing transnational corporations (TNCs) to integrate production processes and other corporate functions across countries in historically unprecedented ways. The United Nations Conference on Trade and Development (UNCTAD) *World Investment Reports* have termed this process “deep integration” – integration at the production level – with specialised activities located by TNCs in different countries linked by tight, long-lasting bonds, in distinction from “shallow integration” of markets alone, brought about by arm’s-length trade that earlier dominated international economic relations (UNCTAD 1999).



Zbigniew Zimny

This paper proceeds in Section 2 with an overview of long-term trends and key features of the internationalisation of production. This section will argue that the internationalisation of production results not only from foreign direct investment (FDI), but also increasingly from non-equity relationships between firms from different countries. Section 3 zooms in on the changing sectoral composition of FDI, and Section 4 portrays the changing geography of FDI. Following up on this, Section 5 examines how EU integration has affected the position of EU member states in international production and what to expect from the enlargement of the EU to countries of Central and Eastern Europe (CEE). Section 6 offers concluding observations, including an observation on key global policy issues.

2. International production: definition, main trends, and key features

2.1 What is international production?

International production refers to the production of goods and services that is under the governance of firms – called transnational corporations (TNCs) – headquartered in other countries. TNCs govern, that is, manage or exercise control over production in countries (host countries) other than their own country (home country) either through the ownership of a minimum share in the equity capital stock of the enterprises (foreign affiliates) in which the production takes place, or through contractual (non-equity) arrangements that confer control upon them (UNCTAD 1999). As a result, international production systems emerge in which not only goods and services but also factors of production move among units governed by TNCs, located in different countries. These systems increasingly cover a variety of activities, ranging from extraction of natural resources to manufacturing and service functions such as accounting, advertising,

marketing, research and development (R&D) and training, dispersed over host country locations and integrated across locations (host and home) to produce final or intermediate goods or services.

From the perspective of factor use, and of the world economy, all of the production that takes place in these systems (in parent firms or home-country units as well as in foreign affiliates or host-country units) constitutes international production. Viewed from the perspective of home and host countries, however, it is, respectively, the production in foreign locations by a country's own firms and the production by foreign firms in a country's own locations that constitutes international production.

It is this latter concept of production, i.e. production by foreign affiliates, that is most commonly used to depict international production. For lack of better measures, flows and stocks of foreign direct investment (FDI) are used as proxies for the activities of TNCs and international production. FDI flows represent annual changes in these activities, while stocks give an idea about the accumulated value of the capital owned by TNCs that forms the base for international production. Though imperfect, FDI data – especially flow data – are published by most countries of the world, thus allowing broad inter-country comparisons. This is not the case with other data, e.g., sales, output or employment, not mentioning production controlled through non-equity arrangements. These data are only available for selected countries and will also be used here to illustrate broad trends.

2.2 The emergence and growth of international production

Until not long ago the main form of countries' integration with the world economy was trade. International production as an important form of international economic involvement is a fairly recent phenomenon. A prominent scholar in international production and TNCs' activities noted in a book published in the early 1980s that production "undertaken by enterprises which deliberately coordinate their operations (purchasing, production, finance, R&D, marketing) on a global basis to make the most efficient use of their resources (material, financial, technical and managerial) is still more the exception than the rule. Even on the eve of the Second World War, the value of such production was only one-third that of international trade. In the mid-1950s and 1960 the growth of such production outpaced that of trade, and in spite of trade liberalisation and rising oil prices, by 1976 it had exceeded that of trade." (Dunning 1981, p.388).

The internationalisation of production has grown faster than global economic aggregates.

During the past two decades all indicators of international production associated with TNC-governance through ownership have increased much faster than global economic aggregates (Table 1) and, as a result, international production is of considerable importance to the world economy, much greater than ever before. Global sales of foreign affiliates were about two and a half times higher than global exports in 2002, compared to almost parity about two decades ago. Global gross product attributed to foreign affiliates was about one-tenth of global GDP, compared to 6 percent in 1982. The ratio of the FDI stock to global GDP has risen from 6 percent to over one-fifth over this period. The ratio of FDI flows to world gross domestic capital formation was 10 percent in 2002, compared to 2 percent in 1982 and 5 percent in 1990. It is significantly higher for manufacturing – around one-fifth – and typically much higher in developing countries than in developed countries.

Table 1. Selected indicators of international production, 1982–2002

	Value at current prices (in billions of US dollars)				Annual growth rate (in percent)		
	1982	1990	2000	2002	1986 -1990	1991 -2000	2001 -2002
FDI inflows	59	209	1,393	651	23.1	30.3	-21.0
FDI outflows	28	242	1,201	647	25.7	25.8	-9.0
FDI inward stock	802	1,954	6,147	7,122	14.7	13.1	7.8
FDI outward stock	595	1,763	5,992	6,866	18.0	13.7	8.7
Cross border M&As	...	151	1,144	370	25.9	37.1	-37.7
Sales of foreign affiliates	2,737	5,675	15,087	17,685	16.0	10.5	7.4
Gross product of foreign affiliates	640	1,458	2,807	3,437	17.3	7.3	6.7
Total assets of foreign affiliates	2,091	5,899	23,460	26,543	18.8	16.6	8.3
Export of foreign affiliates	722	1,197	2,594	2,613	13.5	8.6	4.2
Employment of foreign affiliates ('000)	19,375	24,262	51,013	53,093	5.5	8.4	5.7
GDP (in current prices)	10,805	21,672	31,319	32,227	10.8	3.4	3.4
Gross fixed capital formation	2,286	4,819	6,598	6,422	13.4	2.5	1.3
Royalties and licences fees receipts	9	30	75	72	21.3	10.2	...
Export of goods and non-factor services	2,053	4,300	7,780	7,838	15.6	4.4	4.2

Note: Data on foreign affiliates are estimates.

Source: UNCTAD based on its FDI/TNC database and UNCTAD estimates.

The number of firms that have become transnational has risen exponentially over the past three decades. In the case of 15 developed countries for which data are available, the number of TNCs increased from some 7,000 at the end of the 1960s to around 40,000 in the second half of the 1990s. The number of parent firms worldwide is now in the range of 60,000. They form a diverse universe that spans all countries and industries, and include a large and growing number of small and medium-sized enterprises. More and more TNCs hail from countries that have only recently begun to undertake international production – witness the growth of TNCs from some developing countries and economies in transition. The roughly 60,000 parent firms mentioned above have an estimated 700,000 foreign affiliates (UNCTAD 2003a).

Transnational corporations include a large and growing number of small and medium-sized enterprises.

2.3 Mergers and acquisitions increasingly drive international production

Cross-border mergers and acquisitions (M&As) are now key drivers of international production. During the second half of the 1990s, when international production was booming, most of its growth was via cross-border M&As rather than greenfield investment. It is not possible to determine precisely the share of cross-border M&As in FDI flows.¹ Making an extreme assumption that all cross-border M&As are financed by FDI

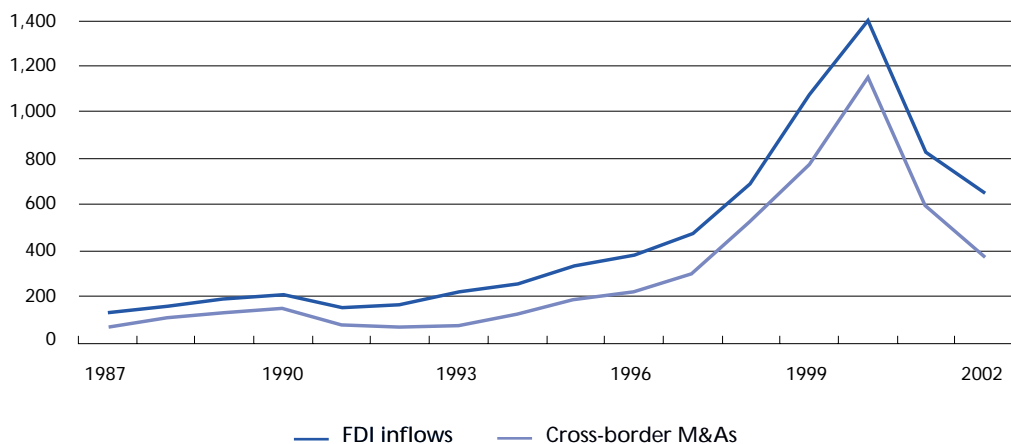
¹ The reason is that although both data series, i.e. cross-border M&As and FDI flows, measure similar phenomena, they do so in different ways. To illustrate, when a company from one country acquires a company from another country, the M&A database records the whole value of the transaction (on an announcement or a completion basis) in a particular year even if actual payments are phased over several years or the actual value of the transaction differs from the announced one. FDI data will record only the part of the transaction financed by acquiring company's own funds. Furthermore, only actual payments in a particular year would be registered. In addition, FDI data would not register the transaction at all if it were financed by a loan raised in the capital market of the host country (for more on this, see UNCTAD 2000, pp. 104-106).

EU firms play an increasing role in cross-border mergers and acquisitions.

(certainly incorrect for developed countries, but less so for developing countries and economies in transition), the ratio of cross-border M&As to world FDI inflows increased from 52 percent in 1987 to 83 percent in 1999. For developed countries, the ratio is much higher, having risen from 62 percent to 100 percent between these years. For developing and transition countries, the ratio is lower, but has been rising with considerable variations among regions and countries. The bulk of cross-border M&As takes place among developed countries, with EU firms playing an increasingly important role: the share of EU firms in cross-border M&A sales has increased from an average of 34 percent during 1987-90 to 51 percent during 1995-2002, while the share in purchases increased from 50 percent to 63 percent (UNCTAD 2003a). The growing importance of EU firms in cross-border M&As was triggered by the Single Market programme (see below) and the global restructuring of industries, which led EU firms to acquisitions of US companies, especially in the second half of the 1990s.

Given the strong correlation between FDI flows and M&As, the rhythm and fluctuations of the latter determine annual patterns of FDI flows. When M&As fall, as they drastically did during the economic slowdown of 2001-02, FDI flows follow (see Figure 1).

Figure 1. FDI inflows and cross-border M&As in billions of US dollars, 1987-2002



Source: UNCTAD (2003a).

2.4 The growth of non-equity relationships

Traditionally, cross-border agreements – or non-equity relationships between firms in different countries – played an important role in the global expansion of firms. In services industries, in particular, non-equity relationships between firms have been more important than equity-based relationships. International restaurant networks, especially fast-food chains, car rentals and retail trading networks have been frequently based on franchising agreements. And then, management contracts are used in the hotel industry (together with equity forms), and partnerships rather than equity links in services such as accounting, business consultancy, engineering and legal services (Mallampally and Zimny 2000). Globalisation has led to an explosive growth of international agreements among firms, with their range growing ever wider. Now they are part and parcel of international

production, complementing traditional FDI, and in particular M&As, as a form of restructuring resources and capabilities of firms in response to globalisation. The number of such agreements (excluding technology agreements and including joint ventures) concluded annually increased from 1,760 in 1990 to 4,600 in 1995 (UNCTAD 1997).

Inter-firm agreements today serve a variety of corporate objectives. Two motivations stand out as particularly important. One is better access to technology, allowing firms to accelerate innovation and share the cost and risk of innovatory activities. Another is streamlining resources and capabilities of firms through focusing on core competencies and shedding less important assets. The first motivation has boosted technology agreements (including strategic alliances) while the second has given rise to outsourcing of non-core activities to other firms.

Over the period 1980-96, a total of 8,254 inter-firm technology agreements were recorded, with their number growing from an annual average of less than 300 in the early 1980s to over 600 in the mid-1990s (UNCTAD 1998). Industries that are highly knowledge-intensive have the largest number of agreements. During 1980-96, information technology was the top industry in this respect, accounting for 37 percent of all agreements. Pharmaceuticals, notably bio-pharmaceuticals, were another important industry, with a 28 percent share in 1996 (up from 14 percent in the early 1980s). In less knowledge-intensive industries – food and automotive industries – the number of agreements peaked in the mid-1980s, but has declined in both industries since then, although inter-firm technology agreements picked up again in the food industry in the first half of the 1990s. Triad members (comprising firms from the EU, Japan and the United States) are dominant partners in these agreements. By the mid-1990s, 86 percent of these agreements had at least one US partner, 42 percent one EU partner, and 31 percent one Japanese partner. The participation of developing country firms increased from 3 percent in 1989 to 13 percent in 1995.

The rise in technology agreements reflects drastic changes in the technological environment of firms since the mid-1980s, which evolved from being reasonably predictable and stable to much more dynamic, variable and unpredictable. To name a few: patterns of demand change more rapidly than before, faster innovation reduces product life cycles, product development times become shorter and flexible, manufacturing techniques put additional pressures on firms. All these increase costs and heighten uncertainty, while at the same time technology increases in importance as the key competitive asset of firms. Initially firms turned to M&As for assembling the critical mass of technological resources to stay competitive. But M&As have frequently proved to be insufficiently flexible, hence firms have resorted to agreements: often firms do not want to acquire, or gain access to, all the assets of other firms, but only those that enhance their competitiveness (Dunning 1995).

Two caveats need to be made here. One is that inter-firm agreements do not seem to replace FDI, or, for that matter M&As. Indications are that both go hand in hand, being complements rather than substitutes (UNCTAD 1998). The second caveat is that technology, although very important, is not the only asset sought in inter-firm agreements, and consequently, technology agreements are not the only agreements on the rise. Gaining access to new markets or distribution channels and capturing economies of scale can be no less important for many firms, giving rise to a myriad of inter-firm agreements.

Non-equity relationships, notably technology agreements, have become an increasingly important feature of international production.

Transnational corporations are focussing on their core competencies, and they outsource more of their non-core activities.

A striking recent trend in the governance of international production systems in manufacturing and increasingly in services is the focus on “core competencies”, that is, activities in which “TNCs can deploy proprietary advantages, wield market power and, consequently, enjoy higher returns” (UNCTAD 2002, p. 122). This leads to greater outsourcing of a greater range of activities, giving rise to further growth of non-equity forms of international production beyond alliances or partnerships. The outsourcing trend creates even more complex structures of international production. In particular, leading TNCs have begun to withdraw from manufacturing altogether, leading to the emergence of contract manufacturers that specialise exclusively in manufacturing for other firms, in particular TNCs. Contract manufacturing differs from earlier non-equity forms such as original equipment manufacturing in that brand-holding TNCs do not simply draw on subcontractors for extra production capacity, but outsource the entire manufacturing function for individual product lines or, in some cases, like Cisco Systems, the entire product range.

Contract manufacturing is difficult to capture statistically. Some figures for the electronics industry give a broad idea of the magnitudes involved. Between 1998 and 2002, the global market for this type of activity in this industry is estimated to have increased by 140 percent, from USD 58 billion to USD 139 billion. Indications are that the share of contract manufacturing in electronics will rise from 8 percent in 1999 to 18 percent in 2004. In 2002, the largest four contract manufacturers each had revenues of over USD 10 billion, two of them being US firms, one Canadian and one Singaporean, Flextronics, (UNCTAD 2002). They had facilities all over the world – in developed, developing and transition economies.

Shedding assets or activities leads, more often than not, to equity and non-equity forms of international production instead of arm’s-length trade, as market imperfections that encourage internalisation still exist. Therefore, “the strategic need to maintain influence over the design, quality and supply of inputs, the processing of downstream activities and the pace and direction of innovation is even greater” (Dunning 1995, p. 139). So, even though international production systems are increasingly based on non-equity arrangements, TNCs typically exert significant authority through controlling key functions, such as brand management and product definition, as well through the setting and enforcing of technical, quality and delivery standards throughout the network of formally independent producers.

To summarise this section: the internationalisation of production has grown rapidly since the beginning of the 1980s; while foreign direct investment – notably in the form of mergers and acquisitions – seems to be the more prominent aspect of this process, non-equity relationships between firms around the globe are also of considerable importance, complementing FDI as a means of increasing the corporate efficiency of producing goods and services. But has this process been even across sectors and geographical areas? The next two sections will argue that it has not.

3. The sectoral composition of FDI: the shift towards services

The rapid growth of FDI in the recent past has been driven largely by FDI in services. As a result, the sectoral composition of global FDI has shifted towards services. During the

1950s, FDI was concentrated in the primary sector and manufacturing. The latter FDI was of a market-seeking type, motivated by access to national markets, often sheltered from international competition by trade barriers. Today, it is mainly in services and manufacturing. The long-term shift towards services has been consistent over time: services represented less than a quarter of the stock of FDI of major home and host countries at the beginning of the 1970s; by 1985, the share of services had increased to 40 percent, and a further increase to almost 50 percent materialised by 1990 (Mallampally and Zimny 2000); the shift has continued since then and, as a result, the share of the services sector in world FDI stock now amounts to some 60 percent (UNCTAD 2003b).

In absolute terms, the FDI stock has grown in all sectors and almost all industries. Even in agriculture, hunting, forestry and fishing – traditionally not important FDI industries – the stock of inward FDI more than doubled between 1990 and 2001, while that in manufacturing tripled. The stock of inward FDI in services, however, quintupled, and the share of manufacturing thus fell to 35 percent in 2001 (from 40 percent in 1990). The share of the primary sector also declined, from 10 percent to 6 percent.

The growing significance of services FDI has taken place mainly due to FDI in non-tradable services which, not being transportable or storable, must be produced where they are consumed. FDI is often the only means of delivering them to foreign markets. In addition, in some services (such as insurance services or retail banking), which technically could be traded, host-country regulations often require local establishment for their delivery. Initially, two services industries dominated services FDI – financial and trading services. This reflected the early international expansion of trading companies (e.g., Japanese *sogo shoshas* and Western European traders) and transnational banks, which followed their customers abroad. In addition, manufacturing and primary sector TNCs used to establish foreign affiliates in these services in support of trade and other operations abroad. Although investments in these services continue, they are not as dynamic as those in other non-tradable services such as electricity (which registered a 13-fold increase in inward FDI stock between 1990 and 2001) and telecommunications and transport (a nearly 15-fold increase), as well as in business services (a nine-fold increase). As a result, finance and trading decreased from 65 percent of all inward services FDI stock in 1990 to 45 percent in 2001, while that of the “new” FDI service industries rose from 17 percent to 44 percent.²

A boost to investment in services, including in the “new” service industries, occurred when both developing and developed countries started revising their policies towards the services sector in the second half of the 1980s, with former central-plan economies following suit in the 1990s with the onset of transition. Governments set in motion a process of liberalisation with respect to domestic as well as international production and provision of services. Domestic and foreign competition has been increasingly viewed as a tool for increasing the efficiency of service industries, which in turn are recognised as being critical for economic performance generally. Deregulation and privatisation of service industries (in particular infrastructure services such as telecommunications, power generation, transportation and the provision of water) followed, combined with an opening up to FDI. On the international front, the creation of the Single Market in the EU

FDI in services received a boost from the liberalisation of network industries.

² Other dynamic services include health and education where stock increased by 12 and five times, respectively, over the same period; but the absolute size of the stock in these activities is still very small.

provided a powerful inducement for both EU and non-EU TNCs to invest in service industries of EU countries. The completion of the Uruguay Round and the adoption of the General Agreement on Trade in Services (GATS) have provided an additional channel for further liberalisation of developing and transition countries' policies related to FDI in services.

Notwithstanding the rapid growth in services FDI, the scope for further expansion of FDI in non-tradable services remains considerable. Prospects for services FDI have been further enlarged by advances in information and telecommunication technologies, which have greatly enhanced the abilities for processing and transporting information between geographic locations and, consequently, for the cross-border tradability of information-intensive services or parts thereof. As a result, we are witnessing a fragmentation of the production of some services by TNCs in all sectors and the relocation of production to developing and transition economies, resembling the process that took place in labour-intensive manufacturing some 20-30 years ago. According to a recent survey of the world's largest companies by AT Kearney, a global business consultancy firm, over the next three years, nearly 80 percent of cross-border business-services outsourcing, leading to export-oriented FDI and non-equity arrangements, will take place in services such as IT support, back office functions, R&D, call centres, distribution and logistics and treasury operations (AT Kearney 2003). This changes the nature of FDI in services. It will allow TNCs to pursue internationally integrated production strategies, leading to efficiency-seeking FDI, which so far has been a characteristic of the international production of goods such as cars, clothing, toys, semiconductors and other electronic products. Now, TNCs in various industries locate more and more services activities along the value chain of services in their affiliates abroad and integrate them with activities elsewhere within their production systems (Zimny and Mallampally 2002).

Cross-border outsourcing of business services further enhances the efficiency of international production systems.

4. Changing geography of FDI

When considering the geography of FDI, it makes sense to proceed in two stages. First, it is necessary to examine which are the main home countries (i.e. sources of FDI) and which are the main host countries (i.e. destinations of FDI). Second, one can ask to what extent home and host countries overlap and why. In answering why there is an overlap between host and home countries, one needs to look at the forces that give rise to regional clustering of FDI and those that foster inter-regional FDI. The structure of this section reflects this approach.

4.1 Home countries: EU countries take the lead

During the two decades after the Second World War, outward FDI was dominated by the United States and a few former colonial powers of Western Europe. In 1960, four countries accounted for over four-fifths of the world outward stock of FDI. The United States was the largest home country, holding around half of the world stock, followed by the United Kingdom (18 percent), the Netherlands (10 percent) and France (6 percent) (UN CTC 1988). Almost all FDI originated from developed countries.

During the decades that followed, the geographical composition of outward FDI became more diverse, especially among developed countries. The dominance of the four countries

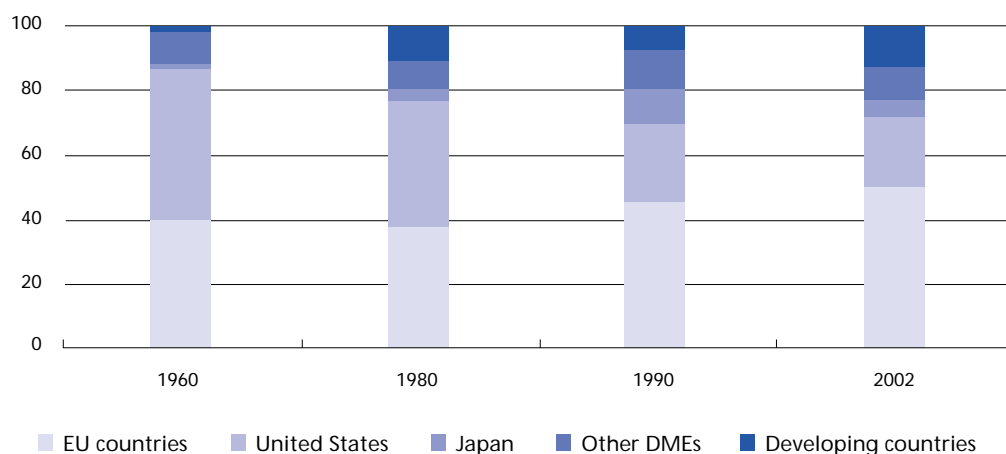
mentioned subsided to some two-thirds during the early 1980s; it has fallen further since then, reaching some 50 percent at the beginning of the new millennium. Their relative drop happened, however, almost entirely due to the declining share of the United States, to one-fifth of the global FDI stock in 2002. By contrast, in 2002, the share of the three remaining countries was close to that in 1960 (30 percent vs. 34 percent), fluctuating during the 1980s and 1990s around one-quarter. The United States remains the largest home country in the world, but the distance to the countries following it largely diminished. New major global players and a group of smaller investor-countries, which stepped up their foreign investments over the past few decades, account for the declining US share in outward FDI. But which countries have emerged as the new kids on the block?

Outward FDI has become geographically more diverse, and EU countries have taken the lead.

Japan's role in outward FDI has seen dramatic ups and downs. As regards individual countries, the largest upsurge in foreign production originated from Japanese TNCs, which increased their investment sharply, particularly in the United States in the 1980s and in Europe in the 1990s. Between 1980 and 1994, Japanese outward stock increased 14 times, and Japan's share in the world stock rose from 3½ to 12 percent. In the early 1990s, Japan outpaced the United Kingdom and had the second largest outward stock. But with the prolonged stagnation of its economy during the 1990s, Japan lost this position and its share declined to some 5 percent by 2002. Japan, however, remains a significant home country in terms of the absolute size of FDI stock (ranking seventh in the world).

TNCs from developing countries have entered the scene. Another significant change was the emergence of TNCs based in the developing world. In the 1970s and 1980s, their investment was about 3 percent of the world total (UN CTC 1988). It was mainly trade supporting FDI and investment in services catering to the needs of emigrants from these countries. This share rose to around 11 percent in the early 1990s and, with some fluctuations, stayed at this level for the next decade. Almost all the increase originated in a few newly industrialising Asian economies, including the Republic of Korea, Taiwan Province of China, Singapore and Hong Kong (China), as part of a regional flying-geese pattern: when these economies started losing comparative advantage in

Figure 2. Composition of global outward FDI stock (in % of total)



Notes: DME = developed market economies.
Source: UNCTAD (2003a).

unskilled labour-intensive manufacturing, their firms moved out to seek more competitive locations in the region, more recently in China in which Hong Kong (China) is by far the largest investor. Automotive and electronics TNCs from these countries also undertook a number of investment projects in developed countries. As a result of the emergence of developing countries' TNCs (and recently those from transition economies, although still on an insignificant scale), the dominance of the world stock of FDI by developed countries decreased to below 90 percent (Figure 2).

EU countries have taken the lead. EU countries considerably strengthened their position in world outward investment, increasing their share from 38 percent in 1980 to 45 percent in 1990 and 50 percent in 2001-02. While in 1980 EU countries' stock was similar to that of the United States, in 2002 it was 2.3 times larger. The three mature investing countries mentioned earlier (i.e. the United Kingdom, the Netherlands, and France) and Germany dominate the EU stock, accounting for three-quarters of the Union's 50 percent. But it is worth noting that these countries account for only 3 percentage points of the 12-percentage-point increase in the EU countries' share in the world FDI stock since the beginning of the 1980s – and here foreign investment of French firms stands out. Germany joined the group of the largest EU home countries before the 1980s. Since then, it has retained its position, with its share hovering around 7-8 percent of the world FDI stock. The biggest gain came from the “newcomers” to the EU, the group of small countries and Spain that joined the EU in various years between 1973 and 1995 (Denmark, Ireland, Portugal, Spain, Austria, Finland and Sweden) – almost 7 percentage points, and the balance from Belgium and Luxembourg (whose FDI data are reported together) and Italy. All in all, out of 15 EU member states, 10 increased their shares in global FDI stock between 1980 and 2001, two (the United Kingdom and Germany) maintained their shares and only one, Greece, decreased its share. France and Spain registered the largest gains (3½ and 3 percentage points, respectively) followed by Italy (1.6) and Sweden (1.3).³

4.2 Host countries: more balanced distribution

The field of inward FDI is more crowded than that of outward FDI.

The inward FDI stock has always been much less concentrated than the outward stock. In the 1960s, almost all FDI originated in developed countries; 70 percent of this went to developed countries and the balance to developing countries (Dunning 1993). Obviously, outward FDI requires a pool of companies with ownership-specific advantages, which only a small group of developed countries have, but many more countries have some locational advantages (such as natural resources, a competitive labour force, and/or large and dynamic markets) – a condition to attract FDI. Therefore, the field of inward FDI is much more crowded than that of outward FDI.

³ We have left aside the special case of Luxembourg and, consequently, Belgium because of the joint reporting of FDI data). Luxembourg is a special case because it is a host to a large number of foreign holding companies established there for tax reasons. These companies are used to channel funds between affiliates and parent companies of TNCs located in different countries in order, for example, to acquire foreign companies. As a result, according to FDI data, Luxembourg emerged in 2002 as the world's largest outward investor and the largest FDI recipient, accounting for about 19 percent (USD124 billion) of world inflows and 24 percent (USD154 billion) of outflows. Only a small part of these flows represents genuine FDI, however. In 2002, according to the Banque centrale du Luxembourg, such transshipped investment of funds for further transfer as FDI elsewhere was estimated at about 80 percent of the country's FDI inflows and outflows (UNCTAD 2003a, p. 69).

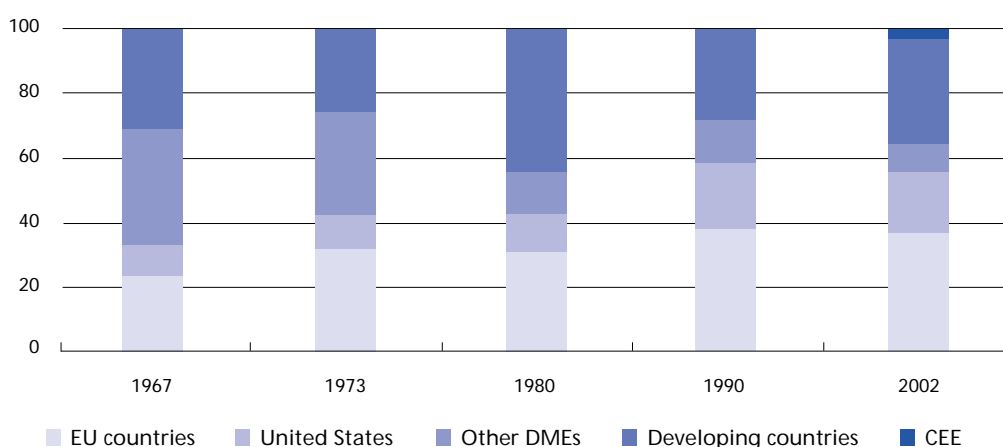
Over time, competition for FDI among countries has intensified, as more countries have opened up to FDI and actively sought to attract it. In the 1990s, competition was more intense than during the 1980s. It is worth noting that increased competition was associated with accelerating FDI growth: from 1980 to 1990, the global inward FDI stock increased 2.8 times, and between 1990 and 2000 3.2 times. In the 1990s, China and transition economies entered the picture, India started to seek FDI more actively than before, Brazil overcame the economic crisis and a number of regional integration schemes came to life, creating large regional markets (e.g., NAFTA or Mercosur) – always an attraction to foreign investors. In this situation it has become more difficult for individual host countries to increase or even maintain their FDI market share. Indeed, the country composition of inward FDI underwent significant changes compared to earlier decades. Given the turbulent FDI market, many of these changes were short-lived and gave way to new ones. But which countries were particularly successful in attracting FDI?

The United States has become the largest host country. In the 1960s and 1970s, the United States was a large host country (with a share in the total inward stock of around 9-10 percent), but not the largest one; the largest one was Canada. In 1979, the United States replaced Canada in this role (UN CTC 1988) and, during the 1980s, became by far the largest host to FDI, accounting for one-fifth of the world total by the end of the 1980s (the United Kingdom came next with 10 percent). Since then, the United States has maintained its share and its distance from other large host countries (Figure 3).

China has emerged as a leading host country. One of the most significant changes in the distribution of inward FDI over the past two decades has been the rise of China to the position of the fourth largest recipient of FDI in the world, from the 17th place in 1980 and 1990. This rise has occurred during the 1990s, when China increased its share of world inward FDI stock from 1.2 percent in 1990 to 6.3 percent in 2002 – a 5 percentage-point increase not matched by any other country of the world. In fact, China accounts for a considerable part of the rise in developing countries' share in inward investment. The greater part of FDI in China originated from developing economies of Asia, particularly Hong Kong (China), and continues to do so.

China's share in the global stock of inward FDI rose substantially over the last decade, with most of the investment originating from Asian developing economies.

Figure 3. Composition of global inward FDI stock (in % of total)



Notes: DME = developed market economies.

Source: UNCTAD (2003a).

CEE has emerged as a new host region. During the 1990s, Central and Eastern Europe emerged as a new destination for FDI, increasing its share in the inward FDI stock from practically zero in 1990 to 2.6 percent in 2002. The eight countries that joined the EU in May 2004 accounted for most of this increase (nearly two percentage points).⁴ That said, the CEE combined stock of FDI (USD190 billion in 2002) is still small; it is not much larger than Ireland's (USD160 billion) and smaller than Brazil's (USD235 billion).

EU countries hold up well amidst tough competition. EU countries posted gains as regards inward FDI, although they were not as big as in the case of outward FDI. Between 1980 and 2001, EU countries increased their share in the global stock from 31 percent to almost 37 percent. All these gains took place during the less competitive decade of the 1980s, however. Since 1990, EU countries have been able to maintain their share amidst increasing competition for FDI and accelerating FDI growth. Between 1980 and 2001, nine out of 14 EU members (Belgium and Luxembourg counted as one) registered increases in their shares, two (Austria and Portugal) showed no change, and the shares in the global inward FDI stock of three countries (Greece, Ireland and the United Kingdom) decreased. Interestingly, the Netherlands, which lost some clout (through losing share) as an outward investor, became a more important host country, increasing consistently its share in global inward FDI stocks from 2.7 percent in 1980 to 3½ percent in 1990 and 4.3 percent in 2001. As a result, the Netherlands has become the third largest host country in the EU (sharing this position with France), after the United Kingdom (8.4 percent share) and Germany (6.3 percent). Although the United States remains by far the largest single host country in the world, EU countries represent the largest host region, with a stock twice as big as that of the United States in 2002.

Foreign investors have shifted away from resource-rich to leading industrial countries.

As regards other long-term changes in the country composition of inward FDI, foreign investors shifted away from resource-rich countries like Canada and Australia to the leading industrial countries, notably the United States and Europe. The main exception in this regard is Japan, whose share in total FDI stock has remained below 1 percent over the past two decades. Within the group of developing countries, there has been a long-term relative shift away from Africa and Latin America to South, East and South-East Asia.

To summarise developments in the direction of inward FDI, there has been a long-term trend towards a more even geographical distribution. In spite of this trend, inward FDI remains highly concentrated within groups of countries. The five largest host developed countries account for 70 percent of developed countries' inward stock, while the top five host developing countries account for 60 percent and the top ten for over 70 percent of this group's inward stock. The concentration ratio for inward flows is similar. For example, the ten largest host developing countries accounted consistently for 70 to 80 percent of total FDI inflows to developing countries between 1990 and 2001 (UNCTAD 2002).

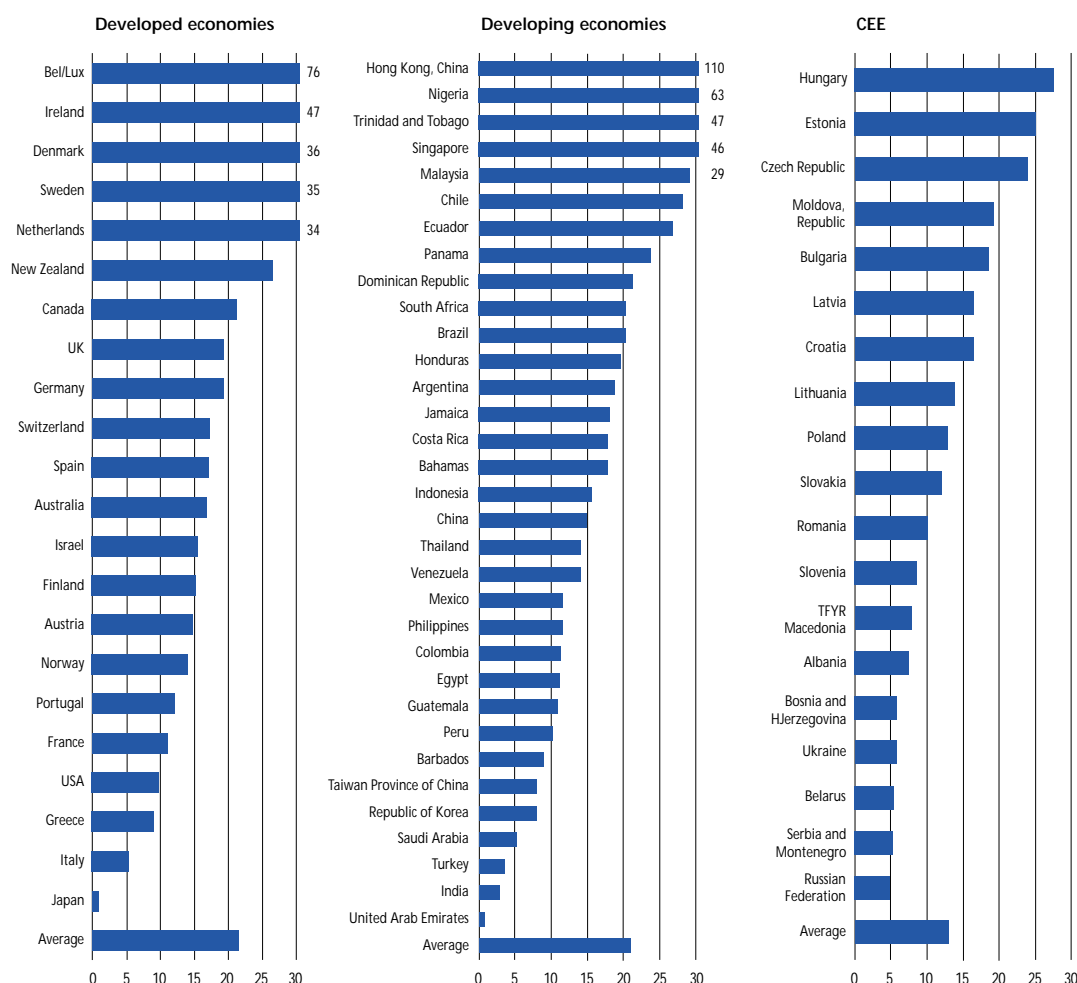
These ratios often serve to illustrate that the overwhelming majority of countries, especially developing ones, are marginalised in international production and, therefore, do not benefit fully from globalisation. While this claim is largely correct, the FDI concentration ratios do not provide a correct picture, as they do not take into account differences in the relative sizes of the economies. After all, what really matters for host

⁴ These are the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia.

countries is the relative role of FDI in their economic activities in terms of its contribution to investment, employment, value added, etc. The UNCTAD transnationality index of host countries tries to measure this role. It represents the average of four shares: (i) FDI inflows as a share of gross fixed capital formation; (ii) FDI inward stock as a share of GDP; (iii) value added of foreign affiliates in percent of GDP; and (iv) employment in foreign affiliates in percent of total employment. The ranking of countries by this index differs considerably from that based on countries' shares in inward FDI (Figure 4), indicating that a group of smaller countries, which will never make it to the group of top FDI recipients, are much more involved in international production through FDI than the largest host countries. To illustrate, only two out of the five largest host-developing economies – namely Hong Kong (China) and Singapore – are also in the top five by the transnationality index. Similarly, this index ranks only five of the ten largest FDI recipients (Malaysia, Singapore and South Africa, in addition to the two above) among the top ten developing countries on the transnationality list. Furthermore, several developing countries – such as Nigeria, Ecuador, Honduras, and Costa Rica – are, relatively speaking, much more involved in international production than China, the largest developing country recipient of FDI.

While the majority of developing countries attract only a small part of global FDI, for many of them the activities of transnational corporations are economically rather important.

Figure 4. Transnationality index of host economies, 2002



Notes: For details concerning the design and computation of the Transnationality Index see UNCTAD (2003a, p.6).
Source: UNCTAD estimates.

Differences between the two lists are even bigger in the case of developed countries. Only one country, the Netherlands, is on both lists, while the top positions on the transnationality list are held by small EU countries: Belgium and Luxembourg, Ireland, Denmark and Sweden, followed by New Zealand and Canada, none of which belongs to the group of the largest host developed countries. The United States, the largest host country in the world, is 19th among developed countries (and 49th among all countries) listed in Figure 4 (not all countries in the world are included, but only those for which the four indicators are available).

4.3 Regional clustering versus inter-regional FDI

The previous two subsections suggest a prominent role of EU economies as both home and host countries for FDI. Evidently, a considerable portion of EU countries' FDI flows and stocks are intra-regional, i.e. they reflect the investment activities of TNCs from one EU country in another. This subsection will highlight the growing importance of intra-EU foreign direct investment and, more generally, sketch how FDI clusters geographically.

Geography, political and cultural factors, and globalisation have contributed to the importance of EU countries as sources and destinations of FDI.

In general, the geographical pattern of international production is shaped by conflicting factors. Two of these factors stand out. One is the preference of firms to invest in neighbouring countries (to which they used to export goods before undertaking FDI) or in countries with which they have close political, economic, cultural and/or language ties.⁵ Regional integration reinforces the importance of this factor by creating larger and potentially more dynamic regional markets. The second factor, increasing in importance with globalisation, is the need of TNCs operating in global industries to be present in all important markets where their competitors have invested and to access competitive capabilities and resources around the globe so as to counter the risk that their competitors will use such capabilities and resources to gain a competitive edge.

To elaborate on the effects of regional integration, an important one is that it facilitates intra-regional investment by removing or reducing restrictions on the movement of capital, goods, services and people and by further protecting investors against member states. At the same time, if regional integration creates a large and dynamic regional market sheltered by trade barriers from the rest of the world, no globally ambitious TNC from outside the region can miss the opportunity to invest there. In sum, regional integration has the potential to foster both intra-regional and inter-regional FDI.

What does this all imply for EU countries' outward and inward FDI? It is fair to claim that EU countries owe their position as the largest source of FDI and a favourite destination for FDI to both factors mentioned above. To start with the empirical evidence on EU countries' outward FDI and the relative importance of intra-regional and inter-regional forces, data show that the share of Western Europe in individual EU countries' outward FDI stock was already high in the mid-1970s – with the exception of the United Kingdom. More specifically, shares ranged from 53 percent in Germany to 72 percent in Belgium/Luxembourg (United Nations 1993). During the following years – until about the mid-1980s – the United States became a much more dynamic destination than EU countries for outward

⁵ Investment in natural resources is an obvious exception: investors often have to accept long distances to countries which have these resources.

investment from the United Kingdom, Germany, France, the Netherlands and Denmark. As a result, the US share in outward FDI of these countries increased at the expense of other EU countries. The trend reversed after the mid-1980s, when the United States' share stagnated or decreased (except in the United Kingdom's outward FDI) while that of EU countries increased. Spain and Portugal stepped up their investment in the region considerably during the period around or after their accession to the EU in 1986. The data for most EU countries as a group, available from the UNCTAD FDI/TNC data base since 1990, show that since the beginning of the 1990s, the stimulus of intra-EU investment has continued: the share of this investment in the EU outward stock increased from 43 percent to 50 percent in 2001. The only other region whose share in EU FDI increased during this period, from almost zero to three percent, was CEE. The share of the United States remained at a high level of 28 percent while that of developing countries decreased from 12 to 8 percent.

As to EU countries' inward FDI stock, the story is broadly similar, with some variations in details. By the mid-1970s, EU TNCs were dominant investors in other EU countries, with their shares in the inward FDI stock of EU countries ranging from 51 percent in the Netherlands to 76 percent in Italy. Exceptions were the United Kingdom and Ireland, where United States TNCs held the largest FDI stock. During the 1980s, intra-EU FDI stimulated investments in the Netherlands, United Kingdom and Germany. At the same time, the intra-EU share in the inward FDI stock of France stagnated and that in inward FDI of Italy dropped – though from a very high level of 81 percent in 1980 (United Nations 1993). At that time, Japan was another dynamic source of FDI into the EU, increasing its share of FDI in all five countries mentioned above. By contrast, the share of the United States increased only in France, but decreased in the remaining four countries. Between 1990 and 2001, the share of intra-EU FDI in total EU inward FDI increased from 37 percent to 60 percent, while the shares of all other major non-EU countries decreased (that of the United States from 28 percent to 24 percent).

Overall, the prominent role of EU member states as a source and destination of FDI suggests strong forces leading to regional FDI clusters. As will be argued in the next section, EU integration is undoubtedly one of the main centripetal forces in this process. But before turning to the role of EU integration, one should note that the geographical pattern of FDI has dimensions other than those apparent from the increasing importance of intra-EU investment. An important one is the clustering of host countries around the EU and the United States (and to a far lesser extent around Japan). One way to illustrate this is to look at the number and geographical location of those host countries that have strong FDI links with the three centres of world FDI activity, namely the United States, the EU, and Japan. Here, a host country is considered to have a strong FDI link with one of these centres if their foreign direct investors account for at least 30 percent of the host country's total FDI inward stock or its FDI inflows within a three-year average.

Using this definition of strong FDI links, it can be shown (UNCTAD 2003a) that the number of countries clustering around Japan is relatively small and has fallen since the mid 1980s. By contrast, clustering around the United States and the EU is much more extensive and confirms, with a few exceptions, the role of geographical proximity and/or special ties. More specifically, 12 out of 19 host countries that had strong FDI links with the United States in 2001 are on the American continent and two (Saudi Arabia and Israel) have close

Host countries cluster around regional centres of gravity, notably the EU and the United States.

political ties with the United States. Furthermore, 17 out of 40 countries with strong FDI links to the EU are from Europe (of which 14 from CEE), eight are from Africa and six from West Asia (essentially, natural-resource-seeking FDI). Both the United States and the EU are major partners for Argentina, Chile, Russia and Switzerland. But in general, close inter-regional ties with one of the centres of gravity are much less frequent than regional ones, and they are often motivated by the need to access natural resources, especially petroleum.

5. EU integration has boosted FDI

As noted above, regional integration can have a considerable impact on FDI, including on its growth, types, geographical, sectoral and industry composition. The EU represents the oldest, largest, most advanced and most successful regional integration scheme in the world. Its establishment, functioning, deepening and extension to new member countries have exerted over the years a significant impact on FDI and, thus, on the position of the EU and its individual members in international production. What follows is a brief overview of key impacts related to the integration process, shedding more light on some of the factors explaining the growing role of the EU in worldwide outward and inward FDI.⁶ Furthermore, this section will offer some views on the impact of integration on the new EU member states from Central and Eastern Europe.

5.1 The establishment of the European Economic Community (EEC)

Preparations for the creation of the EEC in 1958 and the gradual implementation of the provisions of the Treaty of Rome concerning customs union and the common market coincided with large FDI in manufacturing of the EEC countries by US transnational corporations. The US FDI stock in the EEC increased three times between 1957 and 1964, much faster than its total outward stock. Between 1955 and 1972, the share of the EEC (six members) in the outward stock of the United States increased from 6 to 17 percent (UNCTAD 1998). There is consensus in the literature that this inflow was to a considerable extent triggered by dynamic effects of integration, especially by the creation and fast growth of a large regional market (Blomström and Kokko 1997, Yannopoulos 1990, and UN CTC 1993) and to a smaller degree by static effects related to trade diversion.⁷ The creation of EFTA also attracted US FDI into manufacturing, although on a smaller scale. The main beneficiary was the United Kingdom, which explains why its accession to the EU in 1973 had a smaller impact on its inward FDI: the majority of important US transnational corporations were already in the United Kingdom at the time of accession.

The adjustment of EEC firms to integration took the form of trade (the share of intra-EEC exports in total EEC exports increased from 32 percent in 1958 to 50 percent in 1970) and domestic M&As in manufacturing (almost 90 percent of the M&As in the Community

In its early years, European integration triggered US FDI inflows rather than intra-European FDI.

6 Channels and mechanisms demonstrating the impact of regional integration on TNC activity and FDI are well examined in the extensive literature on the subject and there is no need to describe them here. Dunning (1993) provides an exhaustive review of this literature on pp. 479-502. See also Blomström and Kokko (1997); Dunning (1997); and Preston (1997).

7 Estimates show that during that period US exporters lost some USD 311 million as a result of trade diversion and that US FDI increased by more USD 3 billion, far more than required to compensate for trade losses.

during 1961-69 were domestic and not cross-border⁸), and there is no evidence that the creation of the EEC increased intra-EEC FDI. The services sector was affected neither by FDI nor by integration in general. Most services are not tradable and require establishment of production abroad and/or movement of persons. The Treaty of Rome formally provided for both the right of establishment and freedom of movement of persons (in addition to capital movement). But it did not consider internal country regulations on professions, provision of services or state-owned monopolies in telecommunications, electricity or air transportation, which proved to be formidable barriers to trade and FDI in services.

5.2 Deepening integration: the Single Market programme

The next boost to FDI in the EU came from the Single Market programme. The programme was launched in 1985 and implemented during the second half of the 1980s and early 1990s. It aimed at removing remaining non-tariff barriers to the movement of goods, services, capital and people, thereby unifying competitive conditions for enterprises in the EU. Most importantly, it addressed barriers to trade and investment across service industries, initiating deregulation and liberalisation of these industries.

EU and third-country firms, both in manufacturing and services, started to adapt to the new rules of the game in the mid-1980s, not waiting for the completion of the programme, and intensified this process during its implementation. Adaptation took various forms, but had a number of common threads. For one thing, when reorganising their activities, enterprises – including the EU ones – developed a regional perspective, moving away from strategies geared towards serving separate national markets.⁹ For another, FDI played a key role in enterprise restructuring, essentially through cross-border M&As, which became far prominent than ever before; as a result, the Single Market programme led to a pattern of FDI very different from that generated by the creation of the EEC.

But what were the main differences? To begin with, the principal actors this time were TNCs from the EU and not from outside. Intra-EU FDI grew much faster than extra-EU FDI (and faster than trade) and, as a result, its share in total FDI inflows to EU countries increased from 30 percent in the mid-1980s to 60 percent in the early 1990s.

The Single Market programme changed the pattern of FDI in Europe, boosting intra-EU FDI in particular.

Second, as regards third-country TNCs, the most active this time were Japanese firms. Annual flows of Japanese FDI into the EU increased from USD 2 billion in 1985 to USD 14 billion in 1990, levelling off in 1993 at USD 8 billion (Kumar 1994). At the end of 1993, cumulated Japanese investment in Western Europe (mainly the EU) stood at USD 84 billion, of which some 80 percent was invested during 1987-93 in response to the Single Market programme. The main motivation of Japan's TNCs was to protect their market share gained through exports, in the face of growing EU protectionism directed against Japanese cars and electronic products. Similar motivations led to investments by a few Asian newly industrialised countries.

⁸ Commission of the EEC (1970), *La Politique Industrielle de la Communauté*, Part One, Brussels, p. 48.

⁹ A few US TNCs had pursued such strategies in Europe before. The prominent example is the network of Ford's factories located in various EEC countries, specialising in specific components that are then assembled in an assembly plant.

Third, a good part of FDI growth at the time, in particular among EU members, took place in the services industries such as banking, insurance, trading, transportation, telecommunication, tourism, and business services. As a result, the share of services in EU FDI flows increased from 55 percent in 1984-86 to 64 percent in 1990-92. Third-country investors in the EU also increased their investment in services and, as a result, the share of services in their investment during the same period increased from 55 percent to 62 percent (Dunning 1997).

Finally, although US foreign direct investment in the EU was not as dynamic as that of EU and Japanese TNCs, it increased relative to the United States' total FDI: the share of the EU in US outward FDI increased from 35 percent in 1985 to 41 percent in 1990 and stayed at this level for some time. The reason for its slower growth was that at the time of the Single Market programme, US firms were already well established in the EU market. In fact, they were in a stronger position than Japanese and many EU TNCs. US firms serviced the EU market 85 percent through local production and/or sales of foreign affiliates and only 15 percent through exports. In the case of Japanese firms this ratio was exactly the opposite: 15/85. Thus, US firms had less reason to fear trade protectionism. Rather than massively increasing their investment, US manufacturing TNCs focused on the restructuring and consolidation of their existing affiliates into regional networks. But US services TNCs increased their FDI considerably, mainly through cross-border M&As.

In conclusion, the Single Market programme was crucial for strengthening the position of EU countries in international production worldwide. Judging from FDI flows, which measure annual FDI outlays, consistent increases in EU countries' share in world inflows took place between 1986 and 1990 (from 26 percent to 48 percent of world total). After that, in the first half of 1990s, when the effects of the programme weakened or perhaps even subsided, and the recession of the early 1990s set in, the EU countries' share in inflows declined.

5.3 Broadening integration: some evidence from previous EU enlargements

Since its creation in 1958, the EU has gone through four rounds of enlargement, broadening integration to new countries: in 1973 (Denmark, Ireland and the United Kingdom); in 1981 (Greece); in 1986 (Portugal and Spain); and in 1995 (Austria, Finland and Sweden). The fifth round, extending integration to 10 additional countries (of which eight are from CEE), is taking place in 2004. Did enlargement affect FDI in countries that joined the EU?

In many countries, the prospect of EU membership and membership itself stimulated FDI inflows.

In many cases – perhaps in most – the answer is yes, judging from the behaviour of FDI inflows into accession countries before and after joining the EU. Even though accession took place at various times, for most countries their EU entry was associated with a clear increase of FDI inflows – both in absolute terms and relative to total inflows to EU countries and, more generally, developed market economies (DMEs) (Table 2). But obviously, the experience was not uniform across countries.

The experience of Spain and Portugal – for which data were assembled for 15 years (starting six years before accession and ending eight years after accession) – shows that the surge in FDI can start as early as three years before accession and last until a few years after.

Table 2. FDI inflows into countries joining the EU

Country/item	Annual average FDI inflows (millions of USD and percentages)					
	Year of accession	6-4 yrs before	3-1 yrs before	Accession year to 2 yrs after	3-5 yrs after	6-8 yrs after
Denmark, value	1973		131	240	-8	102
% of flows to EU countries		...	2.5	2.5	-0.1	0.7
% of flows to DMEs		...	1.4	1.5	-0.05	0.3
% of GDP		...	0.7	0.7	-0.02	0.1
Ireland, value	1973		29	87	228	275
% of flows to EU countries		...	...	0.6	0.9	2.4
% of flows to DMEs		...	0.3	0.6	1.3	0.7
% of GDP		...	0.6	1.1	2	1.4
UK, value	1973		1,490	3,470	3,743	7,490
% of flows to EU countries		...	...	28.5	35.7	39.2
% of flows to DMEs		...	15.7	22.2	21.9	20.3
% of GDP		...	1.1	1.7	1.4	1.5
Greece, value	1981	239	571	465	468	781
% of flows to EU countries		...	2.7	3.7	3.6	3.8
% of flows to DMEs		1.6	1.9	1.3	0.9	0.6
% of GDP		0.9	1.3	1	1.1	1.2
Portugal, value	1986	158	205	542	2,265	1,559
% of flows to EU countries			0.9	1.6	1.4	2.8
% of flows to DMEs		0.4	0.5	0.5	1.5	1.1
% of GDP		0.6	0.9	1.3	3.3	1.7
Spain, value	1986	1,661	1,787	5,014	11,635	10,262
% of flows to EU countries		...	9.9	13.9	13	14.3
% of flows to DMEs		4.4	4.6	4.7	7.7	7.2
% of GDP		0.8	1.1	1.7	2.4	2
Austria, value	1995	532	1,557	2,995	5,449	...
% of flows to EU countries		0.6	3.1	2.5	1.2	...
% of flows to DMEs		0.4	1.7	1.3	0.7	...
% of GDP		0.3	0.8	1.3	2.7	...
Finland, value	1995	343	950	1,430	4,879	...
% of flows to EU countries		0.4	1.9	1.2	1	...
% of flows to DMEs		0.2	1	0.6	0.6	...
% of GDP		0.3	1	1.1	3.9	...
Sweden, value	1995	3,378	3,385	10,284	34,643	...
% of flows to EU countries		4	6.8	8.7	7.4	...
% of flows to DMEs		2.3	3.6	4.4	4.3	...
% of GDP		1.5	1.6	4.2	14.6	...

Note: DMEs = developed market economies

Source: Author's calculations based on data from UNCTAD/FDI database.

In absolute terms, Spain and Portugal experienced the largest increases in FDI inflows. But they translated into smaller gains relative to total inflows to EU countries. This is because the accession of these countries coincided with the announcement of the Single Market programme, which, as noted above, accelerated intra-EU FDI flows. Ireland registered large increases in both its absolute and relative terms.¹⁰

For the 1995 entrants, increased FDI flows into Austria and Finland started before accession while those into Sweden coincided with the year of accession. As a caveat it is worth mentioning here that the booming global M&As in the second half of the 1990s very likely contributed to higher FDI flows into these countries.¹¹

In the case of the United Kingdom, however, EU accession is likely to have boosted UK investment in continental Europe rather than FDI flows to the United Kingdom.

The experience of the United Kingdom is ambiguous. Many foreign investors entered the UK market in the 1950s and 1960s, partly in response to the establishment of EFTA. But still, FDI inflows in the United Kingdom increased considerably during the first three years of EU membership, as did the United Kingdom's share in FDI flows to developed countries and the ratio of FDI to GDP. Subsequently, in the period 3-5 years after accession, inflows were only slightly higher than during the preceding period. In the period 6-8 years after accession, the level of inflows doubled, but this was most likely due to factors other than EU accession. Overall, the prevailing view in the literature is that accession of the United Kingdom had a much greater impact on British investment in the EU than on FDI in the United Kingdom (see Yannopoulos 1990, for instance).¹²

Both Denmark and Greece registered decreases in their FDI after accession. The case of Denmark is not well researched. In the case of Greece, accession coincided with political and macroeconomic instability and social tensions, which kept foreign investors away from the country. In addition, removal of trade barriers resulted in some divestment in manufacturing, as it exposed earlier import-substituting FDI to foreign competition. Furthermore, rapid wage increases in the early 1980s did not help either in making Greece an attractive FDI destination (Georgakopoulos *et al.* 1994).

In sum, previous enlargements seem to have positively influenced the flow of FDI to most countries joining the EU. What does this suggest for acceding countries from CEE and, in particular, can they expect to experience a boost to inward FDI in the years following EU entry?

5.4 FDI inflows to new EU member states in Central and Eastern Europe

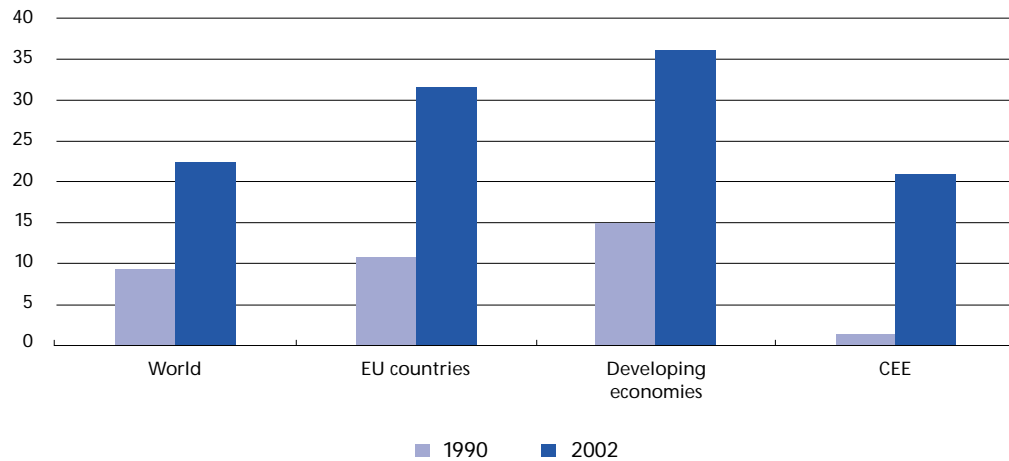
It is tempting to argue that EU entry will have an even stronger impact on FDI flows to the new entrants than it had for earlier entrants, which were all fairly advanced market economies at the time of EU entry. Arguments in support of this view point out that EU membership gives CEE access to the huge EU market, or consolidates such access. It might accelerate economic growth, making the domestic markets of CEE countries more

10 On the impact of Irish accession on FDI see Barry (2003).

11 On the impact of Swedish accession on FDI see Andersson and Fredriksson (1993) and NUTEK (1998).

12 It should be noted that the United Kingdom benefited substantially from increased FDI inflows related to the "Europe 1992" programme. For example, out of USD 70 billion of Japanese investment in the EU during 1987-93, USD 28 billion, or 40 percent, was invested in that country (Kumar 1994).

Figure 5. Inward FDI stocks (share of GDP, %)



Source: UNCTAD (2003a).

attractive to foreign investors. It helps complete FDI liberalisation, raise protection standards for foreign investors, and assure investors on the irreversibility of reforms in new members, thus reducing transaction costs and the risk of investing in these countries. Furthermore, EU funds, if properly used for purposes such as improving infrastructure or restructuring inefficient state-owned enterprises, can enhance the long-term economic attractiveness of CEE countries.

However, there are at least two reasons why the hope for an acceleration of FDI inflows to CEE is overly optimistic. One is that expected EU membership of CEE countries has already had an impact on their FDI inflows, although it is impossible to estimate how big this impact was. Since the early 1990s, these countries have been linked to the EU through association agreements. Under these agreements they gradually gained free access to the EU market for manufactured goods, thus encouraging the inflow of export-oriented FDI to CEE. Their inward FDI stocks rose from a negligible 1 percent of GDP in 1990 to 21 percent in 2002, close to the world average (Figure 5). Most of this increase took place after 1995. What is more, by 2000, exports of TNCs had gained a substantial share in CEE countries' exports, e.g. 80 percent in Hungary, 60 percent in Estonia, 56 percent in Poland, 47 percent in the Czech Republic, and 26 percent in Slovenia (UNCTAD 2002). There is thus evidence that a good part of the FDI that one usually expects to take place with regional integration has already taken place. Such FDI will certainly continue after accession, but whether and how fast it will grow remains to be seen. The abolition of special incentives for foreign investors, required as part of harmonising CEE countries' FDI regimes with EU regulations, may make FDI growth more difficult. New EU members may try to compensate for this by lowering corporate taxes, but still competition for this type of investment is increasing from countries in the region with lower wages – some of them candidates for future accession.

CEE countries have experienced a rapid build in the stock of FDI since the beginning of transition, implying that a further increase after EU accession is everything but obvious.

The second reason for expecting no acceleration but possibly a decline in FDI inflows to CEE countries once they are EU members is that pre-accession flows have been unusually high due to the restructuring and liberalisation of CEE economies during the transition

from plan to market. Liberalisation included the opening up of these countries to FDI and the privatisation of state-owned enterprises. This led to a substantial and in some cases heavily fluctuating FDI inflow. When one looks at FDI inflows into CEE countries in 2002, two years before accession (the right time to expect increases in inflows associated with accession, judging from the experience of previous rounds of EU enlargements), one can see that in three countries (Estonia, Hungary and Poland) inflows decreased over the previous year, while inflows increased in five countries. But in at least two of the latter countries (the Czech Republic and Slovakia), the acceleration was due to privatisation. Hungary will be an interesting case to look at for the accession impact. It completed its privatisation programme during the 1990s, with annual FDI inflows peaking at USD 4½ billion in 1995. In 2002, two years before the accession, it registered its lowest FDI inflows since the beginning of the transition (USD 854 million). Whether accession will help the country regain its previous position in FDI remains an open question. Overall, a considerable build up in FDI stocks (relative to GDP) has occurred in acceding countries and their privatisation programmes are coming to an end. Against this background, a boost to FDI inflows to CEE as a result of EU membership is everything but a foregone conclusion.

6. Conclusions

This paper has focused on long-term trends in the internationalisation of production. It transpires that international production has grown fast in recent decades – both in absolute terms and relative to global value added and international trade. While foreign direct investment is the better-known aspect of international production, there has been an explosive growth in non-equity relationships between firms of different countries. Likewise, although manufacturing remains at the heart of international production, the internationalisation of services has been on rapid growth trajectory. As far as Europe is concerned, the process of economic integration has undoubtedly boosted the position of EU countries as a source and a destination of globally active enterprises. Since the fall of communism, international production has also spread quickly to countries of Central and Eastern Europe, notably to those that have become new EU members. Experience with previous EU enlargements suggests that FDI flows to new members may increase after accession. Whether that will be true in the case of CEE countries is not certain. On the contrary, given that the transition from plan to market, notably the privatisation of state-owned enterprises, and the prospect of EU membership have already led to a substantial build up in inward FDI stocks, a decline in FDI flows to some of these countries (absolute and relative to GDP) should not come as a surprise.

The EU has an important role to play in formulating international investment policies in ways that are beneficial to developing countries.

The bulk of the international production affects advanced economies. However, this should not distract from the fact that the activities of transnational corporations are fairly important for developing countries too. In fact, the weight of such corporations relative to the size of the economy is often much bigger in developing countries than in advanced economies. Still, one of the greatest challenges of globalisation, and its unfulfilled promise, is a more equitable distribution of benefits from international production, especially in favour of the poorer developing countries. Continued marginalisation of many of these countries in the global economy is one of the reasons why globalisation is questioned in many quarters. This raises many policy issues related to international production. One is policy competition to attract FDI, which often puts developing countries at a disadvantage

vis à vis advanced countries and also distorts allocation of resources among and within advanced countries. Another is the issue of policy space needed in particular in developing countries to pursue their development objectives and to increase benefits from FDI. Addressing these question would go beyond the scope of this paper, but it is clear that the EU has a large role to play in formulating international investment policies in ways that are not harmful, but rather beneficial to developing countries.

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ABSTRACT

Focussing on Europe, this paper starts with reviewing the main determinants of foreign direct investment (FDI); a key observation is that economic policies and non-policy factors contribute equally to the direction of FDI flows. The paper then examines the growth-FDI nexus: while a strong positive correlation between inward FDI and economic growth exists, at least in the more advanced EU-15 economies it is not clear whether the causality runs from FDI to growth or vice versa; in the countries of Central and Eastern Europe (CEE) there is stronger evidence that FDI has boosted growth during the transition period, partly by augmenting domestic investment; that said, evidence of technology spillovers (a potentially important channel for FDI to boost growth) is harder to find in CEE than in developed economies. The paper finally argues that growth-enhancing policies in general are more promising than specific support for FDI.

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Determinants and growth effects of foreign direct investment

"I've always had a weakness for foreign affairs".

Mae West, American film actress

1. Introduction

The last decade has seen a pronounced increase in cross-border corporate ownership, as reflected in the rise in foreign direct investment (FDI). While the world inward stock of FDI rose only marginally as a share of GDP between 1980 and 1990, it has more than doubled in the last decade to 22 percent of world GDP in 2002. EU countries have played a central role in this process, both as originators and as recipients of FDI. Excluding intra-EU flows, the EU has accounted for around 40 percent of all FDI outflows in the past decade.

Behind this global expansion lies a combination of technological innovation and a global policy environment that has become increasingly favourable to foreign ownership of productive assets. Countries have also tried to attract FDI through various incentives such as extensive profit tax holidays. The reason host countries have put these policies in place is that they expect tangible economic gains to emerge from the foreign-owned firms. But how justified are these hopes and do the policies make a difference? This paper aims at shedding some light on these issues, with substantial implications for the design of public policy and the use of public funds in this context.

The paper is structured as follows. We will first look at the determinants of FDI, i.e. what are the factors that make FDI take place, and what makes an investor choose a specific geographical location over another. Second, we will assess the empirical evidence regarding the impact of FDI on economic growth. Third, we will discuss the rationale for government support in favour of FDI. The paper will focus primarily on the EU, including its new members from Central and Eastern Europe (CEE).

2. Determinants of FDI

2.1 FDI and the boundaries of the firm

Before discussing the drivers of FDI, it is useful to first recognise that FDI can serve very different purposes. FDI broadly falls into three categories, horizontal, vertical and diversifying, although there tends to be substantial overlapping between them. We summarise these categories briefly below (for a more detailed discussion, see for example Caves 1996).

Horizontal – or market-seeking – FDI aims at serving the host market. Here the transnational corporation (TNC) duplicates plants that already exist in the home country or elsewhere. This form of FDI is a substitute for either exports or licensing.

Vertical – or cost-minimising – FDI aims at the internalisation of the production chain within a TNC. Locating different stages of the vertical production chain in different countries aims at making optimal use of host country comparative advantages for each stage (on the basis of labour cost, resource endowments, etc.). Here, the main purpose



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of the production is not to reach the local market, but to export the product either back home or to a world market. Rather than duplicating plants in the home country, the FDI becomes a substitute for home country production.

Diversifying FDI includes investment that is not evidently horizontal or vertical. This entails the risk-reducing internalisation of diverse activities that do not generate visible positive synergies either on the revenue or the cost side. In theory, this does not add value to shareholders, since they have the ability to diversify by holding a portfolio of shares from many different companies. For the company's management and staff, however, the incentive to reduce firm-specific risk may still be very strong. To the extent that managers possess privileged information not available to shareholders, they can sometimes push through diversifying FDI that is in their own interest even if not in the interest of shareholders.

While pure forms of these types of FDI exist, the decision to set up an operation abroad is often motivated by a combination of factors. For example, a given location may offer both a competitive cost level and a sizeable local market.

In all these forms of FDI, the firm's decision to internalise cross-border economic activities and so to become a TNC is driven by the economics of the boundaries of the firm. As suggested by Coase (1937), in principle any economic transaction can be conducted either via *ad hoc* market interaction between economic agents or internalised within a firm. In between these two extremes there are also many hybrid solutions, such as licensing and other forms of strong contractual arrangements between independently owned firms. Which of these solutions is chosen depends on the relative costs of the different alternatives. For example, in the case of repeated and relatively complex transactions, information and coordination problems can incur high transaction costs when conducted via the market. This encourages their internalisation within a firm, where the transaction can be more closely supervised. On the other hand, dispersed hierarchical organisations come with their own information and incentive problems. It may also undermine the incentives for innovation that is normally generated by competition. Effective corporate governance typically becomes more difficult and costly the more distanced the owner is – culturally, functionally and geographically – from the economic activity.

Local knowledge advantage explains why nine-tenth of world production is still under domestic ownership.

The cost-benefit analysis surrounding FDI and the formation of a TNC follows a similar line of reasoning. Other things equal, the foreign investor faces higher costs relative to local competitors because of its lack of familiarity with the host country. This local knowledge advantage explains why nine-tenth of world production is still under domestic ownership and why the bulk of cross-border transactions is conducted via the market rather than internalised within firms. To make it worthwhile for a firm to evolve into a TNC, it must possess some offsetting advantage not available to its host-country competitors. These advantages differ depending on the form of FDI, i.e. whether it is vertical or horizontal (we will not cover the third form, diversifying FDI, in this discussion).

In the case of **horizontally integrated TNCs**, the advantage enjoyed by the TNC primarily stems from its proprietary assets. It could be that the TNC possesses a brand or a production technology that is not available to its local competitors. Since such proprietary assets are typically the product of fixed costs such as research and development (R&D), they tend to be associated with large economies of scale. This gives the investing firm a

strong incentive to spread these fixed costs across as many markets as possible. In some cases this can be achieved through exports, especially in manufacturing. In other cases the transport costs of trade may be prohibitive, for instance in many services. Consequently, the larger the economies of scale in localised production, the greater the incentive to produce in one place and export to the rest of the world. The larger the economies of scale stemming from proprietary assets (such as brand name), the greater the incentive to duplicate production for market-access purposes.

But even after it has been decided that local production is preferred to exports, the decision to engage in a horizontal FDI entails a second step. There is still the choice to be made between licensing out the proprietary asset and the complete internalisation of production within the firm. Licensing allows the economies of scale from proprietary assets to be exploited without FDI. The decisive factor here is whether the costs from the investor's lack of local knowledge under the FDI option outweigh the potential costs from a less than complete control over the proprietary assets under the licensing option. This trade-off depends on the nature of the proprietary assets. There may be limits to the investor's ability to license out his proprietary assets, for example because of weaknesses in host-country property right protection, or because the asset is embedded in the firm's corporate culture and management techniques in a manner that is not easily codified.

In the case of **vertically integrated TNCs**, the cost-benefit analysis is somewhat different from the one above. While the horizontally integrated firm internalises markets for proprietary assets, the vertically integrated firm internalises markets for an intermediate product. This tends to occur when there are imperfections in intermediate product markets. It could for instance be that the local producers of intermediate products do not make identical goods or goods of sufficient quality, or that the producers themselves are too few in number. The high costs of supply disruptions may then give downstream firms an incentive to internalise the vertical supply chain within the TNC itself, instead of developing long-term market-based relationships with their upstream partners. The foreign investor must, however, weigh the costs of supply disruptions against those stemming from his relative lack of local knowledge and the incentive problems that may arise in an integrated firm when there is imperfect information.

While horizontally integrated firms internalise markets for proprietary assets, vertically integrated firms internalise markets for intermediate products.

2.2 Many different factors attract FDI to a country

Once a firm has decided to conduct FDI, the second question is where to go. There is substantial research on the determinants of FDI across countries. These determinants consist of both economic fundamentals and policy variables, the most important of which are listed below (based on the results obtained in various empirical studies on the determinants of FDI, including Nicoletti *et al.* 2003, Campos and Kinoshita 2003, Slaughter 2003, and Martín and Velazquez 1997).

Market size and growth prospects. Existing and future expected host market size is one of the strongest and most unambiguous drivers of FDI inflows, especially horizontal FDI. In this context, regional trade integration (such as that in the EU) can attract more horizontal FDI from the rest of the world by expanding the size of – and access within – the host market. This shifts the economies of scale in favour of local production as an alternative to exports.

Determinants of FDI consist of both economic fundamentals and policy variables.

Natural and human resource endowments. The existence of unique or competitive factors of production, either in the form of raw materials, skilled labour or intermediate goods has also been found to have a strong positive impact on FDI inflows.

Physical, financial and technological infrastructure, together with human capital, represent a broad set of national assets that positively affects inward FDI, primarily by reducing transactions costs and raising the return on investment.

Agglomeration effects reinforce the attraction of economic fundamentals. The profitability of an investment is often enhanced by the existence of a large pool of suitably skilled labour at the investment location, along with spillovers from knowledge and research and development. As a consequence, a location's ability to attract FDI has been found to be positively influenced by the presence of similar activities as those of the investing firm, especially in knowledge-intensive industries.

The institutional, regulatory, and policy framework and policy coherence is closely related to the previous point in that this too, when applied well, reduces uncertainty and the risks of doing business in an economy. Bureaucracy and restrictive administrative practices, coupled with bribery, are found to incur additional transaction costs that impede FDI inflows.

Openness to international trade along with access and distance to international markets are important especially to attract export-oriented (vertical) FDI. To be able to function as a link in an international value added chain, a free and cost-efficient flow of intermediate goods is needed in both directions. The importance of these factors is reflected by the fact that vertical FDI tends to be concentrated to markets relatively close to the investor's host country. Examples include Japanese FDI in East Asia, US FDI in Mexico and EU FDI in Central and Eastern Europe.

Investment protection and promotion. Proper investment protection such as transparent and consistently enforced dispute settlement procedures is a sort of minimum requirement for FDI. Many governments have gone even further to attract FDI through special incentive schemes, such as tax breaks and other financial incentives that affect net profit rates. While on balance research shows that the distribution of FDI across countries is more determined by economic fundamentals and the broad policy environment affecting foreign-owned and indigenous firms alike¹, policies specifically targeting FDI can still affect the location choice of TNCs in the case when underlying economic fundamentals are similar across countries (Blomström and Kokko 2003b).

2.3 Explaining the surge in FDI in the past decade

As discussed in detail by Zimny (this volume), the ratio of FDI flows to GDP at a global level has risen markedly in the past decade. Consequently, also the FDI stocks have risen and cross-border ownership is becoming a predominant feature of the corporate landscape in

¹ For example, Nicoletti *et al.* (2003) find in a broad cross-country study that around half of FDI can be explained by economic fundamentals such as the size of, and distance to the host market. The remainder is determined by policy variables, broadly defined.

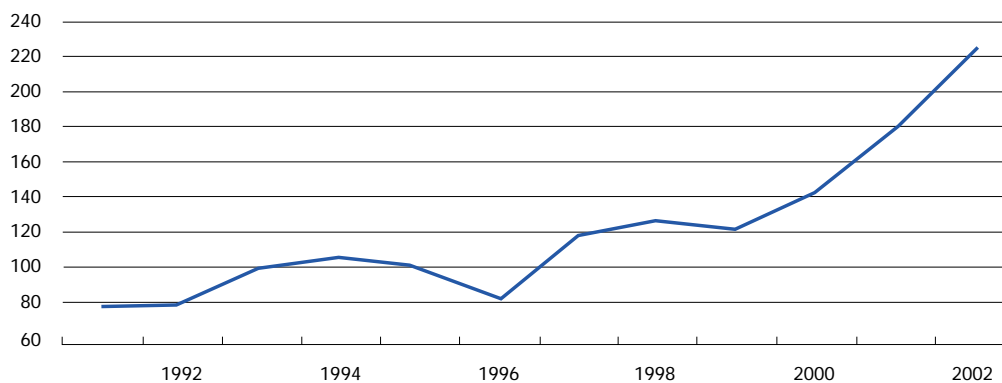
developed and developing countries alike. This suggests that the aforementioned determinants of FDI have not remained constant over time. On the contrary, a combination of technological, economic and regulatory factors have shifted the cost-benefit trade-off in favour of foreign ownership and a cross-border utilisation of proprietary assets. In the context of our earlier discussion, these changes have expanded the boundaries of the firm. Three elements have been particularly important in causing this shift in recent years.

A combination of technological, economic and regulatory factors has shifted the cost-benefit trade-off in favour of foreign ownership.

First, the regulatory and policy environment has become much more favourable to FDI. Barriers to international trade and investment flows have come down steadily in recent years. At first glance, this may not be expected to have a positive impact on FDI flows. Reduced trade barriers should reduce the incentive for “barrier-hopping” horizontal FDI. Yet, the global volume of FDI has tended to rise as trade has become more open. Across countries, trade has also been found to be strongly and positively correlated with FDI. This suggests that, on balance, trade openness encourages vertical FDI even more than it discourages horizontal FDI.

As for barriers affecting FDI directly, more than 90 percent of all regulatory changes that affected FDI in the 1990s were aimed at promoting rather than restricting FDI. As shown in Figure 1, the pace of FDI-friendly regulatory changes has accelerated notably in recent years.

Figure 1. Number of regulatory changes favourable to FDI, globally (net)



Source: UNCTAD (2003).

A second driver of the rise in FDI flows in the 1990s has been technological progress. With more technology-based trade and production, economies of scale tend to become more important both in production and in proprietary assets. Economies of scale in production create an incentive for vertical FDI, a concentration of production of individual components and an internationally integrated production chain. Economies of scale in proprietary assets (such as R&D and brands) encourage horizontal FDI aimed at global market leadership and as geographically dispersed exploitation of the proprietary assets as possible.

At the same time, rapidly falling communication costs – which some have referred to as the “death of distance” – have made it easier and less costly to manage globally dispersed operations, pooling some corporate services globally, and shipping products and components across the globe in search of efficiency. This is particularly relevant for the expansion of FDI in service industries, which are often non-tradable and previously difficult to co-ordinate over large distances. In these industries, geographical expansion through FDI allows for an exploitation of economies of scale in proprietary assets that is not possible through trade alone.

The abovementioned forces have, together, led to increased competition among leading TNCs. In order to survive, TNCs must therefore maximise their economies of scale by contesting all potential markets if their competitors do so. The rise of international production systems has shifted emphasis towards the efficiency of the system as a whole, or as formulated in the 2002 UNCTAD World Investment Report: “Global markets increasingly involve competition between entire production systems, orchestrated by TNCs, rather than between individual factories or firms” (UNCTAD 2002, p. 121).

Factors that contributed to fuel equity prices in the 1990s may also have fuelled a bubble in cross-border mergers and acquisitions.

While these trends have led to a fundamental shift towards the expansion of TNCs, the surge in FDI in the 1990s also seems to have included a temporary element. The unprecedented wave of cross-border mergers and acquisitions (M&As) towards the end of the 1990s was partially a consequence of the equity price bubble. Factors that contributed to fuel equity prices, including easy access to equity capital, excessive profit expectations and possibly a too loose monetary policy, may also have fuelled a bubble in cross-border M&As. Inflated stock prices also raised the price tag of quoted companies, thus raising the M&A amounts. Still, while M&A turnover fell sharply in the aftermath of the bursting of the equity bubble, it remains well above its pre-1990s historical average.

Related to the partially irrational elements that may have given rise to an M&A bubble is the notion among managers that “big is beautiful”. As we mentioned earlier, shareholders do not normally have an incentive to engage in M&A activity that does not increase the joint value of the merged companies. Risk diversification alone should not be a reason for shareholders to engage in M&As, since they have the ability to diversify by holding a portfolio of different stocks. For managers and employees, on the other hand, large, diversified companies can reduce risks specific to them. Technological progress and increased global competition may have made it even more difficult to predict what business activities will be fruitful, strengthening the incentives for managers to push for a more diversified company.

While it is possible that equity bubbles and non-value-maximising strategies have been behind some of the expansion of FDI of the past decade, they are unlikely to be the dominant factors. The extended international production systems of TNCs must sooner or later generate real economic gains, or they should eventually unravel under the pressure of competition from more efficient competitors.² The fact that the foreign-owned share of global production capacity keeps rising suggests that the economic gains are real.

² It should also be observed here that the forces behind the reorganisation of production at the international level are to some extent shared by similar forces at the national level.

3. The impact of FDI on host-country economic growth

The global shift towards a more FDI-friendly policy and institutional environment observed in the previous section reflects a growing perception – in an ever-larger number of countries – that there are substantial economic benefits from free markets, free trade, private ownership, effective property rights and foreign ownership. This section explores to what extent the empirical evidence supports this perception, i.e. evidence of real economic benefits from FDI for the host economies. We address this question strictly from the point of view of economic growth. While we recognise that FDI may influence other aspects of the host economy – such as income distribution, financial stability, or the environment – establishing a positive impact from FDI on growth can be seen as a minimum requirement, which needs to be satisfied before considering FDI-supporting policies.

3.1 The main channels of transmission from FDI to growth

In theory, FDI can have a positive effect on economic growth through three channels, all of which inevitably generate higher output per worker.

The first channel through which FDI can influence economic growth is by raising the domestic rate of investment. To the extent that a country has a savings-investment gap, as reflected in a current account deficit, a net inflow of FDI can help to raise the domestic investment rate in the host economy. This, in turn, expands the productive capital stock and thus output (unless the investment is entirely unproductive).

The second channel is by raising the efficiency of the acquired firm. Efficiency gains in the acquired or created firm can stem from two different sources: economies of scale – either in production or in proprietary assets – and reduced x-inefficiencies. Economies of scale in proprietary assets arise when they represent a fixed cost that can be shared across different physical locations. For example, R&D that results in new product or process designs are not typically constrained to one geographical location. Other fixed costs that may at least partially be spread across different geographical locations include support services such as finance, IT, and marketing. Economies of scale can also emerge in production at a single geographical location. Regional economic integration such as that in the EU gives rise to a pooling of production to a smaller number of locations. This option is not available to the local competitors. In small countries, the exploitation of economies of scale through domestic M&As is only feasible up to a point, after which it will result in excessive industrial concentration. By contrast, productivity gains from reduced x-inefficiencies are independent of the scale of operations. Instead, they originate in the transfer of best practice to the acquired firm, in the form of new management, knowledge and technology.

FDI can have a positive effect on economic growth through three channels: fixed investment, efficiency gains, and spillovers.

Through these different channels, FDI can boost labour productivity even if there is no new fixed investment (e.g. when FDI occurs as a result of an M&A).

A third channel is when the knowledge and technology that the foreign owner transfers to the acquired firm spills over to the surrounding local economy. It could for example be that the firm engages local suppliers (upstream linkages), or sells intermediate goods to local firms (downstream linkages). The presence of a more efficient foreign-owned

firm may force local competitors to innovate more than they used to in order to stay alive, raising the quality, productivity and product diversity of local producers. It may also set in motion a process of consolidation and increased economies of scale among local competitors. It could also be that staff trained by the foreign owner eventually leaves the foreign-owned firm for a local competitor, taking their new skills with them. Through such positive externalities, productivity can increase also in local firms that do not themselves receive FDI. It should be recognised here, on the other hand, that a strong foreign investor could run less efficient local competitors out of business to the point where competition suffers. This would give the foreign-owned firms increased market power and the ability to price its goods in a monopolistic manner. In this case, while there may still be gains from economies of scale and reduced x-inefficiencies, the gains would be disproportionately captured as rents by the foreign-owned firm rather than by the host economy.

If evidence of positive spillovers can be found, there may be a rationale for public policy support aiming at raising the level of inward FDI towards its social optimum.

While all three channels have a positive impact on economic growth, they are far from equivalent from a policy point of view. In the first two cases – higher growth through increased fixed investment and technology transfer to the acquired firm – the private rate of return is the same as the social rate of return. This means that the investing firm has an incentive to choose a level of FDI that is optimal also from society's point of view. In the case of the third channel, by contrast, positive spillovers to the surrounding economy mean that the social rate of return exceeds the private rate. Here there is a risk that the foreign investor chooses a level of FDI that falls short of what would be optimal from the host country point of view. Thus, if evidence of positive spillovers can be found, there may be a rationale for public policy support aiming at raising the level of inward FDI towards its social optimum.

3.2 Empirical evidence of growth effects from FDI: results from broad cross-country studies

The broader empirical growth literature does not primarily concern itself with the role of FDI, but some conclusions of this literature have tremendous bearing on how we view FDI as a driver of economic growth. In fact, the distinction between the three channels in the previous section has its equivalent in the contrasting schools of neoclassical and new growth theory. It may therefore be worthwhile outlining some of the main empirical observations made by this literature.

Early neoclassical growth theory uses a simple production function consisting only of capital and labour inputs to account for growth. The growth of these two factor inputs could not account for even half of output growth in the early models, leaving a large unexplained “Solow” residual to account for the rest. This residual has later become known as Total Factor Productivity (TFP), with the interpretation that the residual represents efficiency gains in the use of a given combination of factor inputs. Later modified neoclassical models have reduced the unexplained share of economic growth captured by the residual. An empirical study by Mankiw *et al.* (1992), for example, finds that four-fifths of the variation in per capita incomes across countries can be explained by only three variables: population growth and investment in physical and human capital. These results suggest a more limited role for general technological progress in growth, as reflected in the – now smaller – TFP residual. By implication, if these neoclassical studies are correct, the role of FDI to serve as a transmitter of knowledge between countries is also rather limited. Any growth effect from FDI is limited to a pure fixed investment effect.

The idea that FDI also affects growth through cross-border technology transfer and spillovers is more closely associated with the “endogenous growth” school than with neoclassical growth theory. According to these models, new knowledge is at least partially captured by the innovating firm and therefore does not spread automatically between countries. This leaves a role for FDI to serve as a conduit for knowledge transfers and spillovers between countries. This strand of growth theory also has its supporters in the empirical literature. For instance, there are studies that find the underlying assumptions of the neoclassical models overly simplistic. Klenow and Rodríguez-Clare (1997) correct for weaknesses in the data quality of human capital and they find that the three inputs used in Mankiw *et al.* (1992) then account for only half of income differences. This leaves a greater portion of growth to be explained by technological progress rather than the quantity of factor inputs. Some studies in this empirical literature (Klenow and Rodríguez-Clare 1997 and Easterly and Levine 2000) suggest that TFP can account for as much as nine-tenths of the cross-country variation in growth rates.

These observations have profound implications for the relative importance of the three channels through which FDI can affect growth. Also Blomström *et al.* (1996) and Bils and Klenow (1998) find that TFP plays a substantial role in economic growth. They conclude from this observation that if FDI has any substantial impact on economic growth, it has to be through its impact on productivity. In effect, this points to FDI potentially affecting growth through all the three channels mentioned earlier.

Turning now to empirical studies that account for FDI explicitly, this literature finds a strong positive correlation between the level of inward FDI and economic performance. A seminal paper in this field is by Borensztein *et al.* (1998). Using a cross-country regression framework, they investigate FDI flows to developing countries over the past two decades and find these to be positively correlated with growth, and particularly so when the host country has a higher level of human capital (as measured by average school enrolment ratios). They also conclude that a unit of FDI contributes more to growth than a unit of domestic investment does. This suggests that FDI contains an additional growth-enhancing element of technology transfer.

The results obtained in the context of developing countries should not necessarily be extrapolated to other regions, however. In fact, there are large differences across countries and regions, both in terms of the overall size of the growth impact of FDI and in terms of the relative importance of the three channels through which FDI operates. There is also tremendous uncertainty regarding the causality in these relationships. This ambiguity is found in both microeconomic and macroeconomic studies. Countries and firms with higher productivity can generally also attract more FDI than others, which makes it difficult to determine with any precision the extent to which FDI has a causal positive effect on growth. Some studies have attempted to determine the true causality by using lagged data for FDI. Aitken and Harrison (1999) and Carkovic and Levine (2002) then find no significant growth effects of FDI. Rangvid (2001) finds that growth and investment returns are very closely associated. This suggests that anticipations of higher growth should attract increased domestic and foreign investment, rather than the other way around. A more recent paper, by Calderón *et al.* (2004) use a bivariate Vector Autocorrelation Regression (VAR) methodology on a large panel of industrial and developing countries to identify the time precedence of FDI, fixed investment and GDP. They find that both M&A and greenfield

Countries and firms with higher productivity also attract more FDI, which makes it difficult to determine the extent to which FDI causes economic growth.

investment lead domestic fixed investment but are led by GDP growth. They thus conclude that economic growth, as an indicator of the rate of return on investment, serves as an effective “pull” factor for FDI. In turn, FDI helps to raise domestic investment in the future, but neither investment nor FDI has a clear causal impact on GDP growth. This result confirms similar results obtained by Blomström *et al.* (1996) and Attanasio *et al.* (2000). It should be stressed that the causality problem is not unique to FDI, but characterises all investment. Generally speaking, high rates of return on investment attract more of it. Temple (1999) suggests that the higher the rate of return, the bigger the potential causality problem. The very high rates of return observed for FDI compared with other forms of investment could thus imply that also the problems of reverse causality are particularly great in the context of FDI.

These results should not be taken as hard evidence, nevertheless, that no causal link exists from FDI to growth. As Barro and Sala-i-Martin (1995) suggest, economic growth is the result of a multitude of factors that cannot be fully captured by only a few variables. Attempting to explain growth on the basis of FDI and a few other variables may then result in a mismeasurement of the relationship between FDI and growth. For example, it could be that the set of policy measures that boost growth simultaneously attract and operate through FDI. If there are no cases where such policies are in place without also attracting FDI, it becomes very difficult to separate the impact of the policies directly from their impact via FDI. Essentially, if the policy measures (in this example the true drivers of growth) are not directly observable, the only solution is to find some instrumental variable that reveals the relationship between policies and either FDI or growth, while being independent from the other.

Empirical evidence suggests that FDI has a relatively stronger growth impact in middle-income countries than in either high-income or poor countries.

Bearing these econometric problems in mind, empirical evidence suggests that FDI has a relatively stronger growth impact on middle-income countries than in either high-income or poor countries. This group typically has two key characteristics that make for a stronger link between FDI and growth.

First, middle-income countries have on average been receiving large inflows of FDI in net terms (since gross outflows have been dwarfed by gross inflows). To the extent that these inflows have consisted of new investment and not just M&As, they have added directly to the fixed capital stock. This is in line with neoclassical growth theory, which suggests that the smaller initial capital stocks of middle-income countries bring higher rates of return than those in rich countries (other things equal). In small open economies, this higher rate of return can raise the equilibrium investment rate above the domestic saving rate, with the gap between the two being filled by a net inflow of capital from the rest of the world.³

A second feature that helps middle-income countries benefit from FDI, especially in comparison with poorer countries, is that they typically meet certain conditions for

³ In principle, there is no difference between FDI and other capital inflows when viewed simply as a source of financing. Net inflows of loans and portfolio flows by definition finance the current account just as well as net inflows of FDI. But this argument ignores the possibility that an inflow may trigger a corresponding outflow, dampening the actual impact on fixed investment. Empirical studies have found a much stronger link between domestic investment and FDI than what has been found for other inflows. Bosworth and Collins (1999), for example, estimate that each additional dollar of FDI to middle-income countries increases domestic investment by 50-85 cents, whereas the impact from loans and portfolio investment does not exceed 25 cents to the dollar.

technology transfer and spillovers. Specifically, to be able to absorb new technologies and knowledge from FDI, the local economy must have a minimum level of human capital, infrastructure and research and development. This allows not only the receiving firm, but also surrounding indigenous firms, to absorb and benefit from the knowledge that comes into the economy via the foreign investor. Empirically, the World Bank (2001) observes that FDI has the expected positive relationship with productivity where absorptive capacity is high, with East Asia having experienced particularly strong positive consequences from FDI on these grounds. A similar result is reached by Fortanier (2002), who claims that “FDI generally has ‘crowded in’ domestic investment in Asia, while ‘crowding out’ effects dominated in Latin America”.

The link between the stock of human capital and the impact of FDI is demonstrated in Borensztein *et al.* (1998), who find that FDI is more strongly correlated with domestic investment when the host country has a higher level of human capital, as measured by average school enrolment ratios. Blomström and Kokko (2003a) similarly point to the importance of human capital and a competitive environment in facilitating positive growth effects from FDI.

FDI has been found to be more strongly correlated with domestic investment when the host country has a higher level of human capital.

Another factor that seems to strengthen the growth impact of FDI is competitiveness. If the local economy is competitive, local firms have a greater incentive to absorb new technologies and to innovate. Blomström *et al.* (2000) find evidence that the economic impact of FDI on host economies is indeed influenced by the level of competitiveness and technical capability of indigenous firms.

While middle-income countries have on average tended to satisfy both the criteria outlined above (net capital imports and a minimum enabling environment), this is less true in the richest and the poorest countries of the world. The world’s richer countries are characterised by large outflows as well as inflows of FDI. This leaves net flows substantially smaller than gross flows and, on average, FDI has not contributed to raising domestic investment substantially in this group. Poorer countries, by contrast, may have a greater need to augment domestic saving with net inflows of foreign capital. However, they often lack the enabling environment needed to benefit economically from FDI inflows. In this case, FDI is often isolated in contained enclaves with a small contact surface to the local economy. This limits the scope for broad economic benefits even when FDI inflows take place. Positive effects from FDI are particularly hard to detect in raw-material intensive less developed countries.⁴

Having made these general empirical observations, we now turn specifically to the role of FDI in two European country groupings: EU-15 countries and CEE countries.

3.3 Impact of FDI on economic growth in the European Union

We first look at the evidence on the economic impact of FDI in EU-15 countries, keeping the three channels outlined earlier in mind. It should be stressed, however, that even when a link is found between FDI and growth, the empirical literature often does not identify the influence of the three effects separately.

⁴ See Blomström, *et al.* (1994).

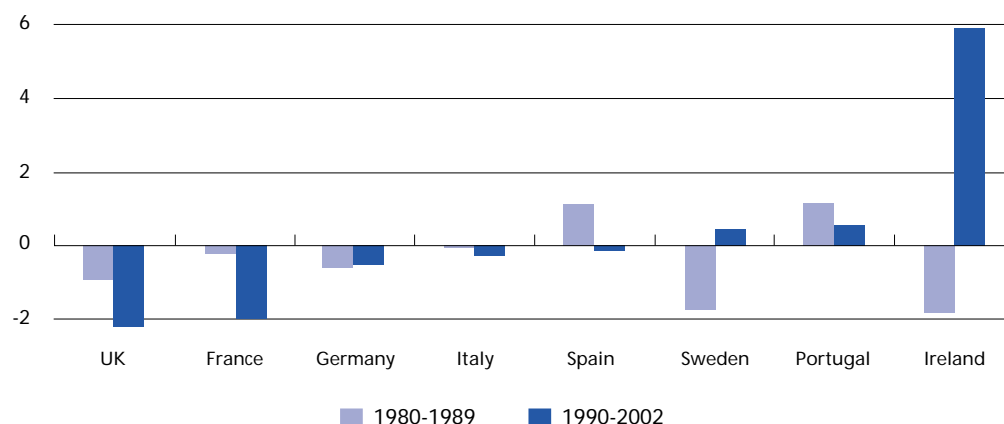
EU countries have, collectively, been net exporters of FDI in the 1990s.

3.3.1 Higher fixed investment

In the EU-15, as in other advanced economies, it is more difficult to argue that there is a general shortage of financing for viable investment projects. With a few exceptions, advanced countries do not systematically have domestic investment above that of their savings, or net inflows of FDI to finance such savings-investment gaps. On the contrary, EU countries have, collectively, been net exporters of FDI to the order of 1 percent of GDP annually in the 1990s. Rather than augmenting domestic saving, FDI flows have thus been a drain in net terms on the resources available for domestic investment.

That the EU-15 as a whole does not have a net inflow of FDI does not exclude individual members from benefiting from such inflows. As Figure 2 illustrates, the four largest EU members all had net outflows of FDI both in the 1980s and the 1990s. But a few other EU members did receive net inflows of FDI. This was especially the case for Spain and Portugal in the 1980s (especially around the time of their EU accession) and Ireland in the 1990s. In these cases, large net FDI inflows contributed directly to raising the level of domestic investment and, probably, to the rate of economic growth.

Figure 2. Net inflows of FDI (in % of GDP)



Source: UNCTAD (2003).

3.3.2 Efficiency gains in foreign-owned firms

The second channel through which FDI can affect economic growth is through efficiency gains in the foreign-owned firm, stemming primarily from the introduction of new or better technology and management techniques by the foreign investor. As the broader growth literature suggests, if technological progress plays an important role in driving economic growth, then one should also expect FDI to affect growth at least partially through the technology-transfer channel.

The empirical literature addresses this question from different directions. One strand of the literature focuses on whether foreign-owned firms have higher productivity growth than indigenous firms. This literature tends to distinguish between unconditional and conditional productivity differences between the two groups. While a natural starting point, measures of the unconditional productivity gap between indigenous and

foreign-owned firms are problematic in that they do not identify whether the gap is due to ownership or to the fact that other characteristics – such as size, staff quality and the level of investment – may also differ across types of firms. In order to observe the causal relationship from ownership, one needs to account explicitly for those other differences, thus obtaining a measure of the conditional productivity gap.

There are a number of studies that find evidence of a conditional productivity gap. A large portion of this literature in the EU context has focused on the United Kingdom, partly because of data availability. Griffith and Simpson (2001) estimate the relationship between ownership and labour productivity for a panel of UK firms between 1973 and 1996, including other firm characteristics such as size and age, to find that both levels and growth rates of labour productivity are higher in foreign-owned firms than in indigenous firms. These results are broadly similar to those of Davies and Lyons (1991), who also look at the UK case.

But the focus on labour productivity in these studies means they cannot separate between productivity gains stemming from better management and technology and those resulting from differences in investment and human capital stocks across the different groups of firms. Two studies therefore focus on total factor productivity (TFP) instead of labour productivity: Griffith (1999) for the United Kingdom and Benfratello and Sembenelli (2002) for Italy. In both cases, foreign-owned firms are more productive than local ones. Similarly, Barrell and Pain (1997) focus on manufacturing in Germany and the United Kingdom and find that a 1 percent increase in the FDI stock raises TFP by 0.27 percent in Germany and 0.26 percent in the United Kingdom. They also find that one-third of productivity growth in UK manufacturing since 1985 can be attributed to inward FDI. Similarly, using panel data from UK manufacturing, Haskel *et al.* (2002) find that firms in industries with a larger share of foreign ownership also display higher TFP growth.⁵

Foreign-owned firms tend to have higher productivity than indigenous firms.

Also studies on Ireland point towards substantial productivity gains from FDI. In Ireland massive FDI inflows have coincided with very high TFP growth in the past decade. At least some of this seems to reflect causality from the former to the latter. Barrell and Pain (1999) focus on the Irish manufacturing sector to find a significant relationship between the stock of FDI and overall productivity growth. They point to the strong link between inward FDI and Ireland's above-average growth in R&D spending to conclude that foreign-owned firms – accounting for around 60 percent of gross output in Irish manufacturing – play an instrumental role in generating the exceptionally high rate of growth in total factor productivity.

Of course, a statistical correlation between ownership and productivity is not in itself proof of causality from the former to the latter. Several recent studies (including Griffith 1999, Harris and Robinson 2003, and Benfratello and Sembenelli 2002) try to address this in various ways – for instance by using instrumental variables. They find that the productivity effects of foreign ownership are then smaller and sometimes even insignificant.

⁵ Studies focusing on other economies broadly support the conclusion that foreign-owned firms are more productive than local firms. In the case of the United States and Canada, this includes Gliberman *et al.* (1994) and Doms and Jensen (1998). For developing countries, support for this conclusion is found in Blomström and Wolff (1994), Sjöholm (1999), Kokko *et al.* (2001) and Haddad and Harrison (1993).

To summarise the productivity-gap literature, while foreign-owned firms are consistently more productive than indigenous firms, it is not clear whether this is because of the ownership *per se* or whether inherently more productive firms simply attract more foreign buyers.

A second strand of the literature approaches the issue of FDI and productivity in a rather different manner, exploring whether merger events introduce a trend break in the profitability of the involved firms. Since the bulk of FDI in developed countries – including the EU – is the direct result of M&As, the question of gains from FDI overlaps substantially with whether there are gains from M&As.

As reported by Fortanier (2002), the efficiency of merged firms can be measured using two methods. The first method is known as “event studies”. This uses stock market valuations before and after a merger takes place to see if the market expects profitability to improve by this event. This method typically compares merged firms either with their historical performance or with other firms serving as a control group. Tichy (2000) reviews 32 event studies to conclude that mergers in the manufacturing industry tend to increase the value of the acquired firm but erodes that of the acquiring firm. Another review of this literature is conducted by Schenk (2002), who similarly finds a negative link between the merger event and the evolution of share prices in three-quarters of the cases. On average, this literature finds that acquiring firms lose between 5 and 10 percent of their market value within five years of the merger.⁶

“Event-studies” tend to find that mergers and acquisitions reduce the market value of acquiring firms.

The second method of studying the efficiency of M&As is used by the “outcome studies”. These do not use market data but instead use data from the annual reports of companies. While such data are typically considered more reliable as an indication of true firm performance than the share price, comparability across countries faces significant problems. Still, outcome studies broadly confirm the negative conclusions of event studies. As reported by Schenk (1998), on average, outcome studies have indicated approximately 65-85 percent of all large-firm M&As do not lead to an increase in profitability.⁷

Since M&As on average result in increased concentration, it is unlikely that the absence of profitability gains is the result of increased competition. Instead, this literature concludes that it reflects a relative absence of gains also at the society level. This conclusion is supported by a lack of evidence that M&As on average bring gains in terms of increased R&D spending or innovativeness of merged firms.⁸ In essence, the combined firm is no more efficient than its predecessors.

Together, these two strands of the empirical literature raise serious questions as to what scope there really is for productivity gains from FDI in industries and economies that are operating relatively close to best practice. Unlike developing countries, where local firms may operate far below the efficiency frontier and so can make large strides thanks to an injection of new management and technology, this seems to be less commonplace in

6 See also Jensen and Ruback (1983) and Agrawal *et al.* (1992) for other surveys on this topic.

7 For other studies on the subject, which mostly reach similar conclusions, see Rhoades (1998), Simon *et al.* (1996) and Schenk (2002).

8 See Fortanier (2002) for a further discussion on these issues.

developed economies where strong local competition encourages innovation and the adoption of best practice also without the influx of foreign capital. While foreign-owned firms are on average more productive than indigenous firms, there is little conclusive evidence that the causality runs from ownership to productivity, rather than the other way around.

3.3.3 Externalities to indigenous firms

Beyond the direct impact that the foreign investor has on the acquired firm, there may also be positive externalities to the surrounding local economy. However, the empirical literature has long had great difficulty producing convincing evidence of such spillover effects. This literature was initially dominated by cross-section studies (which have no time dimension), mostly based on sector-level data. Many of these studies have found mostly positive spillover effects (i.e. a positive impact on productivity), both in developed and developing countries, but these results have been somewhat undermined by methodological questions.

With the availability of larger data sets and new econometric techniques, there has been a partial shift over time towards panel-data studies. Panel data studies are less prone to biased estimates as they allow for the observation of firms over time, which is particularly important if there are lagged effects. They also allow for the control for unobservable factors that may affect both ownership and performance. In sharp contrast to cross-section studies, panel-data studies only rarely find strong evidence of a positive impact on productivity outside the foreign-owned firms themselves.⁹ Görg and Greenaway (2001) investigate the evidence of possible spillovers in a broad survey of the literature covering developing, developed and transition economies. They look for evidence of spillovers in terms of productivity, wages and exports but find little robust empirical support for their existence.

Panel-data studies only rarely find strong evidence of a positive impact of FDI on productivity outside the foreign-owned firms themselves.

One notable exception in the EU context is the United Kingdom, for which several studies – also panel studies – have found evidence of positive spillovers. For example, Haskel *et al.* (2002) find that total factor productivity growth is higher in sectors that have a larger presence of foreign-owned firms. This is the case also for firms that themselves are not foreign-owned. A 10 percent increase in foreign presence in a UK industry raises TFP in indigenous firms by 0.5 percent, an observation that is consistent with the presence of positive spillovers. Also Liu *et al.* (2000) find that UK-owned firms enjoyed productivity gains in FDI-receiving sectors. These results are supported by another firm-level panel study by Griffith *et al.* (2003). They observe that TNCs constitute a large share of the firms that are on the technology frontier. More importantly, they find that increased foreign presence raises the speed of convergence by all firms towards the frontier. These positive conclusions for the United Kingdom are somewhat qualified by a string of studies by Girma and his co-authors. Using firm-level data, Girma *et al.* (2001) and Girma and Wakelin (2000, 2001) find evidence of spillovers only in skill-intensive industries. They find that local firms benefit less from the presence of foreign-owned firms the further they themselves are from the technology frontier.

⁹ Comprehensive surveys of this literature are provided by Görg and Greenaway (2001, 2002) and Barba Navaretti and Venables (2004).

The level of technological development and human capital of the local economy influences positively the size of positive spillovers from FDI.

As opposed to the literature on the United Kingdom, there are only a few studies that look at these issues for other EU countries. Barrios and Strobl (2002) find no persuasive evidence for spillovers in the case of Spain, while Dimelis and Louri (2001) do find such evidence in the case of Greece. Some studies observe that spillovers vary across sectors.

Barry *et al.* (2003) find evidence from US firms in Ireland that externalities arise from FDI in the form of agglomeration effects. These occur both because the presence of foreign-owned firms at a location generates efficiency benefits for other foreign-owned firms at the same location and because existing firms send signals to new investors on the reliability and attractiveness of the host country. Furthermore, Görg and Strobl (2001, 2002) show that the presence of foreign companies has a positive impact on the survival probability of indigenous firms in high-tech industries. Similarly, Sembenelli and Siotis (2003) find evidence in the case of Spain that spillovers to local firms are greater in R&D-intensive sectors. These observations support earlier observations made with respect to developing countries (for instance in Blomström *et al.* 1994, Kokko *et al.* 1996, and Kathuria 1998, 2000 and 2001) that the level of technological development and human capital of the local economy influences positively the size of positive spillovers from FDI.

Castellani and Zanfei (2001) reach similarly mixed conclusions in a manufacturing panel data study on France, Italy and Spain. Of the three countries, a significant positive impact of foreign ownership on domestic productivity was only found for Italy. In this context, Italy does provide some evidence of the importance of an enabling environment for FDI to have a broader growth impact. Imbriani and Reganati (1999) use regional and cross-section data from Italy to show that, although productivity levels are higher in sectors where TNCs have a greater presence, evidence of such spillovers is less apparent in the southern parts of the country.

The difficulty of finding strong evidence of spillovers between foreign-owned and same-sector indigenous firms does not exclude the possibility that spillovers exist across sectors. Smarzynska (2002) proposes that the empirical literature may be looking for spillovers in the wrong place. She suggests that TNCs have a stronger incentive to prevent spillovers to same-sector competitors than to local suppliers in other sectors, i.e. to firms that are not in direct competition with the foreign investor. Spillovers from FDI could then be more likely to occur through backward linkages to suppliers. Studies focusing on same-sector spillovers will not capture these. There is some empirical support for this view. For example, in a study of FDI in Taiwan, Markusen and Venables (1997) find evidence that initial foreign investments created demand for local suppliers, raising quality, productivity and product diversity.

While not providing direct evidence, an indirect indication that FDI is associated with positive spillovers is the fact that it tends to be concentrated in sectors where agglomeration effects and positive spillovers tend to be more common. For example, Barba Navaretti *et al.* (2002) report that while non-EU subsidiaries account for 11 percent of total EU manufacturing turnover, their share rises to above 20 percent in pharmaceuticals and in communication equipment. In office equipment their share is 40 percent. These are all research-intensive industries that have been found to be associated with the presence of technology spillovers.

Another indirect effect of FDI may be through its influence on local competition. Ahn (2002) reviews a large number of empirical studies and observe a positive and robust positive relationship between product market competition and productivity growth. Whether FDI results in positive spillovers may thus depend on its impact on competition. The empirical literature seems to suggest that this is the case when local firms have attained a minimum level of technology, but that FDI actually crowds out competition when local firms are too far below the technology frontier to compete effectively. For example, Cantwell (1989) found that the entry of US manufacturing firms into Europe had a positive effect on competition when local firms had some traditional technological strength.

Through increased competition, FDI can also serve as a catalyst for sector-wide consolidation, generating economies of scale and contributing to the formation of agglomerations. This issue is closely linked to regional trade integration. Once firms are able to serve the larger regional market from one or a few production sites, there is a strong incentive for a pooling of production and R&D functions to a smaller number of locations, thus allowing for greater economies of scale. By implication, this means that economic integration leads primarily to vertical rather than horizontal FDI.

As shown by Zimny (this volume) there is strong evidence that each EU enlargement has increased FDI inflows to accession countries around the time of joining the EU, both in absolute terms and in comparison with the average for all EU countries. This has tended to be true both for intra-EU flows and for flows from outside the EU. This suggests that economic integration does indeed spur larger FDI flows. Yannopoulos (1990) observes that FDI into Ireland accelerated sharply in the 1970s. A similar development has been observed preceding the Iberian accessions of the 1980s (see Buckley and Artisien 1987, Döhrn 1996) and in the case of Sweden and Austria. Brenton (1996) observes that FDI increased within Europe already in the late 1980s in anticipation of the 1992 Single Market.

Each EU enlargement has increased FDI inflows to accession countries around the time of joining the EU.

To sum up, the empirical literature for the EU and other developed countries broadly supports the notion of a positive correlation between inward FDI and economic performance. At the same time, with a few exceptions (notably the UK) it has not typically been possible to find an unambiguous causal influence of FDI on economic growth. Also the size of any such positive link has been contested. Judging especially from the valuation of merged firms, the efficiency gains of M&As tend to be small. Perhaps this should not come as a surprise. Firms operating in a competitive local environment face strong incentives to innovate and adopt best practice also without the influx of foreign capital. This reduces the scope for substantial additional efficiency gains from M&As. By contrast, such a high level of efficiency is less likely to characterise the operation of firms in developing and transition economies. This suggests that the productivity gains from FDI could be substantially larger in those countries. To test this hypothesis, we now move to Central and Eastern Europe.

3.4 Impact of FDI on economic growth in Central and Eastern Europe

The basic mechanisms through which FDI has affected economic growth in other countries are likely to be present also in the CEE countries, i.e. through fixed investment, technology transfers and spillovers. But the manner in which FDI has affected growth through these

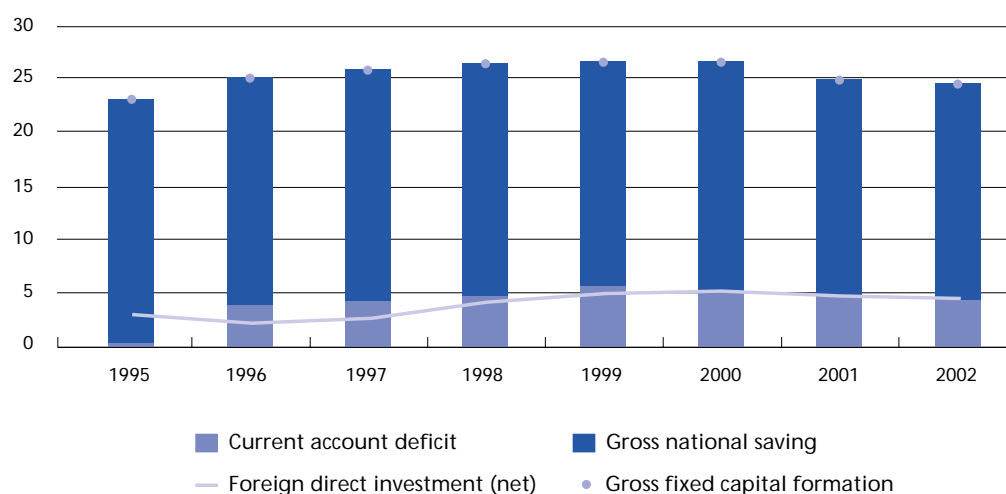
channels also contain some elements that are unique to transition economies. Specifically, FDI seems to have served as a catalyst for structural change in Central and Eastern Europe and so resulted in greater productivity gains from new investment than is typically the case in either developing or developed economies.¹⁰

3.4.1 Higher fixed investment

After more than a decade of transition, one of the main observations that can be made with respect to economic growth is that the region has relied heavily on foreign saving to fund the gap between national saving and investment. Between 1994 and 2002, the current account deficits (or foreign saving) of the CEE-10 averaged 4 percent of GDP (Figure 3). Net FDI inflows contributed significantly to the financing of the region's current account deficit. In fact, net FDI inflows and external deficits were of a similar size. In this sense, and as the chart suggests, FDI helped to facilitate a higher level of investment than would have been possible through national saving alone.

In Central and Eastern Europe, FDI helped to facilitate a higher level of investment than would have been possible through national saving alone.

Figure 3. Gross national saving and investment in CEE (in % of GDP)



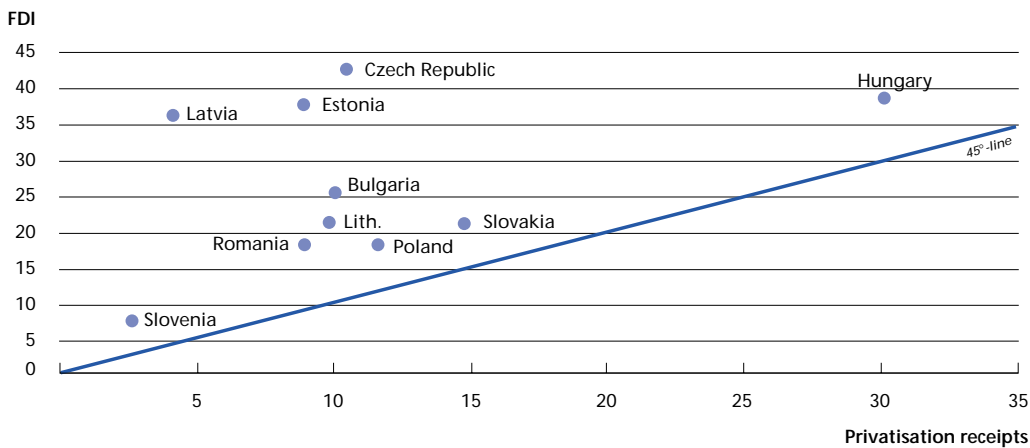
Source: EBRD (2003) and own calculations.

Of course, FDI to these countries partially consisted of M&As (driven by the privatisation of state assets). In this sense there is no immediate one-to-one link between FDI and domestic investment. Nevertheless, as suggested by Figure 4, cumulative FDI inflows to CEE countries have on average been more than double that of privatisation receipts, so there has also been a substantial element of new (i.e. greenfield and brownfield) investment. This is consistent with the results of Calderón *et al.* (2004), who find that cross-border

¹⁰ As discussed in Temple (1999), an important limitation of large cross-country growth regressions is that countries do not lend themselves comfortably to generalised conclusions regarding the drivers of growth. Specifically, there are likely large differences in the drivers of growth between countries that are technology leaders and those that are trying to catch up. This observation is key to the issue of FDI when we compare the EU-15 members with the new EU members. Specifically, one would expect, *ex ante*, that technology transfer and the adoption of best practice plays a much greater role in CEE countries than in the EU-15. Furthermore, the fixed investment gap may be greater in the CEE countries.

M&As tend to generate new additional investment of a similar order of magnitude. This observation is also supported by data reported in the 2000 UNCTAD World Investment Report: in the period 1997-99, cross-border M&As accounted for four-fifths of FDI inflows in developed countries, but only two-fifths in CEE (UNCTAD 2000). Given the shortage of domestic saving and investment in CEE countries, FDI has thus contributed directly to a higher investment ratio during transition.

Figure 4. Cumulative FDI and privatisation receipts 1992-2000 (in % of GDP)



Source: EBRD (2003).

3.4.2 Efficiency gains in foreign-owned firms

The second channel through which FDI can affect economic growth in CEE is by facilitating a more efficient use of existing resources through foreign-owned firms closer to best practice. Similar to the literature for developed countries, the predominant method to measure this is to compare the productivity of foreign-owned firms with that of indigenous firms. Djankov and Hoekman (2000) analyse firm-level data of over 170 foreign-owned firms – joint ventures and FDI – in the Czech Republic for 1992-96. They find that TFP growth is higher in firms with foreign participation than in purely indigenous firms. In some cases, this superior performance of foreign ownership could stem from flaws in domestic mass privatisation schemes that made domestic ownership too dispersed for effective governance. For example, Kocenda and Svejnar (2003) analyse the effect of ownership following large-scale privatisation in the Czech Republic. They find that concentrated foreign ownership improves economic performance, whereas domestic private ownership does not, relative to state-owned firms. They find large differences in how the different owners have managed their firms. Foreign-owned firms engage in strategic restructuring, resulting in increased profits and sales, while indigenous firms focused on cost cutting without increasing profit. One reason for these differences in ownership behaviour could be differences in owner concentration. The authors find that ownership concentration is associated with superior performance. To the extent that foreign owners have been able to gain a greater controlling share in their firms than is typically the case for domestic owners, their corporate governance may be more effective.

FDI can also affect economic growth by facilitating a more efficient use of existing resources.

Konings (2001) looks at FDI in Bulgaria, Romania and Poland. He finds that foreign-owned firms are on average more productive than indigenous firms. Foreign firms have also grown faster in terms of output and employment, pointing to the crowding out of indigenous competitors. This was particularly the case in sectors where indigenous firms had little exposure to the world market prior to transition. However, as stressed by Fortanier (2002), the crowding out of indigenous firms is not necessarily negative for society as a whole if one foreign firm is more productive than many indigenous firms. It becomes a problem only if the crowding out goes so far that competition is undermined. This risk is smaller in industries open to trade since markets can then be contested by foreign competitors.

The literature observing that foreign-owned firms are on average more productive is complemented by a macroeconomic literature showing that TFP has accounted for a large portion of economic growth in CEE. Dobrinsky (2001), for example, concludes that TFP can explain more than three-quarters of the CEE countries' growth in the second half of the 1990s. This pattern of economic growth strongly resembles that seen in Western Europe after World War II. While not direct evidence of a role of FDI as a conduit for technology transfer, this observation is at least consistent with such a view.

It is also noteworthy that the acceleration in TFP growth in the second half of the 1990s coincided with a notable increase in net FDI inflows. While other factors than FDI (for example the level of human capital or research and development) could in theory account for this acceleration in TFP growth, Tondl and Vuksic (2003) show that in practice these sources were of secondary importance to the transfer of knowledge and technology from abroad. They also find that it was in particular FDI, and not capital accumulation as such, which was the main driving factor behind regional growth.

On balance, the unusually large growth benefits from FDI that many observers have found in CEE countries likely reflect the particular characteristics of this region. First, the potential for generating productivity gains at the outset of transition was high because of the initially inefficient use of resources. Both within firms and across sectors, there was thus ample room for quickly reducing so-called "x-inefficiencies". A second factor was that, while the management and existing capital stock may have been poor at the outset, the region had a fairly developed human capital stock. These two factors, combined, allowed foreign investors to more quickly reap productivity gains from the application of new management, new processes and new capital than what is normally observed in either developing or developed countries. To some extent, such transition-related productivity gains would have materialised also without FDI, but the technology transfer from abroad accelerated the process.

The unusually large growth benefits from FDI found in Central and Eastern European countries likely reflect the particular characteristics of this region.

3.4.3 Spillovers to indigenous firms

Even if it is true that a large portion of economic growth in CEE countries has consisted of TFP growth, this is not in itself evidence of spillovers. It is perfectly feasible that TFP stems entirely of efficiency gains within the foreign-owned firms themselves. As we observed earlier in the case of the United Kingdom, technology spillovers require that also firms which do not receive FDI themselves benefit from the inflow of new knowledge.

A number of panel data studies have recently been conducted on spillovers in individual CEE countries. Djankov and Hoekman (2000) and Kinoshita (2001) focus on the Czech Republic; Bosco (2001) on Hungary; and Konings (2001) on Bulgaria, Poland and Romania. None of these studies find evidence of positive spillovers from FDI. Damijan *et al.* (2001) study FDI in eight CEE countries, finding evidence of positive spillovers only in the case of Romania. Görg and Greenaway (2001) demonstrate that transition economies have no greater tendency to benefit from spillover effects from FDI than other countries. A similar conclusion is reached by the UN Economic Commission for Europe (UNECE 2001), which observes that expected spillover benefits to purely indigenous enterprises are found to be few and far between, and indeed often appear to have been negative rather than positive. This suggests that CEE countries are not immune to the emergence of isolated, foreign-owned, technologically advanced sectors that have limited positive impact on the surrounding local economy.

This lack of evidence for spillovers could be the result of the very large volumes of FDI flowing into the region in recent years, with the market shares and technology levels of foreign-owned firms being so high that the remaining indigenous firms become sidelined. The combination of typically narrow technology sectors, underdeveloped domestic capital markets and mass privatisation allowed foreign-owned firms to take over much larger shares of the mostly exporting, high-technology industries in CEE countries than in other regions, leaving little in terms of an advanced indigenous industry to which spillovers can occur. Also, a very large portion of privately financed research and development in CEE takes place in foreign-owned firms. This is very different from most advanced countries, where indigenous firms are active also in high-technology sectors and conduct enough research and development to be receptive to technology spillovers from advanced foreign-owned firms. From this point of view, one can argue that it is the large scale of FDI in CEE countries that has prevented evidence of spillovers from emerging.

One can argue that it is the large scale of FDI in Central and Eastern European countries that has prevented productivity gains outside the foreign-owned firms themselves.

It is worth comparing these observations with evidence from other developing countries, where the evidence is much more mixed. For example, of the 15 studies of spillovers in developing countries that are surveyed in Barba Navaretti and Venables (2004), nine reach positive conclusions regarding the presence of spillovers.

Another possible explanation for the lack of evidence on spillovers is that the domestic financial sector has not developed to the point where domestic entrepreneurs can take advantage of spillovers. Drawing on a broader sample of developing countries, Alfaro *et al.* (2003) find evidence that countries with well-developed financial markets derive significant economic benefits from FDI, while countries without developed financial markets do not. This points to a possible weakness of relying too heavily on FDI as a source of investment finance and technology. Without a more pronounced shift towards more developed financial sectors and indigenous technology generation, the economic gains from FDI in CEE countries may continue to be internalised by the foreign-owned firms themselves, with limited spillovers to the surrounding economies.

Of course, the lack of evidence on spillovers does not revert the result that FDI has likely had a large impact on economic growth in CEE countries, even if most of these gains have taken place within the foreign-owned firms themselves.

4. To promote or not to promote FDI and, if yes, how?

The positive impact that FDI can have on economic growth in host countries – at least in developing and transition economies – seems to suggest a compelling case in favour of FDI promotion policies, including fiscal incentives (e.g. tax holidays), financial incentives (e.g. investment subsidies), and other enticements (e.g. the supply of infrastructure services at preferential charges). But on closer inspection, the case for FDI incentives is far from straightforward.

It is not the growth-enhancing impact of FDI per se that may merit a government intervention, but an acceleration of economic growth that results from externalities such as knowledge spillovers.

To begin with, from an economic policy viewpoint, it is not the growth-enhancing impact of FDI *per se* that may merit a government intervention. Rather, it is the acceleration of economic growth that results from externalities such as knowledge spillovers and the stimulation of competition in the host-country economy. In other words, the justification for FDI promotion policies needs to rest on the failure of markets to fully reward foreign investors for the benefits they generate. And if that is the case, the purpose of economic policy is to align private returns with social returns and, thus, make FDI and the associated TNC activities reach their welfare-maximising level.

But as in other economic policy areas, acknowledging the possibility of market failures is not sufficient to justify government intervention. Clearly, a fundamental question in the context of FDI is whether the presence of TNCs indeed generates such positive externalities. As we have argued above, the empirical evidence is mixed, and a key finding of the empirical literature is that the scope for externalities may vary across industries – even firms – and, more important, very much depends on whether or not economic conditions in host countries provide an environment that enables indigenous firms to learn from and positively respond to the presence of foreign-owned firms (Blomström and Kokko 2003a, 2003b).

The existence of positive externalities from FDI does not mean that they are evenly distributed across countries or regions. This has important implications for allocative efficiency. As shown by Fumagalli (2002), the TNC's preferred location on the basis of private returns may be socially suboptimal if the FDI would bring larger positive externalities in another region. In this case, a subsidy can increase aggregate welfare if it succeeds in changing the location choice of the TNC towards the higher-externality location, so long as the size of the subsidy required to achieve this goal does not exceed the externality gain. As suggested by Barba Navaretti and Venables (2004), and elaborated in detail in the footnote below,¹¹ this may be true even if countries compete strategically for FDI through the use of subsidies. Specifically, if each country were to offer subsidies to TNCs up to the point where the subsidies equal their externalities, then countries with

11 In perfect markets (perfect except for the externality considered here), FDI incentive competition among countries ensures an internationally efficient allocation of resources. To illustrate, suppose a foreign investor can choose between two countries, with the investment in country 1 and country 2 yielding private profits of P_1 and P_2 , respectively; assume further that $P_1 > P_2$ and that the investment would generate the same external benefit in both countries ($B_1 = B_2$); in these circumstances, FDI in country 1 implies an internationally efficient allocation of resources given that the total return to FDI (i.e. the sum of private profits and external benefits) is larger in country 1 than in country 2 ($P_1 + B_1 > P_2 + B_2$). If the governments of both countries are ignorant about the external benefits and offer

larger externalities would in equilibrium offer larger subsidies, possibly changing the location choice of the TNC in their favour. In equilibrium, the allocation of FDI across countries would be more efficient than in the case where no subsidies are offered and TNCs allocate FDI only on the basis of private returns.

There is a caveat to this logic, however. Whereas it may be true that the non-cooperative solution is optimal from an allocative efficiency point of view, these gains accrue to the TNCs as a result of countries trying to outbid each other. For the winning host country, the externalities may be completely offset by the costs of the subsidy. A complete dissipation of the external benefits to foreign investors could be avoided if countries cooperate and commit themselves to cap the incentives they offer to potential foreign investors in such a way that the locational choice of the TNC does not change compared to the non-cooperative outcome. This suggests a need for multilateral coordination.

While theory clearly points to a case for FDI incentives that improve allocative efficiency, the practical obstacles to such cooperative solutions are formidable. As Kokko and Gustavsson (this volume) and UNCTAD (2003) observe, multilateral agreements have so far not reached far in setting common rules for how countries should compete for FDI. That said, more explicit limits on FDI incentives are part of regional integration agreements like the EU and NAFTA.

One reason cooperative solutions may be hard to attain is that the size of externalities are hard to measure. A country may thus claim to enjoy larger externalities than is really true and offer larger subsidies than its permitted limit. Positive externalities are also likely to result only from some FDI. Incentives would therefore have to be selective in order to avoid subsidising FDI that bring no extra benefits to society at large. Obviously, the margin of error and the scope for being too generous is large.

There is ample evidence that this is a real problem. As reported by Blomström and Kokko (2003b), FDI incentives have proliferated across the world, with more than 100 countries offering various FDI incentives in the mid-1990s. In industrialised countries, the subsidies offered often amount to tens of thousands of US dollars per FDI-related job created. To take a few examples from the European automotive industry in the 1980-90s: FDI incentives are estimated to have ranged from USD 54,000 per job in the case of a Nissan plant in the United Kingdom to USD 300,000 for a General Motors plant in Hungary (Oxelheim and Ghauri 2004). Another striking example is FDI support equivalent to USD 800,000 per job for production facilities of Dow Chemical in Germany. It seems questionable whether incentives of this size are really worth it from an externality point of view.

FDI incentives have proliferated across the world, with more than 100 countries offering various FDI incentives in the mid-1990s.

11 (continued)

no incentives, the investor chooses country 1 (because $P_1 > P_2$), thereby allocating resources to the country with the highest total return ($P_1 + B_1$). Let us now assume that country 2 offers FDI incentives equivalent to half of the external benefit accruing to it and that $P_2 + 0.5B_2 > P_1$. The foreign investor now chooses country 2. While this would be beneficial to country 2 and the foreign investor, it would result in an inefficient allocation of resources, not to mention the foregone benefit to country 1.

But country 1 is likely to react and to offer FDI incentives too. It can easily be shown that competition between welfare-maximising governments would entice both governments to offer FDI incentives of $B_1 = B_2$ and, as a result, the foreign investor would opt for country 1, thereby ensuring an internationally efficient allocation of resources.

But overestimating the external benefits of FDI in a world of imperfect information is only one reason why governments may end up being too generous in offering incentives. A more fundamental concern is that governments may not be welfare-maximising, but that they respond to lobbying and rent seeking (Barba Navaretti and Venables 2004). Obviously, given that even welfare-reducing policies raise the income of those that directly benefit from them, they are hard to avoid in real-world economies.

On balance, these problems are likely to make many cooperative solutions unfeasible. It may then be tempting for countries instead to reach agreements that substantially limit FDI incentives in order to avoid the non-cooperative solution that leaves the TNCs with all the allocative efficiency gains.

But a complete ban on subsidies for FDI may also be unsatisfactory given that externalities do seem to exist at least in some industries. There have been proposals that address some of the problems of *ex ante* estimating externalities, resulting in policy proposals that are both workable and pareto superior to the no-subsidy option. Starting with policies that directly affect public finances (either through expenditure or foregone tax revenues) Blomström and Kokko (2003b) have come up with the sensible proposal that incentives should not be given upfront, i.e. prior to investment, but linked to certain activities of the TNCs such as R&D, training and education, and the linkages they establish with indigenous firms. Furthermore, they point out that whether positive externalities indeed materialise (i.e. whether or not social returns to FDI exceed private ones not only *ex ante* but also *ex post*) depends very much on the capacity of indigenous firms to absorb foreign technology and skills. This suggests a strong case for subsidising R&D, training and education expenditures of indigenous firms too – an approach that would also avoid creating distortions between foreign and indigenous firms. In a similar vein, the authors highlight the need for putting in place a modern infrastructure and for investment in human capital. But what we then have is essentially a policy that generally creates an enabling environment that helps countries to attract and benefit from FDI rather than FDI specific incentives.

A complete ban on subsidies for FDI may also be unsatisfactory given that externalities do seem to exist at least in some industries.

But there is also scope for policies that are costless in the sense of having no immediate budgetary implications, namely the reduction if not removal of remaining impediments to FDI. Analysing the period 1980-2000, the OECD has estimated that border barriers and labour market arrangements account for almost half of the differences in bilateral outward FDI positions between OECD members (OECD 2003). Restrictions on FDI flows account for some 45 percent of the difference that is due to border barriers. While FDI restrictions have been reduced considerably in recent years, obstacles remain, notably obligatory screening and approval procedures and limits on the share that foreign investors can hold in domestic enterprises.

In this context, it is worth considering barriers to cross-border M&As. We have pointed out above that the transfer of best management practice from home to host countries can reduce “x-inefficiencies” and thus increase welfare. Clearly, to the extent that mergers also lead to economies of scale and scope – which is, in fact, their main but often unfulfilled promise – there could be further efficiency gains. In the EU, cross-border M&As are currently difficult, in some member states they are not legal except through a rather cumbersome transformation process. Against this background, work on a take-over

directive aimed at liberalising cross-border mergers has been in the making for a long time.¹² In 2001, a far-reaching proposal by the European Commission reached deadlock for a variety of reasons, including concerns that mergers could be a means of circumventing national regulations on worker participation. A new proposal, less ambitious than the previous one, is currently under consideration by the Council of Ministers and the European Parliament. Under this proposal, the merged company may have to apply the worker participation laws of the country where they are most extensive, potentially hindering mergers of and with firms in countries like Germany.

The other important impediment to FDI emphasised by the OECD are labour market arrangements, which explain about one-quarter of the differences in FDI positions between OECD members. Looking more closely at specific arrangements, it turns out that the labour tax wedge (in essence the difference between the cost of labour to the firm and workers take-home pay) accounts for most of the effect of labour market arrangements on bilateral FDI positions; by contrast, employment protection legislation, although not irrelevant has less of an influence on FDI flows. All this suggests that structural reforms in labour markets could contribute to increasing FDI flows and ultimately higher welfare.

Structural reforms in labour markets could contribute to increasing FDI flows and ultimately higher welfare.

To conclude, while specific FDI incentives can be justified in principle, the many pitfalls in designing and implementing them in practice suggest that it may be better not to offer them. Instead, government support for firms – whether foreign-owned or indigenous – aimed at generally raising economic productivity appears to be more promising. In addition, one can argue that reducing remaining impediments to FDI, whether of direct or indirect nature, should get priority over measures that have budgetary implications.

5. Conclusions

The empirical literature on the growth impact of FDI suggests a strong positive relationship between the two. Yet, the lack of evidence of a clear causality from FDI to growth impedes our ability to firmly conclude that FDI inflows are a driver and not just a consequence of higher economic growth. Just as a higher return on investment typically attracts more fixed investment, it should be no surprise that it also attracts more foreign investors.

Having said that, we need to acknowledge that the difficulty of finding unambiguous evidence of causality from FDI to growth does not refute the notion that such a relationship nevertheless exists. As the growth literature suggests, many different factors combine to create an environment conducive to higher economic growth. Proper policies and institutions have been found to be particularly important over longer periods of time. In this context, we need to view FDI from a broader perspective than its direct and immediate impact on growth itself. Could it not be the case, for example, that foreign investors are more demanding than indigenous firms as regards a stable and favourable policy environment, good infrastructure and an appropriate human capital stock?

¹² http://europa.eu.int/comm/internal_market/en/company/company/mergers/mergers_en.htm

If governments introduce policies and create institutions with the purpose of attracting FDI, they may create an environment more generally favourable to growth, even though some of this growth is not the result of FDI *per se*.

The evidence is stronger that FDI has been boosting growth directly in CEE than in the EU-15. The reason, as we have argued, is that while these countries needed to bridge the technology gap to the more advanced countries, they nevertheless met some key conditions – especially in terms of human capital – which helped them bridge this gap more quickly with the help of FDI. In addition, the sheer magnitude of net FDI inflows helped sustain a higher level of domestic investment than would have been possible on the basis of domestic saving and debt-creating capital inflows alone.

While FDI is expected to continue to contribute to economic growth in the CEE countries that have joined the EU, it is less clear whether the economic gains from FDI will be as high as during the transition from plan to market. The more the new EU members come to resemble EU-15 countries in terms of inward FDI stocks as a share of GDP, productivity, efficiency and level of technology, the less likely it is that FDI will have a positive influence on economic growth beyond what is observed in more advanced market economies. That said, FDI and the associated activities of transnational corporations will undoubtedly remain an important welfare-enhancing force – both inside and outside an enlarged European Union.

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ABSTRACT

Recognising three main channels of economic integration (labour migration, trade flows, and FDI), this paper focuses on the employment effects of FDI in Europe, addressing, in particular, concerns that EU firms will relocate jobs to low-wage countries in Central and Eastern Europe at the expense of jobs elsewhere in the European Union. European firm level data are used to document firm level differences in labour costs and productivity between high-wage and low-wage regions, thereby assessing the competitiveness of various regions. In addition, firm level data of over 1,000 European transnational corporations and their affiliates are used to analyse whether employment relocation between high-and low-wage regions occurs. The main finding is that employment relocation from west to east is not taking place, but there is evidence for employment relocation within high-wage European regions.

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The employment effects of foreign direct investment

1. Introduction

In recent years, with the increased globalisation of the world economy, fear has grown in industrialised countries that free trade with low-wage economies in the developing world and in Central and Eastern Europe will harm domestic employment. The economic implications of international economic integration have been widely researched. However, its main concern has been how foreign competition, trade protection, and foreign ownership affect the level and distribution of wages.¹ The consensus seems to be that trade does not do much to wages and employment.

However, foreign direct investment (FDI) seems to have some effect on host country labour markets. Most papers that have studied the effects of FDI on labour market outcomes have focused on the relationship between FDI and wage levels paid in the host country. The main finding of this literature (e.g. Aitkin *et al.* 1996) is that foreign-owned firms tend to pay higher wages than indigenous firms. The typical explanation of this correlation is that foreign firms apply better technologies than indigenous firms and, therefore, attract the better workers by paying them more. More recent explanations focus on international rent sharing between the parent and its affiliates. Budd *et al.* (2004) show that in addition to the profitability of an affiliate in a particular host country the profitability of the parent firm determines the affiliate wages, which gives rise to a wage premium in foreign firms compared to indigenous ones. Thus, in terms of wages, transnational corporations (TNCs) do not seem to exploit local workers, but rather pay them better than indigenous firms.

The observation that TNCs tend to pay higher wages suggests that FDI is good for host countries. There is surprisingly little work, however, that studies the employment generation potential of foreign firms although this could have an important impact on the welfare in host countries. Furthermore, new investment of parent companies may affect not only host-country employment, but also home-country employment. From a global point of view, little is known about the employment effects of FDI, despite the increased internationalisation of production in recent years.

In this paper, we take up this theme and investigate it in a more systematic way, using representative European firm level data to examine the impact of FDI on the level of employment not only in host countries, but also in the respective home countries. Especially, the latter is high on the political agenda. Fear is growing that increased competition from low-wage countries leads to a relocation of economic activity within TNCs. In view of the enlargement of the European Union (EU), the focus of this paper will be on the international economic integration between EU-15 member states and new members from Central and Eastern Europe (CEE) and, in particular, on the question of employment relocation to the low-wage CEE regions.

¹ Foreign ownership has been studied by Aitken *et al.* (1996) and Feliciano and Lipsey (1999); trade protection by Gaston and Trefler (1995) and Haskel and Slaughter (2003); and foreign competition by Borjas and Ramey (1995) and Freeman and Katz (1991). These are representative examples of a large trade-and-wages literature. Many representative studies can be found in the volumes of Abowd and Freeman (1991) and Feenstra (2000).



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The structure of the paper is as follows. To focus ideas, Section 2 provides an economic framework to think about economic integration. Section 3, compares labour costs and labour productivity across a number of EU countries – old and new – to get an idea about the incentives to relocate economic activity to the low-wage regions. Section 4 tunes in on the role that TNCs play, as they are more likely to be footloose and, hence, more likely to relocate employment. Specifically, we will examine to what extent labour costs in affiliates of TNCs affect employment in parent firms. Section 5 takes the perspective of CEE countries and discusses how foreign firms have contributed to the job creation process in the region. Section 6 concludes the paper.

2. A framework to think about economic integration²

Standard international trade theory can offer a useful guide for understanding how international economic integration and, in particular, the integration between EU-15 countries and CEE countries may take place. Typically, the adjustment process involves (i) migration by workers in search of better paid jobs, (ii) growing international trade in goods and services, and (iii) FDI, i.e. the movement of companies in search of expanding markets and/or lower costs. Each of these three factors may be important depending on the legal and economic constraints. We will discuss them briefly.

The substantial difference between wages in the EU-15 and CEE could be an incentive for the migration of labour from east to west ...

Labour costs in the EU-15 are, on average, 7 times higher than in CEE (e.g. Konings 2003). This suggests that there is a strong incentive for workers to migrate from east to west. At the same time, as workers from CEE countries may be willing to offer their services at lower cost, EU-15 companies have an incentive to import cheap labour from the East. This is particularly true for unskilled labour and routine activities as these activities are standard and require no, or only limited, training. However, with the exception perhaps of the German experience in 1989-92, a human flood has not materialised so far (Zimmerman 1995). This is partially explained by the reluctance of EU-15 countries to accept large inflows of labour from CEE countries. With already high unemployment rates of unskilled labour, few policy-makers are willing to accept a substantial inflow of labour. For their part, trade unions fear the social consequences of competition by CEE workers willing to work at very low wages. In a broader economic perspective, a sound long-term economic development of CEE was deemed incompatible with an important part of labour force, notably the young, leaving for the West. In short, very much the same motives were involved that led Germany to promote the reconstruction of its *Neue Bundesländer* rather than to accept the reallocation of a significant share of the population of eastern Germany.

Even if the EU-15 attitude towards migration becomes more favourable in the years to come, it remains hard to predict whether labour flows from east to west would increase dramatically. The literature on migration points out that the decision to move is determined by a complex interaction between pull factors in the country of origin and pull factors in the host country (for a survey see Fischer and Nijkamp 1987). As Zimmerman (1995) notes, the combination of an ageing population in the EU-15 and a large pool of young workers in low-paid jobs in many CEE countries creates a potential for future migration to the high-wage countries in the EU-15. However, a variety of factors hinder

² See Abraham and Konings (1999) for further details.

the mobility of workers in Europe, including the importance of formal educational degrees for specific jobs that differ between countries, different languages and cultural traditions, rigid housing and labour markets, and a lack of ethnic networks that facilitate the assimilation of migrants in the host country (such networks are omnipresent in United States, for instance). All those elements contribute to a low degree of labour mobility across and within EU-15 countries. The same factors may also apply to CEE countries. In fact, Burda (1998) shows for Hungary and Bulgaria a strong regional divergence in unemployment, suggesting that unemployed Hungarian and Bulgarian workers do not move even within their own country to find a job.

... but labour mobility even within CEE countries is low, with the supply of labour not responding much to regional wage and unemployment differences.

If labour is rather immobile, other adjustment mechanisms are needed to bridge the gap between east and west. The available options are trade integration and capital mobility. Trade integration started early in the transition period. Before the collapse of communism about 30 percent of total CEE trade was with Western Europe, but with the transition from plan to market, the share of the EU-15 in CEE countries' trade increased rapidly (to 70 percent and more). Ten years into the transition process, the EU-15 continued to have a trade surplus with CEE countries. Trade flows are still growing, but do not seem to cause much policy concern, as the direct and short-term labour market effects seem to be small. A more serious policy concern has been the third adjustment mechanism: the mobility of companies.

One of the most obvious channels through which home (EU-15) jobs may be affected by this increased economic integration is through the employment (re)-allocation decisions of TNCs. It is often argued that TNCs are footloose (Caves 1996, Görg and Strobl 2002). They operate over a range of diverse national markets and can reallocate their factors of production across these markets to minimise total costs of production. The assumption being that they can respond to changing local economic conditions, without having to incur major set up costs. The literature makes a distinction between horizontal and vertical FDI (see Markusen 1995, for instance).³ The approach of vertical FDI says that the TNC locates in a particular place to take advantage of international factor-price differences (e.g. Feenstra and Hanson 1996). Parent headquarters engage in more capital-intensive activities, while production is labour intensive and is thus outsourced to the low-wage locations. The horizontal FDI view asserts that TNC investment arises because trade barriers and transport costs increase the costs of exporting. In this view, FDI takes place primarily for market expansion reasons (e.g. Markusen 1995, Markusen and Venables 1998, 2000).

Empirical work has provided evidence supporting the horizontal view of FDI. The fact that a significant proportion of FDI flows between rich countries further supports this view (e.g. Markusen 1995, Lipsey 1999, Carr *et al.* 2001). However, more recent empirical work by Hanson *et al.* (2001)⁴ emphasises the significant role of outsourcing and conclude that both horizontal and vertical strategies in TNC decisions are important. The relative importance of vertical and horizontal FDI may also change over time. Hanson *et al.* (2001) use matched US parent-affiliate data and document a striking difference between TNC strategies in the 1980s and the 1990s. In the 1980s, a rising concentration of affiliate

³ Uppenberg and Riess (this volume) discuss the nature and drivers of FDI in greater detail.

⁴ They exploit micro data on US headquartered TNCs and their affiliates in the 1980s and the 1990s.

activities in high-income countries took place, with relatively stable employment in US affiliates. This seems to reflect horizontal FDI strategies. This changed in the 1990s, however, and by 1999, the OECD employment share had fallen below its 1982 level while the share of non-OECD employment had increased to around 36 percent. US affiliates in low-income countries experienced rapid annual employment growth rates in the 1990s, especially in the emerging market economies of China and Central and Eastern Europe. This suggests that FDI has been an important source of job creation, thereby playing a key role in creating the basis for sustained growth in countries that experienced massive job destruction early on in the transition process. An obvious question is whether such TNC-driven job creation in countries that are catching up with higher living standards in the world comes at the expense of jobs in TNCs' home countries. The next sections will tune in on this question and will ask, in particular, whether competition from low-wage CEE regions threatens employment in the EU-15.

3. Do labour cost differentials trigger a relocation of jobs?

To assess whether low-wage competition from CEE is a genuine threat to employment in the EU-15 one needs to look at productivity differences too.

In recent years, the popular press and trade unions expressed concerns that low-wage competition from CEE countries threatens employment in the EU-15 – a threat that is believed to become even stronger with EU enlargement. Although such concerns are often presented as undisputable, there is hardly any systematic evidence that compares labour costs across CEE countries with those of the EU-15. Against this background, this section compares wage costs and labour productivity at the firm level in the three largest CEE countries (Poland, Hungary and the Czech Republic) with those in Belgium and Portugal. Belgium and Portugal are very fitting benchmarks for the EU-15 as they form the bounds of the wage cost differentials within the EU-15, with Belgium having one of the highest labour cost and Portugal one of the lowest. Comparing wage cost and labour productivity across these countries gives a good idea about the incentives for EU-15 companies to relocate part of their activity to CEE and, thus, it helps us to assess whether the competition from CEE countries is indeed a genuine threat to employment in the EU-15. The comparison rests on a microeconomic approach, using firm-level data to rank manufacturing industries according to the level of labour productivity and to compare labour productivity (and thus competitiveness) of a given industry across countries. Box 1 elaborates on the dataset and the computation of labour productivity and competitiveness.

Let us start with key features of employment, labour cost, and labour productivity in the countries considered here. Table 1 shows that employment in the average firm is quite large. At the same time, there is substantial heterogeneity between firms as the fairly large standard deviations indicate. The average labour costs in CEE countries can be as low as one-eighth of the labour cost in the average Belgium firm. However, labour productivity in Belgium firms can be about eight times as high as in CEE firms. This suggests that it is not so obvious that Belgium suffers from a wage cost handicap relative to new EU members. But even within the EU-15 there exists a substantial heterogeneity in terms of wage costs and labour productivity. For instance, wages of the average Portuguese firm are one-fourth of those in Belgium, but labour productivity in Belgium is, on average, almost four times higher. Overall, using the ratio of labour cost to productivity as a measure of competitiveness, it appears that the fear of jobs moving to the East because of lower wages is not well founded since lower productivity largely offsets the effect of

Box 1. Firm-level data set and measurement of labour productivity and competitiveness

The firm-level dataset used in this paper covers those large and medium-sized manufacturing firms in Belgium, Portugal, Poland, Hungary, and the Czech Republic that have to report full company accounts to the national statistical offices. This dataset is commercialised under the name 'AMADEUS' by Bureau Van Dijk (Brussels). It enables a comparison of companies across countries because the criteria for including firms (or leaving them out) are the same for all countries and because Bureau Van Dijk tries to make company accounts comparable. To be included in the data, a firm must meet at least one of the following criteria: (i) total operating revenue of at least EUR 10 million, (ii) total assets of at least EUR 20 million, or total employment of at least 150. Another feature of the dataset is that it is not restricted to listed firms as is the case in, for example, the COMPUSTAT tapes of US firms. A drawback of the AMADEUS dataset is that the coverage of firms and firm variables may vary from country to country depending on the national accounting legislation. To minimise the extent of data errors and outliers in the data, we dropped all firms for which annual labour productivity growth was higher than 250 percent or lower than -250 percent. Furthermore, we excluded firms for which data values were unrealistic. In particular, some firms reported negative wages, which indicates a reporting error in the data. This led to an eventual data set of 5,544 manufacturing firms, covering the five countries that we study.

In this paper, labour productivity is measured as output per worker. Output, in turn, is proxied by value added, which is obtained from firms' profit and loss accounts. An obvious drawback of this measure is that it does not account for the number of hours worked.

From the profit and loss accounts we also retrieve the total wage bill. A salient feature here is that the wage bill includes not only the actual pay of workers, but also social security contributions of employees and employers, which often constitute a substantial fraction of total labour costs. Overall, this provides a fairly comprehensive estimate of the costs that firms incur by employing labour. Dividing the total wage bill by the number of employees yields a measure of annual labour costs per worker. A drawback of the data is that the data collection for CEE countries was less accurate for the early period in the sample (e.g. smaller coverage).

To gauge the competitiveness of firms in similar industries, we consider the ratio of the wage cost per worker to labour productivity, which is the same as the total wage bill as a fraction of total output, the latter measured by valued added. Comparing this ratio for a firm in, say, the car industry of one country with that of car producers in other countries gives an indication of the relative competitiveness of firms and countries. It tells us the degree to which the value added that is generated by the firm can pay for the wage bill of workers.

It should finally be mentioned, that all local-currency values are transferred into euro at market exchange rate. This allows a comparison of productivity differences across countries – provided that purchasing power parity approximately holds.

lower wages.⁵ Moreover, to the extent that there is reason to fear rivalry, competition from low-wage countries may be as important within the EU-15 as in an enlarged EU.

⁵ One could object here that a TNC that invests and produces in CEE countries would do so by using relatively advanced technologies, which would come with a productivity of labour far above the CEE average. This is certainly true in a number of cases, but we will see below that, on average, there is nevertheless a considerable wedge between the labour productivity of EU-15 parent firms and their CEE affiliates.

Table 1. Employment, wages, and labour productivity (firm-level means) in selected EU countries for the year 2000

	Belgium	Portugal	Czech R.	Hungary	Poland
Employment	239 (579)	113 (236)	396 (830)	223 (458)	475 (1,001)
Annual wage cost (in euro)	40,700 (12,100)	10,100 (4,500)	5,130 (5,300)	5,900 (3,800)	5,000 (2,800)
Labour productivity (in euro)	72,900 (49,100)	18,600 (11,800)	9,300 (9,600)	12,600 (12,700)	10,000 (9,400)
Number of firms	1,760	650	1,252	587	1,295

Note: Standard deviations in brackets.

Source: Own calculation based on AMADEUS dataset.

But how has the relative competitiveness of these countries evolved over time? Figure 1 shows the evolution of the median firm level ratio of labour cost to labour productivity for Belgium, Portugal, Poland and Hungary.⁶ We opted for taking the median rather than the mean because the median ratio is less sensitive to outliers in the data. The pattern shown in Figure 1 is very revealing. In Belgium, the labour cost to productivity ratio is relatively high and has remained fairly stable over time. The pattern in Poland reveals that this ratio was below the Belgium one until 1998, but it has been higher than the ratio for Belgium since then. This suggests that some convergence has taken place towards the Belgian levels. Probably more important for the topic discussed here: from a competitiveness point of view, it is now more expensive to produce in Poland than in Belgium! Comparing Belgium with Portugal, it turns out that it has always been cheaper to produce in Portugal. What is more, by the late 1990s, Portugal seems to have become more competitive than both Hungary and Poland. It is also worth noting that the indicator of competitiveness behaves more erratically for Poland and Hungary than for Belgium and Portugal. This may be because of deeper structural changes in Poland and Hungary. But it could also reflect a data problem, i.e. as we go back in time, the data may be less accurate (see Box 1). Overall, comparing ratios of labour cost to productivity across countries suggests that incentives for relocating production from high-cost EU-15 countries, such as Belgium, to low-cost ones, such as Portugal, are stronger than the forces that may drive production to CEE countries. Thus, the main 'threat' of low-wage competition does not necessarily come from CEE countries but perhaps from within the EU-15. In any event, survey evidence suggests that the main reason for FDI in CEE is market expansion rather than the availability of low-cost labour. In these circumstances, FDI flows to new EU members are an engine for growth in high-income EU countries rather than a burden on their labour markets.

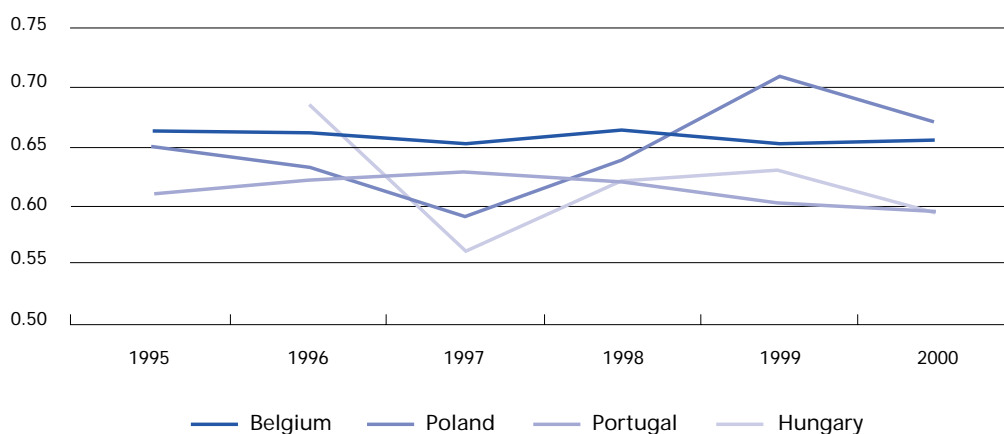
Low-wage competition may come from countries within the EU-15 rather than from CEE countries.

While the ratio of labour cost to productivity gives an idea about the relative competitiveness of countries, it ignores other important factors, including capital productivity and countries' public infrastructure, that play a crucial role in the (re)location decision of production. Furthermore, aggregate figures hide substantial heterogeneity

⁶ The Czech Republic has been omitted, as pre-2000 data for this country are less reliable.

within a country. Some sectors create more value added than others for a given employment level. This could be due to differences across sectors in technologies, institutional settings – such as the sector-specific extent of union bargaining – and in the degree of foreign ownership.

Figure 1. Ratio of wage cost to labour productivity in selected EU countries, 1995-2000



Source: Own calculation based on AMADEUS dataset.

To shed more light on sectoral differences, Table 2 shows the median labour cost per worker relative to productivity per worker for various 2-digit NACE sectors in each of the five countries. The table – showing data for 2000 – ranks sectors from low labour costs (relative to productivity) to high labour costs in Belgium. The main point to take away from the table is that there exists substantial heterogeneity between sectors. In Belgium, for instance, the ratio of labour cost to productivity varies from about 40 percent to almost 80 percent. Table 2 also shows that the ranking of sectors across countries is not very different: low wage-productivity sectors in Belgium are often also low wage-productivity sectors in Portugal and in CEE countries. Thus, by simply comparing labour cost differentials at the country-wide level, one misses an important aspect of what is going on. More specifically, it is clear that the issue of delocalisation to low-wage countries cannot be generalised to all sectors. For instance, for the motor vehicle industry, the ratio of labour cost to productivity per worker ranges from 54 percent in Hungary to 73 percent in Belgium. This may make Hungary an attractive destination for the car industry. But differences between EU-15 countries and CEE countries are considerably lower in other industries, including “wearing apparel”, a sector that has often been cited in the popular press as prone to low wage competition. In Belgium, wage costs are indeed quite high relative to productivity (72 percent). But they are also high in the apparel industry of other countries (68 percent in Portugal, 81 percent in Poland, 63 percent in Hungary, and 75 percent in the Czech Republic). Likewise, the results for other manufacturing sectors do not suggest large differences across countries. Overall, since differences in this measure of competitiveness are relatively small, the rationale for relocating production from one country to another does not seem to be very strong, in particular when one accounts for possible differences in other factors such as infrastructure and geography.

The issue of job relocation to low-wage countries cannot be generalised to all sectors.

Table 2. Ratio of labour cost to productivity per worker, 2000

NACE Description	Belgium	Portugal	Poland	Hungary	Czech R.
Group 1:					
Tobacco products (16)	0.39	0.58	0.37	0.38	0.28
Recycling (37)	0.46	NA	NA	0.60	0.48
Wood and wood products (20)	0.57	0.31	0.70	0.78	0.60
Coke, refined petroleum products, nuclear fuel (23)	0.58	0.59	0.45	0.63	0.81
Chemicals (24)	0.58	0.48	0.62	0.55	0.45
Food and beverages (15)	0.58	0.52	0.53	0.55	0.55
Group 2:					
Office machinery and computers (30)	0.62	0.67	0.68	0.43	0.71
Leather products (19)	0.63	0.57	0.77	0.77	0.78
Furniture (36)	0.64	NA	0.48	0.77	0.65
Textiles (17)	0.65	0.74	0.73	0.58	0.64
Other non-metallic mineral products (26)	0.67	0.69	0.62	NA	0.57
Basic metals (27)	0.67	0.64	0.62	NA	0.57
Rubber and plastic products (25)	0.67	0.64	0.79	0.50	0.67
Fabricated metal products, except machinery (28)	0.68	0.57	0.68	0.67	0.67
Radio, TV and communication equipment (32)	0.68	0.51	0.63	0.43	0.64
Pulp, paper and paper products (21)	0.68	0.69	0.50	0.57	0.48
Group 3:					
Publishing, printing (22)	0.71	0.56	0.56	0.68	0.62
Wearing apparel (18)	0.72	0.68	0.81	0.63	0.75
Motor vehicles, trailers (34)	0.73	NA	0.80	0.54	0.57
Electrical machinery n.e.c (31)	0.75	0.96	0.68	0.82	0.64
Machinery (29)	0.75	0.68	0.76	0.52	0.67
Medical precision, optical instruments (33)	0.78	NA	0.45	0.84	0.66
Other transport equipment (35)	0.79	NA	0.76	0.68	0.63

Note: Industries are ranked from "low" to "high" in Belgium. The first group refers to the highly competitive Belgian sectors, defined as those with a median ratio of labour costs to labour productivity below 60 percent; the second group is a middle group, while the third group refers to the weakly competitive sectors in Belgium. The NACE two-digit classification code is indicated in parentheses.

Source: Own calculation based on AMADEUS dataset.

The above exercise can be criticised since no distinction is made between foreign and indigenous firms, with the former typically having better technology and therefore higher productivity. It is reasonable to believe that FDI involves an investment in more up-to-date equipment, which could boost labour productivity and, therefore, the labour cost advantage may start to play an important role. Furthermore, it is likely that the main incentives for relocation lie with transnational corporations rather than indigenous firms. In the next section, we will therefore focus on labour cost differentials within TNCs to analyse whether labour cost differentials within the same firm may drive employment relocation.

⁷ This section is, in part, similar to sections 2 and 3 of Konings and Murphy (2003).

4. Employment relocation within transnational corporations⁷

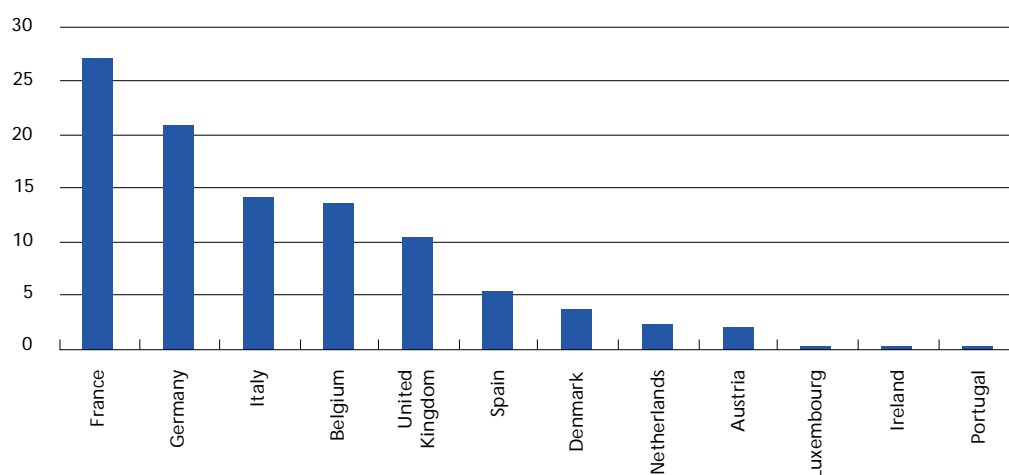
4.1 Location and activities of European transnational corporations

In this section, we will use the same data source (AMADEUS) – but now focusing on more than 1,000 European transnational parent enterprises and their affiliates located in the EU – to study the issue of employment relocation to CEE countries. Apart from the standard data provided in company accounts, the data also includes information on the ownership structure of firms. The company records include information on whether the company has an ownership stake in a foreign affiliate and identify affiliates by name and an identification number. The ownership information available refers to the year 1998, and it is assumed that the parent-affiliate ownership structure for 1998 applies to the earlier years. Although it is not possible to trace ownership changes during the sample period, this is unlikely to be a serious problem. To the extent that affiliates that were not affiliated in earlier years have been included, a measurement error is introduced that may bias the results towards zero.

The eventual data set covers the period 1993-98 and is an unbalanced panel of 1,067 parent companies located in the EU-15, with 2,078 affiliates located in the EU-15, CEE countries, or in both.⁸ We only take into account direct ownership links⁹ and, furthermore, there is no affiliate that also appears as a parent in the dataset. Figures 2 and 3 show the distribution of parent firms and their affiliates across the various European countries. France, Germany, and Italy are home of almost two-thirds of the parent firms in the sample, while France, Spain, the United Kingdom, and Italy host around two-thirds of the affiliates. It is worth noting that only some 5 percent of affiliates of TNCs from the EU-15 locate in CEE countries. This may come a bit as a surprise, but it is consistent with figures reported by UNCTAD World Investment Reports and with the observation that FDI in CEE gathered speed quite late in the 1990s.

Only about 5 percent of affiliates of transnational corporations from the EU-15 locate in CEE countries.

Figure 2. Frequency distribution of parent firms in the EU-15 (in%, 1998)

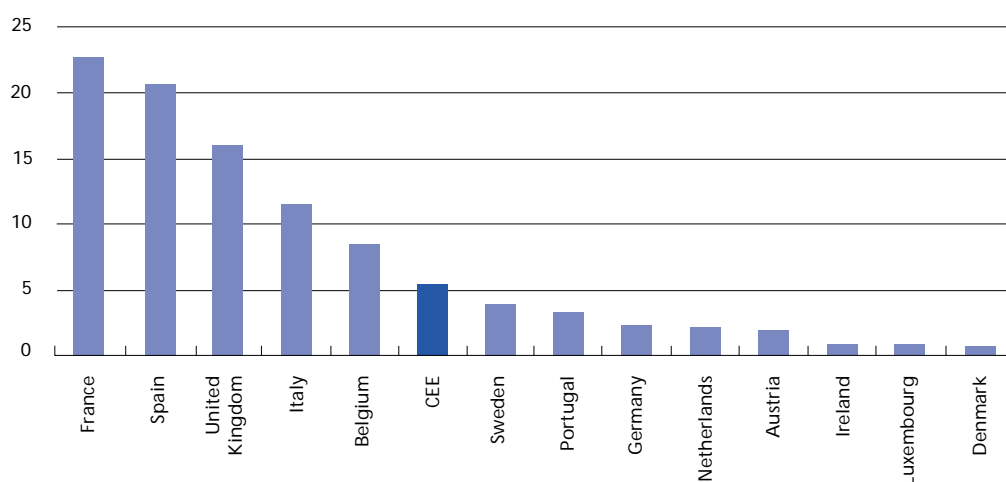


Source: Own calculation based on AMADEUS dataset.

⁸ AMADEUS does not report financial information on companies that are located in the United States, Africa, Asia, so our analysis is restricted to Europe.

⁹ The data often lacked information on indirect ownership structures.

Figure 3. Frequency distribution of affiliate firms in the EU (in%, 1998)



Source: Own calculation based on AMADEUS dataset.

Wage differentials are unlikely to affect the allocation of employment between parent firms in manufacturing and their affiliates in the non-manufacturing sector.

Table 3 shows the distribution of parent-affiliates across the two broad classes of sectors, namely manufacturing and non-manufacturing. In the sample, nearly half of manufacturing parent firms have affiliates solely in the manufacturing sector. Almost one-third of manufacturing parents have affiliates in non-manufacturing only, while close to 20 percent have affiliates both in manufacturing and non-manufacturing. Typically, manufacturing parent firms in the latter two categories have over 80 percent of their affiliates in the wholesale and retail distribution sectors. It is therefore unlikely, for this category of firms, that reallocation of employment in response to wage cost differentials is important. This is because the main activity of the foreign affiliate is related to distribution rather than production within the multinational group.

Table 3. Sector distribution of parents and affiliates in the EU (1998)

		Affiliate in ...		
		... manufacturing	... non-manufacturing	... both
Parent in ...	... manufacturing	48.1%	32.2%	19.7%
	... non-manufacturing	24.7%	58.5%	16.9%

Note: Parents of TNCs from the EU-15; affiliates of these TNCs in the EU-15 and in CEE.

Source: Own calculation based on AMADEUS dataset.

Turning to parent firms in the non-manufacturing sector, Table 3 shows that almost 60 percent of them control affiliates only in the non-manufacturing sector, but a substantial fraction (about 25 percent) of parents in non-manufacturing have affiliates in manufacturing only. The latter fraction could reflect a situation where production is 'outsourced' to affiliates, while the 'administration' and part of the distribution is done in the parent firm. This is the case if the affiliates take care of the production for the market where the parent is located, and the parent firm – in turn – operates in the distribution sector, which is non-manufacturing. We have no data, however, on inter-firm trade, so we have no way to test for this formally.

Having described the location of parent and affiliate firms and their distribution across manufacturing and non-manufacturing, we now look at the evolution of employment in parent and affiliate firms. Figure 4 pictures trends in parent and affiliate employment as a share of total employment in EU-15 transnational corporations, with total TNC employment being the sum of affiliate and parent employment. We can see that the employment share of parents has declined from 80 percent to 72 percent between 1993 and 1998, while the employment share of their affiliates has steadily increased, reaching 28 percent in 1998. This suggests that some reshuffling of jobs between parent firms and their affiliates took place in a relatively short time.

Figure 4. Parent and affiliate employment in % of total TNC employment, 1993-98

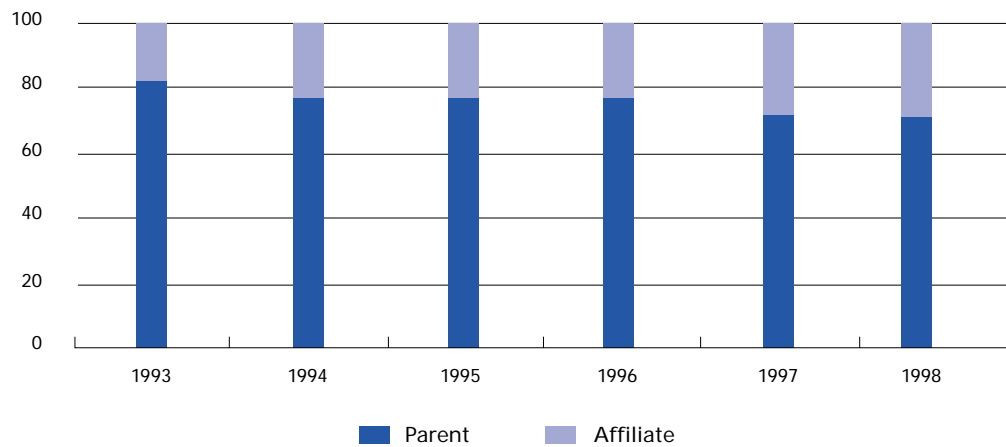
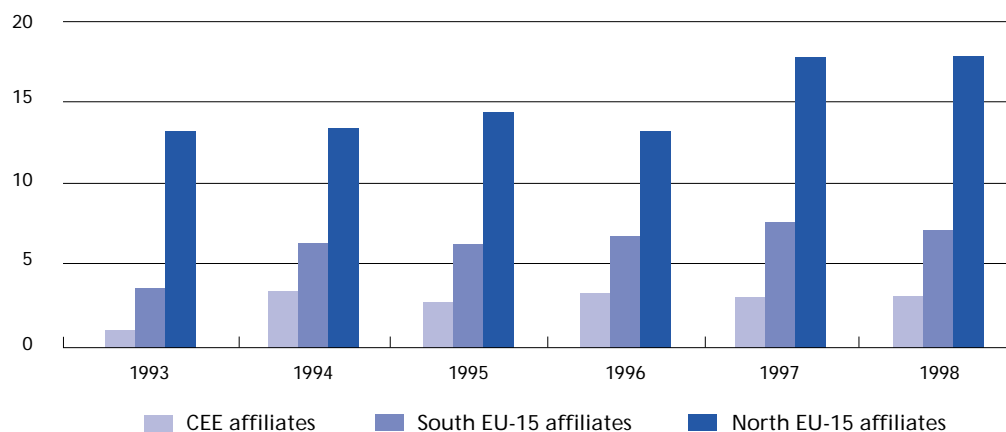


Figure 5. Affiliate employment in % of total TNC employment, by region, 1993-98



Notes: Total TNC employment is the sum of EU-15 TNC parent employment and employment in their affiliates in the EU-15 and CEE.

Source: Own calculation based on AMADEUS dataset.

Some reallocation of employment from European parent firms to their affiliates has taken place, but most of this has been within high-wage countries.

Figure 5 sheds more light on this reshuffling, revealing two possibly surprising results. One is that the employment share of affiliates in CEE countries has remained essentially stable since 1994; by extension, EU-15 affiliates account for most of the increase in the share of affiliate employment (shown in Figure 4). The other is that the increasing employment share of affiliates located in the EU-15 is largely due to an increased fraction of employment in affiliates located in high-wage economies of the EU-15. To see this, Figure 5 shows how the EU-15 affiliate employment share breaks down into a 'south' and 'north' component. The 'south' is defined here as the low-wage countries in the EU-15, i.e. Spain, Italy, Portugal, and Ireland, whereas the 'north' is referring to high-wage EU-15 countries. And as Figure 5 indicates, affiliate employment in the 'north' – i.e. high-wage EU-15 countries – accounts for the larger part of EU-15 affiliates' gains in employment. Overall, these patterns suggest that most of the job relocation took place between EU parent firms and their affiliates located in high-wage EU-15 countries. We will next test this hypothesis in a more rigorous framework.

4.2 Employment relocation and labour cost differentials

Table 4 sets the scene for a more rigorous analysis of possible links between labour cost differentials and employment relocation. It shows that EU-15 parent companies employ – on average – 1,873 persons, while their affiliates employ less workers. The typical EU-15 affiliate employs 243 workers, while the typical CEE affiliate employs almost twice as many (460). This is not surprising since unit labour costs are much lower in CEE than in the EU-15. The average labour cost per worker per year is EUR 52,000 in parent firms, while it is only EUR 7,000 in CEE affiliates. Although labour costs in CEE affiliates are much lower than in EU-15 affiliates, so is average labour productivity. More specifically, value added per worker in 'north' EU and 'south' EU is EUR 83,000 and EUR 81,000, respectively, but it amounts to only EUR 22,000 in CEE affiliates. We thus find, surprisingly, the same pattern for TNCs as for firms in general (Section 3). But some nuances are worth mentioning.

First, on average, labour costs in TNCs are higher than in all firms. To recall from Table 1, the average labour cost in a typical Belgian firm, for instance, amounts to about EUR 41,000, while Table 4 shows average labour cost in a typical EU parent of EUR 52,000.¹⁰ Likewise, the average labour cost of a typical firm in CEE is around EUR 5,500 (Table 1), but in a CEE affiliate of a transnational corporation the average labour cost is EUR 7,000. This confirms that FDI has a positive effect on wages, compared to indigenous firms.

Second, while labour costs of TNCs are high compared to other firms, it is clear that labour productivity in TNCs is higher too. Comparing again Table 4 with Table 1, we find an average labour productivity in a parent firm of EUR 104,000, while it is only EUR 73,000 in a typical firm in Belgium. Likewise, productivity of CEE affiliates is higher than that of the average CEE firm.

¹⁰ In fact, Table 1 also includes TNCs, which represent less than 10 percent of all firms. So, the figures are likely to overestimate the true ones. Given that more than 90 percent of the firms used for computing Table 1 are indigenous ones, it is reasonable to interpret the wage costs as domestic wage costs.

Finally, Table 4 also shows the ratio of labour costs to labour productivity, following the same approach as Table 1 and Figure 1. This ratio is equal to 50 percent for the typical parent firm, which compares to a ratio of 54 percent and 32 percent for EU-15 affiliates and CEE affiliates, respectively. It is worth pointing out that the cost-productivity ratio differs more between EU-15 TNCs and their CEE affiliates than between EU-15 and CEE firms in general. This suggests that the incentives for TNCs to relocate to CEE are stronger than for the typical indigenous EU firm. To test whether this is indeed the case, we now turn to a more rigorous regression framework.

The option of relocating jobs to CEE countries seems to be more attractive for transnational corporations than for other firms.

Table 4. Summary statistics of EU-15 transnational corporations, full sample averages (1993-98)

	Mean	Standard deviation
Employment		
Parents	1,873	4,444
Affiliates	257	409
EU-15	243	390
EU 'south'	225	354
EU 'north'	252	407
CEE countries	460	577
Wage cost per worker per year (in euro)		
Parents	52,000	18,000
Affiliates		
EU-15	45,000	17,000
EU 'south'	41,000	15,000
EU 'north'	47,000	17,000
CEE countries	7,000	7,000
Valued added per worker per year (in euro)		
Parents	104,000	79,000
Affiliates		
EU-15	83,000	71,000
EU 'south'	81,000	62,000
EU 'north'	83,000	76,000
CEE countries	22,000	36,000
Ratio of wage cost to productivity per worker		
Parents	0.50	...
Affiliates		
EU-15	0.54	...
EU 'south'	0.51	...
EU 'north'	0.57	...
CEE countries	0.32	...

Note: On average, a parent company has 1.65 affiliates (standard deviation 2.44).

Source: Own calculation based on AMADEUS dataset.

Box 2 sets out the analytical framework used for estimating the link between employment in the parent firm and labour cost in affiliates. In essence, employment in parent firms is regressed on wages in parent firms and in affiliates. In case of a positive link between parent employment and affiliate wages, there would be reason to believe that affiliate employment substitutes for employment in the parent firm. A decline in affiliate wages, for instance, would trigger a relocation of employment from the parent to its affiliate.

Box 2. Analytical framework for estimating employment relocation from TNC parents to affiliates

Consider a transnational corporation (TNC) that produces global output, Y , using the following production function, which depends only on labour input in various locations:

$$(1) \quad Y = F(L^P, L_{NEU}^A, L_{SEU}^A, L_{CEE}^A)$$

Where:

- Y = total output of the TNC (i.e. the sum of output in the parent and all its affiliates);
- $F()$ = production function of the TNC;
- L^P = parent employment;
- L_k^A = affiliate employment in location k ; $k = NEU$ ('north' EU), SEU ('south' EU), and CEE .

Total cost minimisation under constraint (1) yields the conditional demand for employment in the parent firm:

$$(2) \quad L^P = h^P(W^P, W_{NEU}^A, W_{SEU}^A, W_{CEE}^A, Y)$$

Where W^P and W_k^A , respectively, indicates the wage cost per worker in the parent firm and the affiliated firm located in k ($k = NEU, SEU, CEE$), respectively.

Assuming that labour productivity remains constant, one would expect the following partial derivatives of equation (2):

- $\delta h^P / \delta W^P < 0$, i.e. employment in the parent firm increases (falls) with a fall (increase) in parent wages;
- $\delta h^P / \delta W_k^A > 0$, with $k = NEU, SEU, CEE$, if there are substitution effects between parent and affiliate employment. Parent firm employment increases (falls) with an increase (fall) in affiliate wages;
- $\delta h^P / \delta W_k^A \leq 0$, with $k = NEU, SEU, CEE$, if there are no substitution effects between parent and affiliate employment.

The substitution effect – or employment relocation effect – gives an indication of the substitution possibilities between parent and affiliate employment, for a given level of the TNCs' global output. It represents the possibilities to move along the same isoquant. Equation (2) is the basis of the empirical specifications used in this paper. In particular, we will estimate (2) by accounting for firm-level fixed effects and assuming a log-linear approximation of equation (2):

$$(3) \quad \ln L_{it}^P = \alpha_i^P + \alpha_1 \ln W_{it}^P + \alpha_2 \ln W_{NEU, it}^A + \alpha_3 \ln W_{SEU, it}^A + \alpha_4 \ln W_{CEE, it}^A + \alpha_5 \ln Y_{it} + \varepsilon_{it}$$

With i = firm i , t = year, ε_{it} = error term.

Thus, in equation (3) a positive effect of affiliate wages on parent employment ($\alpha_2, \alpha_3, \alpha_4 > 0$) would mean that, on average, European TNCs relocate employment from the parent to the affiliate in response to wage cost differentials. In particular, a decline of the affiliate wage relative to the parent wage means that it becomes cheaper to produce in the affiliate and as a consequence labour demand in the parent company will be reduced. Thus, testing for a statistically significant positive effect of affiliate wages on parent employment is testing whether employment relocation between the parent and its affiliates takes place on average.

Table 5 shows the main results of the underlying regression analyses, which centres on estimating the parent-employment equation (3) of Box 2. To start with the results for the whole sample, which are shown in column (1) of Table 5, the first point to note is that the parent-wage elasticity of employment in the parent firm (α_2 , i.e. the effect of W^p on L^p) is estimated at -0.89 , which is well within the range of estimated labour demand elasticities reported in the literature (e.g. Hamermesh 1993).

Table 5. Regression results – the link between parent firm employment and affiliate wages

	(1) Whole sample	(2) Manu- facturing	(3) Non- manufacturing	(4) Parents with CEE affiliate	(5) Parents with SEU affiliate
α_1 : impact of W^p on L^p	-0.89***	-1.03***	-0.69***	-0.76***	-0.67***
α_2 : impact of W_{NEU}^A on L^p	0.018**	0.032**	-0.02	0.022**	0.018**
α_3 : impact of W_{SEU}^A on L^p	0.002	0.009	-0.013	0.001	0.038
α_4 : impact of W_{CEE}^A on L^p	0.024	0.015	0.04	0.019	0.029
α_5 : impact of Y on L^p	0.48**	0.57***	0.33***	0.27***	0.31***
Number of observations	4,375	2,817	1,558	438	1632
R ² within	0.35	0.42	0.26	0.56	0.32
R ² between	0.62	0.64	0.59	0.56	0.48
R ² overall	0.69	0.72	0.64	0.64	0.59

Note: (i) The estimates shown in the table are obtained by applying the dummy variable estimator, including firm-specific fixed effects; (ii) all equations include year dummies; (iii) *** (**) [*] indicates that the coefficient is significant at the 1% (5%) [10%] confidence level; (iv) for notation see Box 2; (v) R² between = R² corresponding to OLS applied to the model in means (over time), R² within = R² corresponding to OLS applied to the model in deviation of individual (firm) means, R² overall = R² corresponding to OLS applied to the model including fixed effects.

Source: Own calculation based on AMADEUS dataset.

The affiliate-wage elasticities of employment in the parent firm (α_2 , α_3 and α_4 , respectively) – or substitution elasticity – give an indication about the responsiveness of parent employment to wage changes in affiliates. All three elasticities are estimated positively, thus suggesting that a decline in affiliates wages would trigger a relocation of employment from the parents to their affiliates. However, only the wage effect on parent employment of affiliates located in ‘north’ EU is estimated positive and statistically significant ($\alpha_2 = 0.018$). This suggests that, on average, a reduction of, say, 10 percent of affiliate wages located in ‘north’ EU is associated with a reduction in parent employment of 0.18 percent.

There is no statistically significant effect of a reduction in wages of affiliates located in ‘south’ EU and CEE countries. This suggests that employment substitution or relocation in response to relative wage changes only takes place between parent firms, which are mainly located in ‘north’ EU, and their affiliates located in ‘north’ EU. This result is a little

Perhaps surprisingly, employment substitution in response to relative wage changes occurs largely within high-wage countries.

surprising as it suggests that competition from low-wage locations does, on average, not constitute a threat to parent employment. Braconier and Ekholm (2000) report similar results for Swedish TNCs. A potential explanation for this finding is the proximity hypothesis put forward by Brainard (1997). Brainard shows that substitution between parent and affiliate employment in response to wage cost differentials is more likely when proximity to the final market is important. In this case, transport or trade costs are assumed to be negligible. Furthermore, such substitution effects are more likely when initial factor endowments are similar across locations. In the sample of firms considered here, this is the case for 'north' EU affiliates and parent firms, with the latter also mostly based in 'north' EU.

What additional insights concerning the link between parent employment and wages in 'north' EU affiliates can be gained if we analyse separately the sub-sample of parent firms operating in manufacturing and non-manufacturing firms, respectively? Columns (2) and (3) of Table 5 show the results for these sub-samples. It turns out that the relocation effect between parents and their 'north' EU affiliates that we found in the whole sample is driven mainly by the sub-sample of parent firms operating in manufacturing: column (2) shows that the estimated effect ($\alpha_2 = 0.032$) is almost twice as high as for the whole sample, and it is statistically significant. Moreover, as column (3) shows, there are no statistically significant substitution elasticities for the sub-sample of parent firms operating in the non-manufacturing sector. One possible reason why there are no substitution effects in the non-manufacturing sector could be due to the nature of these activities: they are more likely to concern non-tradables, which obviously provide little scope for substituting affiliate production for parent firm production.

To check whether the results in Table 5 are not driven by the dominance of EU-15 affiliates in the whole sample, we show in column (4) the results of estimating the same regression, but on the sub-sample of parent firms that have at least one affiliate located in CEE; furthermore, column (5) shows the results for the sub-sample of parent firms that have at least one affiliate located in the 'south' of the EU-15. Again the basic result holds for both sub-samples. Wage costs in 'north' EU based affiliates have an impact on parent employment, but wage costs in other locations do not seem to matter for parent employment.

A final remark concerns the type of labour demand function that is estimated in Table 5. In particular, by including output as one of the explanatory variables, the labour demand elasticities are not affected by potential market expansion effects. In particular, apart from a pure substitution effect between parents and affiliates, there may be an additional employment effect due to increased product demand, which could result in different estimated elasticities. We experimented with estimating such unconditional labour demand functions, allowing for an output expansion effect to have an impact on the labour demand elasticities. The results, not reported here for brevity, again confirmed the basic pattern, i.e. there is no effect of labour costs of affiliates located in low wage regions on parent employment, but there is an effect of labour costs of affiliates located in high wage regions.

To conclude, despite the substantial wage cost differentials between the EU-15 and CEE, relocation of employment to the low-wage regions has not materialised so far. Contrary to the popular belief, employment relocation mainly takes place between parent

Despite the substantial wage cost differentials between the EU-15 and CEE, employment relocation to the low-wage regions has not materialised.

companies (which are largely based in high-wage EU countries) and their affiliates located in 'north' EU (which is also the better-off region of the EU) rather than between parent companies and their affiliates located in 'south' EU and in CEE countries.

Given the apparent absence, on average, of employment relocation to CEE countries, a natural question is whether foreign firms that have invested in the region did contribute at all to the job creation process. The next section, will therefore document the extent to which TNCs have contributed to the transition process in CEE countries through job creation.

5. How have TNCs contributed to job creation in CEE countries?

The job creation and destruction process in CEE has been of enormous economic and policy relevance. As described by Blanchard (1997), there are two extreme views of transition: the first is that the main force behind the reform process is the collapse of the state sector combing with a slowly emerging private sector. The growth in the private sector is not sufficient to pick up the slack in the state sector. As a result, high and persistent unemployment emerges, which – in turn – could slow down the desired restructuring of the state sector and other structural reforms. It is for this reason that the optimal sequencing of reforms might matter. While Blanchard (1997) stresses the role of unemployment in hampering reforms, Roland (1994) stresses the role of political constraints, which necessitate a gradual approach to restructuring. The second extreme view of transition is that the main force behind transition is the rapid growth of the private sector, thereby absorbing the workers laid off by the state sector. In this case unemployment is a consequence of a healthy process of reallocation. This does not exclude the possibility of a large unemployment pool; but this is less of a problem if there is sufficient turnover of that pool, implying that individuals do not remain unemployed for too long but find jobs in newly created firms.

The job creation and destruction process in CEE countries has been of enormous economic and policy relevance.

Against this background, let us shed some light on the issue of job creation and destruction in CEE and the role of TNCs in this process. Following Davis *et al.* (1996), the job creation rate is defined as the sum of all new jobs in all expanding firms divided by the total amount of jobs in the economy. The job destruction rate is defined as the sum of all job losses in all contracting firms divided by the total amount of jobs in the economy. The difference between the two is the net aggregate employment growth rate and the sum is the gross job reallocation rate. These job flow measures are useful to disentangle the net aggregate employment growth rate in its various components. They are also useful to get an idea about how turbulent a labour market is. For instance, a net aggregate employment growth rate of 2 percent could be the result of a job creation rate of 4 percent and a job destruction rate of 2 percent; alternatively, it could be the result of a job creation rate of 10 percent and a job destruction rate of 8 percent. It is clear that the amount of churning in the labour market and, thus, of job reallocation and restructuring is higher in the latter example than in the former. What can be said about the dynamics of CEE labour markets?

Using firm level data to compute job flows, Table 6 shows job creation and destruction rates for selected CEE economies. It is clear that the transition paths in the various CEE

The path of job creation and destruction differs considerably across CEE countries, reflecting differences in the timing and speed of transition from plan to market.

countries have been very diverse. While in the most advanced economies – such as Poland, Estonia, and Slovenia – job creation and destruction had more or less equalised by 1997, job destruction continued to dominate job creation in the laggards such as Bulgaria and Romania. But how did foreign investors contribute to this job creation process?

Table 6. Annual job flow rates for selected CEE countries, 1994-97

	Positive	Negative	Gross	Net	Excess
Poland					
1994	3.0	6.8	9.8	-3.8	6.0
1995	3.6	6.0	9.6	-2.4	7.2
1996	3.0	5.0	8.0	-2.0	6.0
1997	3.0	3.7	6.7	-0.6	6.1
Estonia					
1994	4.6	9.2	13.8	-4.6	9.2
1995	6.4	7.3	13.8	-0.9	12.9
1996	11.2	7.2	18.4	4.0	14.4
1997	9.3	8.8	18.1	0.6	17.5
Slovenia					
1994	3.9	4.2	8.1	-0.2	7.9
1995	4.6	5.9	10.5	-1.3	9.2
1996	5.5	5.3	10.8	0.2	10.5
1997	3.3	5.4	8.8	-2.1	6.7
Bulgaria					
1994	0.8	7.2	8.0	-6.3	1.7
1995	3.2	3.3	6.5	-0.1	6.4
1996	4.1	7.0	11.1	-2.9	8.2
1997	1.4	5.2	6.6	-3.7	2.9
Romania					
1995	4.7	10.1	14.8	-5.4	9.4
1996	3.6	7.1	10.7	-3.5	7.2
1997	3.7	9.9	13.6	-6.2	7.4

Notes: Positive = gross job creation rate; Negative = gross job destruction rate; Gross = gross job reallocation rate (positive + negative); Net = net employment growth rate (positive – negative); Excess = excess job reallocation rate (*gross-net*).

Source: Faggio and Konings (2003).

Distinguishing different ownership categories, Table 7 shows the average job creation and destruction rates for Poland, Bulgaria and Romania¹¹. The job creation and destruction rates are computed relative to the total employment in each category¹². It is clear that the job creation potential of a foreign-owned firm is higher than that of a state-owned or an indigenous private firm. For instance, in Poland, foreign firms create, on average, about 10 percent new jobs each year, which is almost twice the job creation rate in indigenous private firms. Note, however, that also the job destruction rate in foreign firms is positive,

¹¹ Ownership information is not available for Estonia and Slovenia.

¹² Thus, the job creation rate in foreign firms is defined as the sum of all job gains divided by total employment in all foreign firms. This way of defining job creation and destruction rates allows us to assess how dynamic different types of firms are in terms of employment reallocation, but hides the contribution to total job creation in a country.

Table 7. Annual average job flow rates for selected CEE countries by type of enterprise ownership, 1994-97

	Positive	Negative	Gross	Net	Excess
Poland					
State	1.6	4.2	5.8	-2.5	3.3
Foreign	9.4	2.9	12.3	6.5	5.8
Indigenous private	5.0	4.3	9.3	0.7	7.9
Bulgaria					
State	1.9	5.6	7.5	-3.7	3.7
Foreign	3.6	4.8	8.3	-1.2	5.6
Indigenous private	2.8	6.0	8.8	-3.2	5.6
Romania					
State	2.3	9.5	11.8	-7.2	4.6
Foreign	15.1	4.3	19.4	10.7	8.7
Indigenous private	5.3	8.7	14.0	-3.4	10.6

Note: Figures for Romania refer to 1995-97 averages. Indigenous private firms are a residual category.
Source: Faggio and Konings (2003).

which indicates that foreign firms also engage in a restructuring process. This may be important to generate efficiency gains. Given that foreign firms account only for a very small fraction of all jobs in these countries (about 4-5 percent in Poland and Bulgaria, and 1 percent in Romania), the contribution of foreign firms to total job creation is rather limited, however.

While it is clear that foreign firms are the most dynamic ones in the job generation process in transition countries, they constitute only a small, though growing fraction of all firms in these countries. As a result, in many countries, job destruction is still dominating the aggregate picture – as shown in Table 6. Considering that foreign firms seem to grow in terms of employment in CEE countries and the findings of the previous section (i.e. that there is, on average, no relocation of employment from the West to the East), suggests that TNCs invest in CEE mainly because they seek markets rather than cost savings. This pattern is consistent with horizontal, rather than vertical theories of FDI. Lankes and Venables (1996) reached similar results using firm level survey data. They pointed out that the main reason why firms invested in CEE countries was the market expansion motive rather than the availability of cheap labour. The overall picture seems therefore to be a positive one: EU enlargement benefits all.

The growth of employment in foreign-owned CEE firms in the absence of significant job relocation from west to east points at horizontal rather than vertical FDI.

6. Conclusions

This paper has tried to shed light on whether the internationalisation of production has been harmful for EU-15 labour markets. Increased economic integration can take place mainly through three channels. First, workers in search of better-paid jobs may migrate to the high wage regions, second, trade flows between the different regions can cause factor price equalisation and, third, if workers cannot flow to the high-wage regions, firms can.

The trade adjustment process took place early and has had little or no effects on labour market dynamics. Migration between the East and the West is not yet liberalised, but even if it were, the expectations are that it would be rather limited. The main concern has been the mobility of companies in recent years.

There is a consensus in the literature that FDI contributes to higher wage payments in host countries. However, there is not a lot of research on the employment effects of FDI. The focus of this paper has been concerned with the latter. To this end, this paper uses firm level data to document labour cost and productivity differentials between the East and the West. In addition, a large representative panel, comprising more than 1,000 EU-15 transnational corporations and their affiliates located in the EU-15 and CEE, has been used to test whether low-paid jobs in affiliate firms replace jobs in parent firms. Despite the substantial wage cost differential between east and west, relocation of employment to the low-wage regions has not materialised so far. Contrary to popular beliefs, employment relocation mainly takes place between TNC parents (mainly located in high-wage countries of the EU) and their affiliates located in high-wage EU countries, rather than between TNCs and their affiliates in low-wage regions such as CEE countries and southern Europe. This paper has not, however, investigated the employment impact of the actual investment/location decision of TNCs due to data limitations. Further research on this latter issue is important to assess the full impact of the increased global nature of firms.

The finding that employment relocation to CEE countries is, on average, not happening, may suggest that foreign-owned firms have not contributed much to the job creation process in CEE, but this does not seem to be the case. Compared to state-owned enterprises and privatised indigenous firms, foreign firms are the most dynamic ones in the job creation process of CEE countries.

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ABSTRACT

Stressing that the liberalisation of international trade and investment may lead to a geographical concentration of economic activity, this paper discusses the scope for FDI as an instrument of regional policy aimed at offsetting the centripetal forces unleashed by liberalisation. Focusing on Sweden, the paper finds no signs that FDI has contributed to reducing income and development gaps in this country. More specifically, remote provinces that qualify for EU regional support – including support for FDI – have not performed better in terms of employment, labour productivity, and education levels than remote provinces that do not qualify for such support. An exception concerns the R&D intensity of firms (both foreign and indigenous), which tends to be higher in supported than unsupported remote regions.

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Regional integration, foreign direct investment, and regional development

1. Introduction

Regional integration was not a major issue in the international economics debate as long as neoclassical theory dominated academic thinking and policy making about international trade. The economic arguments for regional integration were relatively weak, since economies of scale and markets with imperfect competition were unimportant at an international level. Most of the existing regional integration agreements involved small countries or developing economies that were too weak to bargain successfully with larger and more advanced economies. The European Economic Community (EEC) was an exception, but it was clear that its existence was motivated by political rather than economic reasons. Avoiding future wars in Europe was arguably more important than improving the efficiency of European industry.

The discussion about regional integration changed markedly with the emergence of “new trade theory” in the late 1970s. Although there is no consensus about the exact delimitations of this theory, it is fair to say that one of its most important characteristics is an explicit emphasis on economies of scale. This results in imperfect competition at the national level and cross-country differences in the international competitiveness of national firms. Put simply, firms in small countries will tend to have relatively high average costs, whereas firms in large countries can grow larger and achieve lower average costs. When international trade is established, large-country firms will dominate exports in industries with significant scale economies. Unlike neoclassical models, where changing factor prices tend to reduce the advantages of the first-comers, there is not necessarily any such effect in the new trade models. Various agglomeration benefits – or alternatively, external economies of scale – may instead cement the advantages that large countries have at the outset.

For a brief period, strategic trade policy seemed like a feasible policy option for small countries and industries trying to compete in a world with significant economies of scale. This concept refers to the various subsidies and other forms of support that can be used by governments to reduce the production costs of domestic firms relative to their foreign competitors, allowing them to capture larger market shares both at home and abroad. However, it soon became clear that it would be very difficult to conduct strategic trade policy in practice. In addition to the difficulties in identifying those industries that would be able to meet international competition after an initial dose of strategic support, the success of the policy has also been tempered by the responses from competing firms and nations. Every discovery of attempts to provide strategic support for domestic firms is likely to result in severe complaints from other countries, leading, in the worst cases, to formal trade disputes and retaliation.

Instead, regional integration has emerged as a major national policy alternative for countries trying to overcome the handicap of a small domestic market. By joining a regional integration agreement, they gain access to a regional market where firms may grow large enough to face the competition from countries like Japan and the United States.



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However, while regional integration opens up opportunities, it also introduces new challenges. Most importantly, not all firms will be able to qualify as “regional champions”. The process of regional integration is instead likely to bring about substantial restructuring at the micro level: many firms must disappear so that the remaining ones can grow larger. A substantial share of this restructuring will occur through mergers and acquisitions (M&As), as relatively strong companies devour their weaker competitors. Many M&As will involve companies from different countries, introducing foreign direct investment (FDI) as an important element of the process.

This new kind of regional integration obviously introduces a new set of questions for policy makers and private actors alike. Which firms will survive the restructuring process? What countries will be home to the new regional champions? How should the regional integration agreement be designed to give equal opportunities to all member countries? What opportunities do policy makers have to influence the outcome of the restructuring process? Could it even be possible to use the restructuring process to achieve regional development policy objectives?

The present paper addresses some of these questions. Section 2 discusses the expected benefits of regional integration, and stresses the restructuring needed to improve the scale efficiency of production in the integrating region. Section 3 looks at the consequences of modern trade theory for how regional integration should be organised. Section 4 provides an overview of the relation between FDI and regional integration. Section 5 discusses FDI incentives and examines whether the types of investment incentives allowed in the EU can be used to influence FDI flows and the pattern of development in the EU. Section 6 offers a summary and some concluding comments. The overall conclusion is that while FDI is an important channel for the productivity and growth effects from regional integration, it is not likely that it can be a major instrument to promote development in remote and disadvantaged parts of the integrating region.

2. Effects of regional integration

2.1 Neoclassical views

The neoclassical approach to regional integration focussed on trade creation and diversion...

The neoclassical analysis of the effects of regional integration (or preferential trade agreements) focussed on two phenomena: trade creation and trade diversion (Viner 1953, Lipsey 1961). Trade creation was said to occur when the introduction of regional trade preferences allowed firms in one of the partner countries to capture market shares held by local firms in another partner country. Since this replaced a relatively inefficient producer (that had benefited from import protection) with a more efficient producer, it was expected that it would on balance improve welfare, both regionally and globally. Regional consumers would benefit from lower prices, and the producer surplus gained in the expanding industry would exceed the producer surplus lost in the contracting industry; at the same time, the rest of the world would not be affected.

Trade diversion, by contrast, was often expected to reduce both regional and global welfare. Trade diversion occurs when regional trade preferences allow firms from one of the partner countries to capture regional market shares that were earlier held by outside

producers. The reason for expecting negative welfare effects in this case is that more efficient producers are displaced by less efficient ones. To get into the market in the first place, when all foreign producers faced the same trade barriers, the outsiders must have been relatively efficient. Hence, outsiders lose when their market shares diminish, and welfare losses in the integrating region itself are also likely, in spite of lower consumer prices and increased regional production: tariff revenues shrink when imports from the rest of the world fall, offsetting the gains in consumer and producer surplus. However, over time, it has been recognised that the welfare impact of trade diversion may in some cases be beneficial to the integrating region. These situations occur when the substitution possibilities in consumption and/or production are relatively large, and the cost disadvantages of regional producers (as compared to the most efficient outsiders) are relatively small. If the establishment of a regional integration agreement improves the terms-of-trade of the integrating region, it is even possible that a trade distorting customs union could raise the welfare of the integrating region above that in free trade (Markusen *et al.* 1995). Moreover, as pointed out by Kemp and Wan (1976), it is always possible to define a set of tariffs and subsidies to compensate outsiders, so that the global welfare effects of any customs union – even one with trade diversion – are positive.

However, whether the main impact of regional integration was thought to be trade creation or trade diversion, the welfare effects found in quantitative assessments were typically very small – often less than one percent of GDP. One reason for the limited quantitative impact of this kind of “neoclassical” integration is that most regional agreements were between similar countries, where the potential gains from trade creation are relatively small. The members in most regional agreements exhibited similar factor price ratios and industry structures, whereas theory predicted large effects mainly when the agreement included countries with widely different comparative advantages.

The neoclassical literature on regional integration rarely focused explicitly on investment effects. To the extent that investment was discussed, the underlying assumption was largely that trade and capital movements were substitutable modes of serving foreign markets.¹ If anything, this suggested that tariff barriers could motivate import-substituting FDI, and that general tariff reductions, e.g. in the context of a regional integration agreements, would reduce foreign direct investment flows between the member countries or even stimulate a repatriation of foreign-owned assets to the home countries of transnational corporations (TNCs). An exception to this simplistic view was provided by Kindleberger (1966), who noted that when regional integration agreements result in trade creation, then intra-regional FDI in some member countries might increase in response to changes in the regional production structure. This potential impact on intra-regional FDI flows was termed investment diversion.

... but rarely examined explicitly the effects of regional integration on foreign direct investment.

At the same time, it was clear that inflows of FDI from outside the integrating region might be stimulated. This would obviously occur if the average level of protection increased as a result of regional integration agreements, or if the establishment of such agreements raised fears about future protection. The inflows of foreign capital could also

¹ See, for instance, Mundell (1957), Corden (1967), Johnson (1967), Brecher and Diaz-Alejandro (1977), Bhagwati and Brecher (1980), and Bhagwati and Tironi (1980).

increase if the volume of incoming FDI was initially restricted by the limited size of the individual national markets. Contrary to the national markets, the integrated common market might be large enough to bear the fixed costs for the establishment of new foreign affiliates. In addition, Kindleberger (1966) identified investment creation as a likely response to the trade diversion brought about by regional integration agreements. The term refers to the strategic investment responses by outside firms who lose export markets when their former customers turn to suppliers based in the region.

With the exception of tariff-jumping FDI, these investment responses were typically seen as adjustments to temporary imbalances in relative cost conditions. Most neoclassical authors seldom distinguished between flows of foreign direct investment and flows of portfolio capital, and it was expected that the investment flows would gradually diminish: the inflow of foreign investment was expected to reduce the marginal return to capital in the recipient country until the expected risk-adjusted return was equal to that in the investor country. Consequently, the investment effects of regional integration agreements were not considered to be of great quantitative importance. This view did not change until scale economies and imperfect competition entered the picture, and it was recognised that FDI is mainly driven by the exploitation of firm-specific intangible assets rather than cross-country differences in the price of capital. In order to compete successfully in a foreign market – where local firms have superior knowledge of the local market, consumer preferences, and business practices – the internationally-oriented firm must possess some firm-specific intangible assets, such as technological and marketing expertise, that give it a competitive edge. The effective exploitation of these assets sometimes requires firms to internalise their international operations by establishing foreign affiliates, since other modes of international business, including exports and licensing of technology to foreign firms, carry relatively high transactions costs (Buckley and Casson 1976, Dunning 1977). FDI may therefore occur even when there are no trade barriers or substantial cross-country differences in interest rates, and the effects of FDI on home and host economies can be expected to reach far beyond the impacts on capital returns. In particular, both home and host countries are likely to benefit from economies of scale as well as various externalities stemming from the closer international contacts that necessarily accompany foreign direct investment.

Scale economies and imperfect competition help explain FDI flows even in the absence of substantial trade barriers or cross-country differences in interest rates.

2.1 Modern views

Some of the expected effects of more advanced forms of regional integration can be illustrated with the discussions in the mid-1980s about the establishment of the European Single Market. It was recognised at that time that European integration had brought significant benefits to the region, but arguments were also raised that a deepening of the integration process was needed to realise the full potential of the integration project. The case in favour of further integration was laid out in the so-called Cecchini report (Cecchini 1988), which specified the foregone benefits if the European Single Market was not realised. These benefits were related to harmonisation of technical standards, removal of border controls for intra-EC trade, more efficient public procurement, tougher competition, and improved opportunities to benefit from scale economies.

While the formal tariff barriers between EC countries had already been abolished with the Treaty of Rome in 1957, the regional market was still segmented by various national

technical standards that effectively protected domestic producers in each country. The Single Market project addressed the plethora of technical standards in two ways. For areas concerning health and safety, the aim was to harmonise national regulations. In all other areas, the key words were mutual recognition: a product or service that fulfilled the requirements in one member country should automatically get access to other member countries.

With both tariff barriers and country-specific technical standards out of the way, it would also be possible to remove border controls altogether. This measure was considered to be important especially for smaller firms. Given that the costs for border formalities do not vary directly with the volume of foreign sales, but are fixed in the sense that some expenses have to be incurred as soon as a firm decides to engage in exports, they may discourage smaller firms from exporting.

While public purchasing accounted for about 15 percent of the Community's GDP, most of this was reserved for domestic suppliers until the mid-1980s. The creation of EC-wide competition for publicly procured goods and services was envisaged to contribute to restructuring in sectors where public procurement accounts for an important share of total purchasing. The competition between suppliers would force them to restructure in order to seek economies of scale.

Competition and better opportunities to exploit scale economies more generally were the two main expected gains from the Single Market programme. The various non-tariff barriers that maintained the fragmented market structure in the region also provided each national producer some degree of market power. This resulted in a lower output volume and higher price level than what would have occurred in perfect competition. By opening up the regional market, the number of firms competing with each other would increase, and the increase in competition would in a first round reduce the mark-ups for each firm. This would force firms to reduce average costs, which could result from a stronger emphasis on efficiency and, probably more important, from an increase in the volume of production in order to reap economies of scale. However, the enlarged market would not be able to support a constant number of firms producing larger quantities of output. In a second round, the number of firms would thus have to fall, leaving fewer but larger and more competitive firms in the market.

Combined, these improvements in the European market structure were expected to yield significant efficiency and welfare benefits in the medium term. The estimates from the Cecchini report put the aggregate gains in the region of 4-6 percent of total GDP in the EC-12 countries; more than half of this was expected to result from increased competition and economies of scale. It is clear that these estimates are only very rough approximations of the economic effects of European integration, and they have been criticised both by those who argue that the report is unduly positive and those that believe that the relatively static approach of the Cecchini report underestimates the true effects of deep regional integration. For instance, Baldwin (1989) argues that integration is not just a temporary shock to the system, but that it may instead have permanent growth effects. As productivity and output rise for the reasons discussed above, both savings and investment – and hence the long-run capital-labour ratio – are also likely to increase.

Enhanced competition and better opportunities to exploit scale economies are the main gains expected from the Single Market.

Another reason to expect even stronger growth effects is the prominent role of FDI in the restructuring process. The process whereby the structure of the regional industry changes from one where every country has its “national champions” to one where only a smaller number of “regional champions” survive will largely take place through FDI. The strongest firms will try to achieve the coveted scale economies by acquiring existing plants and companies throughout the region, or by seeking strategic alliances and mergers with their former competitors. Simultaneously, foreign transnational corporations may be attracted to enter the region with new FDI, in line with Kindleberger’s (1966) investment creation hypothesis. This increase in international production will not only raise competition, but also speed up technology transfer and information flows between the countries involved. It is even possible that the increase in FDI will benefit domestic industry through various external effects, such as technology or productivity spillovers (Blomström and Kokko 1998). These phenomena could obviously contribute to strengthening the dynamic growth effects in the regional market.

Modern views on regional integration recognise the role of FDI in exploiting scale economies.

One important difference between the neoclassical and modern types of regional integration concerns the optimal integration area. As noted above, neoclassical integration was expected to yield the strongest positive impact when it included countries with widely different factor price ratios and industry structures. This increased the likelihood that the regional integration agreements would result in trade creation rather than trade diversion. By contrast, a modern integration agreement can be expected to yield the strongest effects when it comprises countries with similar factor price ratios and industry structures, since the potential for industrial rationalisation to exploit scale economies is the largest in these cases. Furthermore, it should be noted that modern regional integration is expected to influence the international competitiveness of the region’s firms, whereas neoclassical integration focused on the static efficiency of the region’s resource allocation. If integration agreements actually improve competitiveness in third-country markets, then it is clear that the benefits from integration are larger than those estimated in the Cecchini report.

3. Forms of regional integration

Whether the focus is on old or new forms of regional integration (or on the static or dynamic effects of regional integration), it is clear that some degree of restructuring is essential to realise the potential benefits of integration. In cases of neoclassical integration, trade creation and trade diversion will result in expansion in some parts of the integrating region and contraction in other parts, but the determinants of this restructuring process are not very complicated. In the neoclassical world, the pattern of comparative advantages is largely given by the factor endowments of each economy, and these cannot be manipulated in the short term. Hence, when regional trade barriers are removed, factor price differences will automatically direct investments to the appropriate part of the region.

In modern integration, the restructuring needs are driven by the objective to establish a larger market with better opportunities to exploit economies of scale. Not all firms will be able to grow larger at the same time: instead, some firms will manage to exploit the new opportunities, while others will shrink, go out of business, or be acquired by their

stronger competitors. One of the main policy concerns in connection with this kind of restructuring is the concept of fairness, since there is an awareness that competitiveness at the firm level is not only related to factor endowments of the home economy: instead, various policy interventions may play a major role in determining competitive strength. In Europe, it has largely been accepted that this process will yield mixed results, where gains in some areas are to some extent tempered by losses in other fields. However, to muster general support for the restructuring process, which is certain to meet political opposition from those groups that are unable to respond to tougher competition, it has been necessary to establish institutions that define fair rules for regional trade and production: all member countries should in principle feel that their firms have a fair chance to survive and become a regional champion. These concerns have resulted in a tendency towards a gradual deepening and broadening of the integration process. In fact, the development of different forms of regional integration may, to some extent, be seen as a response to the need to create an increasingly fair environment for regional business.

Box 1 describes how different forms of regional integration gradually create such an environment. Suffice to note here that with the creation of the Single Market, EU firms operate on a level playing field where most policy-related features of the competitive environment have been harmonised. There are no tariffs or non-tariff barriers to trade goods, services, and capital, and labour can move freely between EU countries. In addition, for firms in countries that have joined the European Economic and Monetary Union (EMU), a common inflation target is implemented and currency risk affecting activities in the monetary union has been eliminated.

Deeper integration – such as the Single Market and EMU – is obviously more difficult and more costly than shallow integration in the form of free trade areas and customs unions. The harmonisation of national legislation is a slow and complicated process, and it may be difficult to agree on common macroeconomic objectives. At the same time, it should be recalled that modern integration promises more substantial benefits than what neoclassical integration did. Hence, there is a correspondence between the size of expected benefits and the investments countries have been willing to undertake to foster integration. Modern integration did not emerge until arguments related to scale economies and imperfect competition suggested that it might be meaningful.

It is possible that future developments will reveal further stages in the regional integration process, focusing more on political harmonisation and union. However, it is unlikely that the harmonisation process will eliminate all policy differences within the regional integration agreements, since the competitive conditions of each location will to some extent be determined by exogenous factors, like geography and natural resource endowments. Peripheral regions will protect their right to maintain more favourable policies (e.g. lower corporate taxes) to balance the natural advantages enjoyed by countries that are located closer to core markets, and locations with unfavourable climatic conditions (e.g. northern Sweden and Finland) will look for ways to compensate for the handicap of long, cold, and dark winters.

Although regional integration results in a harmonisation of policies, peripheral regions will strive to maintain policies to offset natural advantages enjoyed by other regions.

Box 1. From shallow to deep integration

The simplest integration agreements are so-called preferential trade areas (PTAs), where the member countries grant preferential access – lower tariffs – to goods produced in the integrating region. PTAs are simple constructs, but they are also relatively ineffective in bringing about the desired restructuring of regional industry. The main reason is that substantial trade barriers, both in the form of tariffs and non-tariff barriers, may still exist within the PTA, so that national markets remain segmented.

A more comprehensive solution is the establishment of a free trade area (FTA), where all tariff barriers between the participating countries are removed. However, in spite of its name, a FTA may still include substantial barriers to regional trade and competition. Remaining non-tariff barriers may limit market access, and differences in external trade policy are likely to affect competitiveness in the regional market. The member countries in FTAs retain their individual trade policies with respect to third countries, and the differences in import tariffs from the rest of the world – and the resulting differences in production costs – can create a serious obstacle to competition on equal terms.

Further progress towards integration is made with the creation of customs unions, where external tariffs are harmonised. Looking only at formal tariffs, customs unions provide a level playing field for all firms in the integrating region. However, other differences remain to segment markets. First and foremost, it is clear that various forms of non-tariff barriers may still create substantial obstacles to regional trade. There will also be cross-country differences in the availability and prices of production factors, which naturally will affect relative competitiveness and trade flows.

The next step in regional integration, the establishment of a common market, addresses these cross-country differences. By removing all non-tariff barriers, such as technical standards, a common market can guarantee the free flow of goods between member countries. In the case of the European Single Market, the solution has been to combine some harmonisation with mutual recognition, so that products fulfilling the legal requirements in one of the national markets must also be allowed in the other national markets. By guaranteeing free mobility of services, capital, and labour, a common market can also remove some of the cross-country differences in factor prices and contribute to the harmonisation of the overall business environment.

While the creation of a common market is an important milestone on the road to deeper integration, the existence of national currencies hinders price transparency and thus competition. Against this background, the harmonisation of exchange rates and monetary policies of member countries can be expected to further stimulate competition and, by extension, economic welfare. In a first phase, this may entail establishing a system of fixed exchange rates between the national currencies in the region. To maintain this system of fixed rates, it is also necessary to coordinate monetary policy. However, as the experiences of Europe up to the early 1990s suggest, it is difficult to combine fixed exchange rates and full capital mobility even in the most ambitious integration agreements. It can even be argued that a common market with fixed exchange rates and completely free capital mobility is inherently unstable in some circumstances.

The solution to this problem is the introduction of a common currency, which necessitates the establishment of an economic and monetary union. In such a union, the different national currencies are replaced by a common currency, and the national central banks are replaced by a common central bank that determines the union's common monetary policy. For this to be sustainable, there is a stronger need for policy harmonisation, not only concerning inflation targeting, but possibly also fiscal policy (e.g. profit taxes).

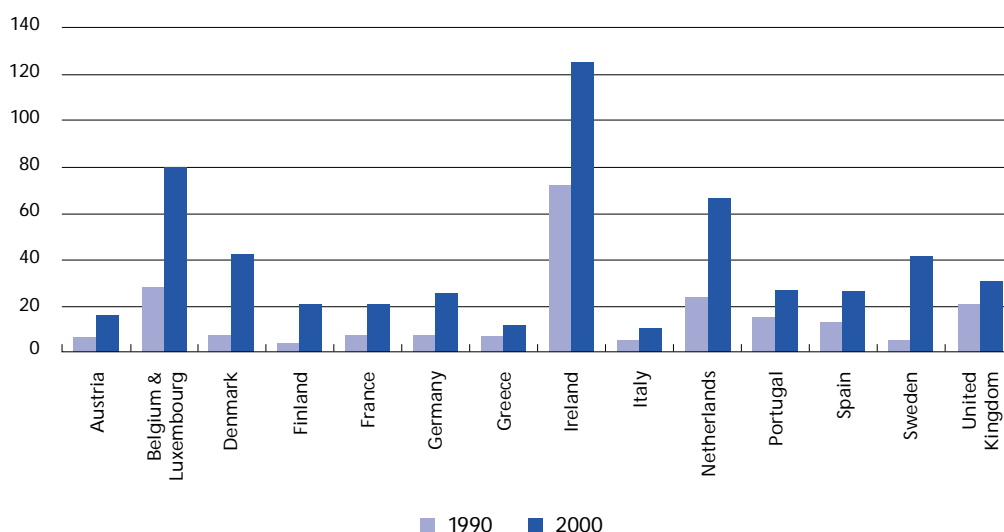
4. Regional Integration and FDI

Some of the restructuring that is expected to result from regional integration will occur as new firms enter the market, relatively efficient pre-existing firms expand their operations, and less efficient firms shrink or go out of business altogether. However, this kind of “organic” change is slow, and much of the restructuring therefore takes place through ownership changes. M&As can rapidly reduce the number of firms in the market, and allow the surviving ones to grow large enough to exploit economies of scale. The recent stages of European integration have clearly been characterised by this kind of restructuring. Baldwin and Wyplosz (2004) report that the average annual number of M&As in the EU-15 between 1991 and 2001 exceeded 10,000. Most of these were domestic, but some 45 percent of the M&A cases – and a substantially larger share of the total capital involved – included firms from more than one country.

Most of the industrial restructuring resulting from regional integration takes place through M&As.

Cross-border M&As make up at least half of the foreign direct investment in the EU. However, the investment inflows have not been equally distributed across the EU. Figure 1 shows EU countries’ stock of inward FDI as a share of GDP in the EU in 1990 and 2000. It illustrates some of the cross-country differences in the importance of inward FDI. Ireland, where the inward FDI stock corresponded to more than 120 percent of GDP, Belgium/Luxembourg (60 percent), and the Netherlands (80 percent) were the EU’s most prominent host countries in relative terms. In most other EU countries, FDI stocks were well below 30 percent of GDP. In terms of the absolute value of inward FDI stocks, however, the picture is dominated by the largest EU countries: the stocks of FDI in the United Kingdom, Germany, and France all exceeded USD 450 billion, while Ireland barely reached USD 160 billion (UNCTAD 2003 and Zimny, this volume).

Figure 1. Inward FDI stock in the EU, in % of GDP (1990 and 2000)



Source: UNCTAD (2003)

These cross-country differences bring up questions concerning the determinants of FDI inflows, and how these inflows are distributed across the integrating region. Which parts of the region are likely to be the main beneficiaries of the FDI inflows that may be triggered by the integration process?

Until recently, there was a strong consensus in the literature on why transnational corporations (TNCs) invest in specific locations (see e.g. Dunning 1993, Globerman and Shapiro 2003, Uppenberg and Riess, this volume). The view was that TNCs are mainly attracted by strong economic fundamentals in the host economies. The most important of these are market size and the level of real income, with skill levels in the host economy, the availability of infrastructure and other resources that facilitate efficient specialisation of production, trade policies, and political and macroeconomic stability as other central determinants. This hierarchy of host country characteristics largely assumed that FDI was market seeking although it was recognised that foreign investors seeking an export base would be less focused on local market size and more concerned about the relative cost of production. However, with an integrated regional market, many of these determinants do not distinguish effectively between alternative locations within the region. With deep integration, national market size does not matter much, the free mobility of labour and capital will to some extent temper the impact of national resource endowments, and the policy convergence that typically accompanies regional agreements also tends to reduce differences in institutions and macroeconomic stability. What are then the remaining cross-country differences that explain the wide variation in the importance of FDI at the national level?

Regional integration reduces the relevance of FDI determinants that were of importance prior to integration, but geographical proximity and factor endowments still matter.

Notwithstanding the price and policy convergence that takes place as a result of regional integration, there are still differences in the locational advantages of the countries and regions participating in any integration agreement. The most obvious differences are related to geographical location – where proximity to the market remains a strong determinant of FDI – but factor conditions are also likely to vary. In particular, different locations will offer different mixes of production factors: the best examples may be related to different kinds of labour skills. Some of these differences are related to history, in the sense that previous production experience has led to the accumulation of specialised skills used by the industries that have clustered in the specific location. In these cases, it is also possible that national policies have evolved to support the specific industries that have established a base in the location: higher education may have some emphasis on research training in locations where industries intensive in research and development (R&D) are important; energy taxes may be relatively low in areas where energy-intensive industries dominate; and so forth. Some of these locational factors may even take on more importance after a regional integration agreement because some other determinants of investment location decisions, such as trade barriers, are likely to disappear.

History matters also because the character and degree of change brought about by regional integration differ between countries. For instance, countries that have traditionally implemented free-trade-oriented policies are not likely to see any surge of imports after joining an integration area, whereas countries with a more protectionist history will meet significantly tougher competition. In the former case, it is likely that the effects on foreign as well as domestic investment will be unambiguously positive, since the effects from increased regional market access dominate; in the latter case, it is even

possible that the country is host to import-substituting foreign investment that might be withdrawn or diverted to other locations as a result of regional integration. In general, it can be argued that the *ex ante* structure of trade and investment flows will be one of the determinants of the country and industry specific responses to regional integration agreements. Countries and industries that were already closely linked to their partners before the formal agreements – due to geography, historical conditions, or other reasons – are likely to face smaller changes than countries and industries with limited initial contacts with the other participants in the integration agreement.

Given these various determinants of the pattern of FDI within the integrating region, it is useful to specify a summary framework relating the expected effects of regional integration to country and industry characteristics. Figure 2 provides an organisational template for thinking about the FDI process in the context of regional integration. The attribute labelled environmental change summarises the degree to which trade and investment flows are liberalised by the integration agreements in question. This depends both on the nature of the specific agreement and the initial institutional environment in the region. As one moves down the rows of Figure 2, the degree of liberalisation is considered to be “weaker”. The attribute labelled locational advantage summarises the degree to which it is advantageous from a profitability standpoint to locate an economic activity in a particular location. This characteristic refers to the availability and cost of various production factors as well as the country’s geographic location with respect to major consumer markets and the general macroeconomic environment. As one moves across the columns (from left to right) in Figure 2, the locational advantages of a particular country – in relation to other members of the integrating area and the rest of the world – are presumed to be weaker. Identifying the position of a specific country or industry in Figure 2 will provide a starting hypothesis for the investment impact of regional integration. More detailed predictions regarding FDI flows must, of course, also take into account trade and investment patterns prior to integration, the motives for pre-existing FDI, the competitive strength of domestic versus foreign firms, and so forth.

The degree of trade and investment liberalisation and locational advantages at the outset of deeper integration shape the pattern of FDI once deeper integration unfolds.

Figure 2. Stylised country/industry characteristics that shape the pattern of FDI in an integrating region

	Locational advantages (positive to negative ⇔)	
Environmental change (strong to weak ↓)	1	2
	3	4

Source: Blomström *et al.* (2000).

The most pronounced positive impact on investment would presumably be experienced by those economic sectors falling into area 1. These activities experience the strongest degree of integration, and the country in question enjoys a strong locational advantage.

Hence, for reasons noted earlier, one would anticipate relatively strong, positive capital flows from both foreign and domestic investors to these sectors. For example, labour-intensive industries in low-wage countries entering integration agreements with high-wage countries (North-South integration) could be expected to fall in this area. In area 3, the hypothesised impact on domestic investment is weaker, albeit still positive. Area 3 contains those economic activities for which the country in question has a strong locational advantage, but for which the impact of the integration agreement is relatively weak. Economic integration between OECD countries, where the formal and informal barriers to trade and investment are relatively low at the outset (North-North integration), can be expected to provide many examples of existing industry clusters that fall in this category.

Moving to area 2, the expected impact on inward FDI is negative and the potential for actual disinvestment increases. Specifically, the activities in area 2 are strongly affected by the integration agreement, but the country or region in question suffers locational disadvantages in these sectors. Many countries and industries where the bulk of existing FDI has been established in order to avoid trade barriers would be classified in this area: labour-intensive industries located in high-wage countries entering into North-South agreements would fall in this category. Finally, the impact of integration on activities in area 4 is likely to be small. While the country or industry in question suffers a locational disadvantage, the impacts of the integration agreement on the overall economic environment are also quite weak. Area 4 could, for example, include activities in relatively remote or weakly developed parts of North-North integration agreements.

Deeper integration is likely to result in a pattern of FDI that exacerbates regional imbalances.

In summary, there is reason to expect that the main beneficiaries of the FDI flows triggered by regional integration are likely to be geographically central locations and existing clusters: proximity to markets and agglomeration effects are likely to be important determinants of investment location. This is a worrying conclusion from the point of view of regional development policy: to the extent that FDI affects regional development, it is likely to cement the development gaps already existing between central and remote regions. However, these predictions do not take into account the possible policy responses of national and regional authorities. Yet, it is clear that the increasing competition for investment may well motivate authorities at different levels to introduce various policies to influence the pattern of FDI. While the countries and industries located in area 1 have a strong competitive position and may not need any additional incentives to attract investors, the situation is different for the other quadrants. In particular, countries and industries located in area 2 may well be tempted to compensate for their locational disadvantages by offering various kinds of investment incentives. The possibility to influence the investment pattern with various policy measures complicates the analysis of the regional integration-FDI nexus, and motivates a discussion of the effects of FDI incentives on regional development.

5. FDI incentives and regional development

5.1 FDI incentives: rationale, proliferation, and rules governing their use

Before focussing on the link between FDI incentives and regional development, a few general observations on FDI incentives are useful. The first one is that the attitudes towards inward FDI

have changed markedly over the last couple of decades. In addition to the push from deeper integration discussed above, FDI has also been advanced by multilateral trade liberalisation and innovations in telecommunications and information technology, which have combined to facilitate the coordination of international production networks. Consequently, almost all countries have liberalised their FDI policies, and an increasing number of host governments provide various forms of investment incentives to encourage entry by foreign-owned companies. These include fiscal incentives such as tax holidays and lower taxes for foreign investors, financial incentives such as grants and preferential loans to TNCs, and measures like market preferences, infrastructure, and sometimes even monopoly rights.

The second observation concerns the motives for subsidising FDI. The main economic argument in favour of public support to FDI is based on prospects for positive externalities associated with the activities of TNCs. Probably most important, foreign entry may increase the efficiency of indigenous firms. Such efficiency gains could result, for instance, from tougher competition and knowledge spillovers arising with the entry of foreign firms.² But as TNCs will not include these externalities in their private assessment of the costs and benefits of investing abroad, they may invest less than what would be socially optimal. The motive for public subsidies to foreign investors is to bridge the gap between the private and social returns, thus promoting larger inflows of FDI. But a word of caution is merited here: the empirical evidence on externalities and, by extension, the justification for specific FDI incentives is mixed; a key conclusion of the empirical literature is that host country and host industry characteristics determine the impact of FDI and that systematic differences between countries and industries should be expected (for a detailed review see Blomström *et al.* 2000 and Uppenberg and Riess, this volume); furthermore, there is evidence that spillovers do not occur automatically, but depend on the ability and motivation of indigenous firms to engage in investment and learning to absorb foreign knowledge and skills.

Third, even when justified economically, the proliferation of FDI incentives creates new problems. One is that competition between host countries may lead to more and more generous subsidies. In fact, competition between potential investment locations, internationally or within countries, may raise the subsidy levels so much that most of the benefits are shifted from the host country to the foreign investors (Haaland and Wooton 1999).³ At the same time, it is understandable that many countries are unwilling to give up their promotion efforts, and there is a consensus that the unilateral withdrawal of investment incentives would be costly for any individual country (Head *et al.* 1999). There is thus a parallel between FDI subsidies and trade barriers in the sense that multilateral coordination may be key for dismantling trade barriers and limiting international or regional investment subsidies. But how far has multilateral coordination gone in setting rules for how countries should compete for FDI?

Even before considering regional development objectives, there are theoretical arguments for FDI incentives; in practice, however, the case is much weaker.

2 It is also possible to motivate FDI incentives with arguments based on capital market imperfections, assuming that TNCs have better access to capital, or labour market imperfections, assuming that unemployed workers would not find new jobs in the absence of FDI. See Blomström and Kokko (2003).

3 In addition, there are costs because subsidisation invites rent seeking. For instance, tax holidays and tax breaks may appear to be simple and innocuous forms of incentives, but are likely to lead to transfer pricing and other distortions as firms try to shift as many transactions as possible to the activity with tax preferences, or set up new firms as the tax preferences of existing firms expire.

The short answer to this question is that while multilateral agreements – for instance WTO's agreements on Subsidies and Countervailing Measures (SCMs) and Trade-Related Investment Measures (TRIMS) – include clauses on incentives and investment rules, they have not achieved much in establishing common rules for how countries should compete for FDI (Kokko 2003). However, more advanced regional integration agreements like the EU and NAFTA include explicit rules for FDI incentives: it appears clear that extensive market integration makes it necessary to harmonise incentive policies as well. At a broad theoretical level, there are several reasons for this development. For one thing, common rules for incentive policies are necessary to create a level playing field for all firms in the integrating region. It is clear that the opposition to far-reaching trade and investment liberalisation would be fierce if some countries in a regional integration agreement were able to lure investors from other member countries by offering particularly generous incentive packages. For another, a situation where production location is determined by specific incentives rather than underlying production conditions defeats some of the efficiency objectives of regional integration. Consequently, EU rules set two kinds of limits on FDI incentives. The first type of restriction follows from Article 87(1) of the Maastricht Treaty, which, in principle, bans specific FDI incentives. The Article states that: “Any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, insofar as it affects trade between Member States, be incompatible with the common market.”

In principle, EU rules ban FDI incentives, but they envisage important exemptions.

Similarly, the EU's Code of Conduct on business taxation from 1999 bans “harmful” tax measures that may affect investment location within the Union. In this context, harmful tax measures are defined as taxes that are significantly lower than those generally applied in the economy. Hence, the starting point for policy is that the scope for subsidisation of FDI is very limited. However, the Maastricht Treaty also identifies some important exemptions from the general rule. In particular, support can be given to disadvantaged parts of the Union, suffering from low income levels or high unemployment, to promote balanced regional development (Article 87(3)(a)). Support used to “facilitate the development of certain economic activities... where such aid does not adversely affect trading conditions” (Article 87(3)(c)) is also allowed: this exemption covers subsidies for R&D, labour training, and development of small and medium-sized enterprises. Taken together, these exemptions give substantial scope for investment support, with subsidy levels in some cases reaching over 75 percent of the total investment amounts.

The other type of restriction comes from non-discrimination and national treatment regulations, which essentially guarantee that all firms qualifying for a certain kind of support should be treated equally. In other words, the investment subsidies apply equally to foreign and domestic investors. This is desirable from a theoretical perspective, recalling the conclusions from the literature on knowledge spillovers, which suggest that spillovers are not automatic but depend crucially on the conditions for indigenous firms. The potential for spillovers is unlikely to be realised unless indigenous firms have the ability and motivation to learn from foreign TNCs and to invest in new technology. Consequently, investment incentives aiming to increase the potential for spillovers may be inefficient unless they are complemented with measures to improve the local learning capability and to maintain a competitive local business environment.

The final observation on FDI incentives concerns their effectiveness in attracting TNCs. There is increasing evidence that investors do, in fact, respond to targeted FDI policies. Until the early 1990s, there was a strong consensus in the literature that FDI is mainly attracted by strong economic fundamentals, like market size, income, skills, infrastructure, and political and macroeconomic stability. Global and regional trade and investment liberalisation have changed this picture and made incentives a more important determinant of international investment decisions. One indication is the proliferation of investment incentives across the world. More than 100 countries provided various FDI incentives already in the mid-1990s, and dozens more have introduced such incentives since then – few countries compete for foreign investment without any form of subsidies today (UNCTAD 1996). In the OECD countries where financial incentives are common, the subsidies per FDI-related job often reach tens of thousands of US dollars (UNCTAD 1995). In developing countries, incentive schemes are often based on tax holidays and other fiscal measures that do not require direct payments of scarce public funds – the costs of these programmes are difficult to calculate, since it is seldom possible to tell what share of the FDI (if any) would have been undertaken without the tax incentives. While TNC executives used to downplay the role of incentives some years ago, they now readily admit their increasing importance for investment decisions (Easson 2001). Even econometric studies, which used to find small or no effects of incentives, now suggest that they have become more significant determinants of international direct investment flows (Clark 2000, Taylor 2000). With this in mind, we turn to the link between FDI incentives and regional development in the European Union.

FDI incentives proliferate, and recent econometric evidence suggests that they have become more significant FDI determinants.

5.2 FDI incentives: what is their contribution to regional development?

To answer this question, an obvious starting point is to analyse the role of FDI incentives in Europe and, specifically, to investigate whether the EU's regional investment subsidies are substantial enough to influence the pattern of FDI in Europe. This question has recently been addressed by e.g. Basile *et al.* (2003), who examine the location choices of TNCs investing in Europe, and Mayer (this volume), who examines effects of regional support in France. Basile *et al.* (2003) explore the investments of nearly 6,000 foreign-owned firms established in France, Germany, Ireland, Italy, Portugal, Spain, Sweden, and the United Kingdom during the period 1991-99, using a conditional logit model that allows them to relate the investment decisions to a set of variables describing the local investment environment. In addition to standard variables, like market size, labour costs, taxes, and proxies for agglomeration economies, they also include dummies to identify Cohesion Fund countries and Objective 1 regions.⁴ Controlling for other location determinants, the model yields positive and significant coefficients for both regional policy dummies, suggesting that FDI flows are indeed attracted to countries and regions where subsidies are available. These findings match several other recent studies that look specifically at the responses of FDI to incentives and regional tax competition (Clark 2000, Mihir *et al.* 2003, Taylor 2000), but it should also be noted that there are some

⁴ The Cohesion Fund provides support to projects in environment and transportation infrastructure in those EU countries where the per capita income level is below 90 percent of the Community average. In early 2004, only Greece, Ireland, Portugal, and Spain were eligible for this support, which in total amounts to about EUR 2.5 billion per year. Objective 1 support focuses on development and structural adjustment in regions where the average per capita income is below 75 percent of the Community average. About 20 percent of the EU population lives in Objective 1 regions, and the total amount of Objective 1 support for the period 2000-06 is around EUR 136 billion.

question marks regarding the generality of the results.⁵ Mayer (this volume), by contrast, does not find any substantial effects of regional subsidies for investment location in France. One likely reason for these divergent findings is that the relative strength of agglomeration forces and subsidies probably varies between countries and regions, and – at the same time – there is substantial cross-industry variation in the relative importance of agglomeration forces (see Dunning 2000).

But even if the EU's regional support programmes affect FDI flows, it is not clear whether the impact is strong enough to narrow the income gaps between central and remote regions. The reason is that FDI may still cluster to the central locations, where other fundamental determinants of investment location are stronger. Thus, the positive impact of investment subsidies may be too weak to compensate for the disadvantages of the regions qualifying for support. Moreover, given that the firms most likely to respond to investment incentives are probably also the most footloose, it is not clear whether attracting this kind of firms is enough to create sustainable regional development. Footloose foreign investors may well be prepared to move on after the subsidisation period has expired, or when competing regions offer more attractive incentives. This may result in a shorter time horizon for investments, and perhaps also weaker links to local industry. It is therefore relevant to compare the development over time of foreign-owned enterprises in supported and unsupported regions. Such a comparison should include employment creation as well as other production characteristics, like productivity, labour skills, and R&D expenditures. Obviously, such a comparison should also include locally-owned firms to explore whether local and foreign firms respond differently to incentives.

To assess whether EU regional support affects FDI flows, one needs to compare the development of foreign-owned firms in supported and unsupported regions.

Figures 3 to 7 provide some comparisons of this type for the Swedish manufacturing sector.⁶ We have defined nine of the 21 Swedish provinces as support provinces, meaning that they qualify for EU Objective 1 or 2 support.⁷ Firms investing in these provinces qualify for investment grants, favourable loans, subsidies for employment creation, and support for training, skill development, research, and innovation. Small and medium-sized firms are eligible for the most favourable support, with investment grants covering up to 50 percent of investment costs or employment grants amounting to SEK 200,000 (equivalent to around EUR 22,000 at 2003 exchange rates) per year and job created.

5 One concern is that the specification of regions does not fully conform to Objective 1 eligibility. For instance, the model defines all of Sweden as an Objective 1 region. However, only some remote parts of the country actually qualify for regional support, and most of the FDI inflows are directed to provinces without Objective 1 support. It is also worrying that Ireland, the FDI host by far the most successful of the four Cohesion Fund countries, is included in the data set, while the least successful, Greece, is not.

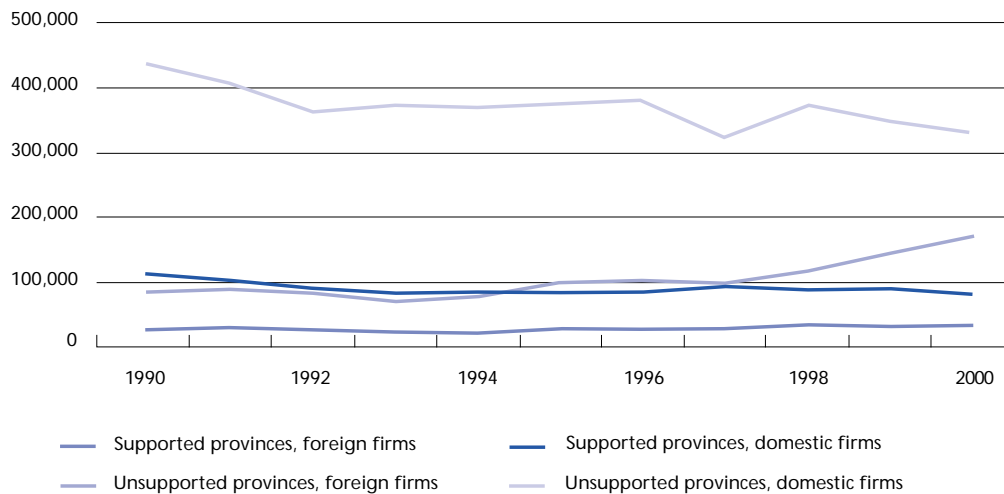
6 The data come from Statistics Sweden, Financial Statistics database, and cover all enterprises with 20 or more employees. The firms classified as foreign-owned have foreign majority ownership.

7 Objective 1 regions are defined in FN 4. Objective 2 regions are areas in industrial decline. The provinces included in the "support" category are Gotland, Värmland, Västmanland, Dalarna, Gävleborg, Västernorrland, Jämtland, Västerbotten, and Norrbotten, accounting for 22 percent of the Swedish population in 2003. Some municipalities in other provinces are also eligible for Objective 2 support (which aims to contribute to the economic and social conversion of regions in structural difficulties), but they are not included in the "support" category since the support amounts involved are limited. The total amount of regional support from the EU to Sweden envisaged during 2000-06 is about EUR 19 billion. In addition, the national budget provides about SEK 3 billion per year for regional development.

We start with Figure 3, which illustrates the development of employment in the Swedish provinces qualifying for EU support compared to that in the rest of the economy between 1990 and 2000. It can clearly be seen that Swedish accession to the EU in 1995 coincided with a strong boom in inward FDI, and that most of the increase in foreign employment occurred in unsupported provinces. In the supported provinces, foreign employment grew moderately, from about 28,000 jobs to 33,000 jobs; in other parts of the country (mainly the urban centres), foreign employment more than doubled during the same period, from 88,000 to 173,000. Meanwhile, employment in domestic manufacturing firms fell significantly in supported as well as unsupported parts of the country. While it can be argued that the employment created in foreign-owned enterprises was of great importance for the Swedish manufacturing sector, there are no signs that FDI has contributed to closing the regional development gaps in Sweden. The key message transpiring from Figure 3 is that the provinces qualifying for EU support did not perform any better than those where regional support was not available.

With respect to manufacturing employment, Swedish provinces receiving EU support did not perform better than unsupported provinces.

Figure 3. Manufacturing employment in supported and unsupported Swedish provinces, 1990-2000



Source: Statistics Sweden, Financial Statistics database.

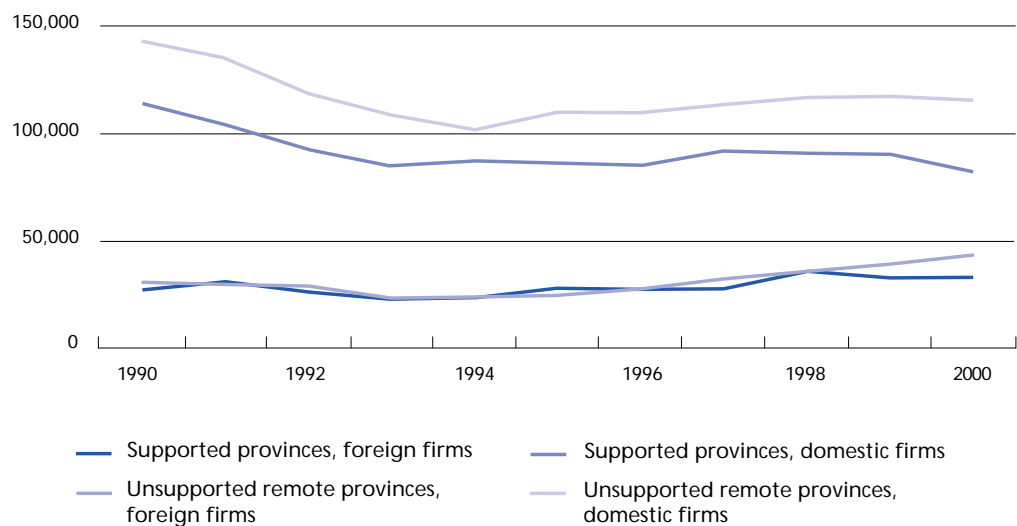
However, comparing developments in foreign employment in supported provinces to those in the rest of the country may fail to capture the impact of EU support. The investment decisions of foreign investors depend on variables other than investment incentives, as noted above, and the negative effects of smaller local markets, higher transport costs, weaker infrastructure, and various other locational disadvantages may simply outweigh the positive effects of investment incentives. One way to control for these differences between provinces would be to explore the effects of incentives in a multiple regression setting, as done by Basile *et al.* (2003) and Mayer (this volume), but we lack the detailed firm-level data needed for this task. Another approach is to compare firms in Objective 1 and 2 provinces to firms in other relatively remote provinces, where geographical location and other investment conditions are more similar to those in the

Trends in manufacturing employment have been particularly favourable in remote provinces that are not receiving regional support.

supported provinces. This is a significantly less ambitious undertaking than a regression analysis, since we will not be able to distinguish the marginal effect of regional support at the firm level: the comparisons will only reveal whether the support has a strong enough impact to influence the aggregate development of the region in question.

With this caveat duly noted, Figure 4 compares the employment development in the nine supported provinces to that in eight unsupported regions outside the urban provinces Stockholm, Uppsala, Västra Götaland, and Skåne.⁸ The most notable observation from Figure 4 is perhaps that changes in employment have been very similar in both types of regions. Both foreign and domestic firms experienced a contraction in connection with the financial crisis in the early 1990s, but in particular foreign employment increased thereafter. However, it can be seen even in this comparison that the development was more favourable in unsupported regions than in the provinces qualifying for Objective 1 and 2 support. This observation corroborates the conclusion that investment incentives, including those offered to foreign investors, are not very effective in reducing regional disparities.⁹

Figure 4. Manufacturing employment in supported and unsupported remote Swedish provinces, 1990-2000



Source: Statistics Sweden, Financial Statistics database.

To examine whether access to regional support programmes leads to any notable effects on production characteristics (aside from employment), Figures 5 and 6 show the changes in manufacturing labour productivity and average education levels in supported and unsupported remote provinces in Sweden. Looking first at labour productivity (defined as

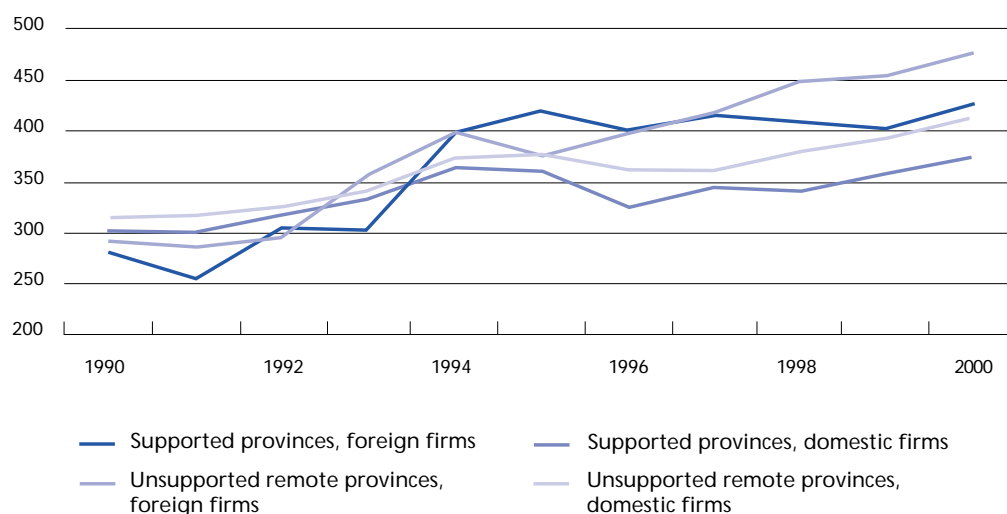
⁸ The control group of unsupported regions includes Södermanland, Östergötland, Jönköping, Kronoberg, Kalmar, Blekinge, Halland, and Örebro. These provinces accounted for 24 percent of the Swedish population in 2003.

⁹ Most of the increase in foreign employment occurred as a result of mergers and acquisitions, which makes it even more difficult to draw strong conclusions about development effects.

value added per employee, in constant 1990 SEK) in Figure 5, it is notable how rapidly value added per employee increased in both regions and both types of firms before the mid-1990s. These increases were to a large extent related to the downturn in the business cycle that culminated in the financial crisis in 1992: the job cuts during this period centred on the least productive workers, and forced firms to focus more heavily on rationalisation and productivity improvements. Productivity growth was faster in foreign-owned firms, resulting in a pattern where foreign firms now exhibit a productivity advantage over indigenous enterprises. This is a normal pattern, and reflects the benefits derived from the intangible assets that are necessary to become a multinational firm (Caves 1996). It is also noteworthy that the fastest productivity increases have taken place in foreign firms in unsupported provinces, especially during the last few years in the sample period. This suggests that the Objective 1 and 2 subsidies have not been strong enough to fully reverse the possible productivity disadvantages in the supported provinces.

The fastest productivity increases occurred in foreign-owned firms in Swedish provinces that did not receive EU regional development support.

Figure 5. Manufacturing labour productivity in supported and unsupported remote Swedish provinces, 1990-2000

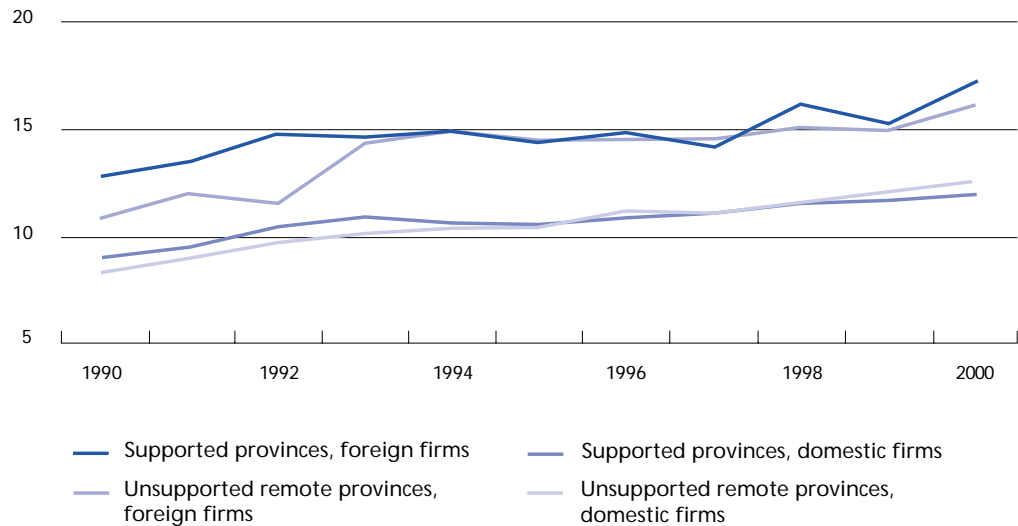


Note: Labour productivity defined as value added per employee (in '000 of SEK, 1990 prices).

Source: Statistics Sweden, Financial Statistics database.

The average level of education (measured as the share of the workforce with at least some tertiary education) has developed in a similar manner, as shown in Figure 6. Overall, foreign firms tend to employ workers with higher average education levels, and the advantage over Swedish firms seems to have increased during the 1990s. The fastest increases in the education level occurred in the early 1990s, as job cuts focused on the least productive and least educated workers. The increase in education levels has continued during the second half of the 1990s, but there are no distinguishable differences between firms in supported and unsupported remote regions. It should also be noted that both labour productivity and education levels have increased even faster in the most urban Swedish provinces, both in foreign and locally-owned firms. In other words, FDI has apparently not contributed to any regional convergence in terms of productivity and skill levels.

Figure 6. Level of education in manufacturing in supported and unsupported remote Swedish provinces, 1990-2000



Note: The vertical axis shows the level of education measured by the share of employees with tertiary education (in % of all employees).

Source: Statistics Sweden, Financial Statistics database.

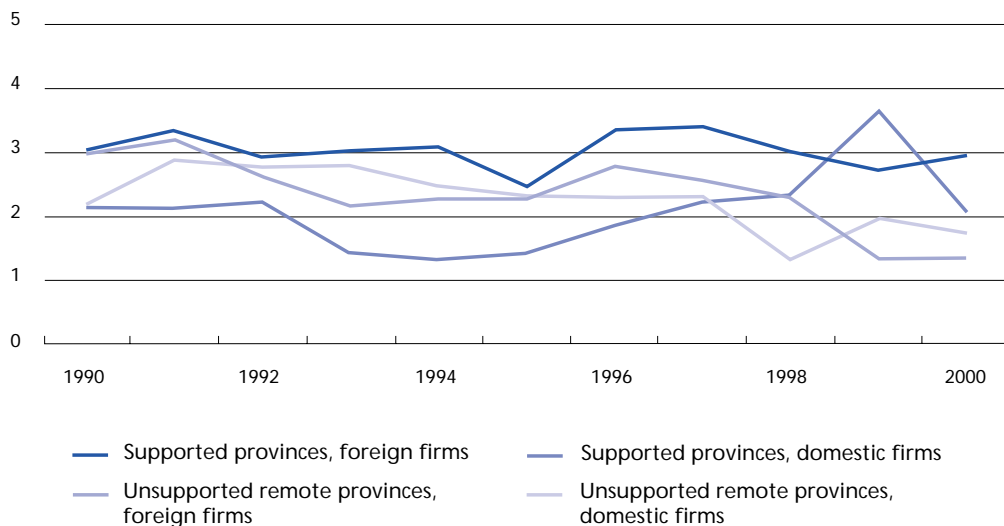
Regional support has promoted R&D in firms located in remote provinces.

Figure 7 presents a somewhat contrasting picture of the impact of regional support and FDI incentives. Summarising data on R&D expenditures as a share of sales, the figure suggests that regions enjoying EU support have distinct advantages compared to other remote provinces. Since the mid-1990s, the R&D intensity fell in domestic as well as foreign-owned firms in remote unsupported regions, but was maintained or increased in supported regions.¹⁰ Foreign firms in Objective 1 and 2 regions maintained a roughly constant ratio of R&D to sales, at around 3 percent, while domestic firms increased their R&D ratio from less than 1.5 percent to well over 2 percent. It is likely that this development is a result of various more specific forms of regional support, such as Community initiatives for research, development, and innovation. The distinct effects of these support measures at the macro level are probably due to the high concentration of R&D activities in the largest corporations, which often own plants and firms in several provinces. They are able to concentrate their R&D activities to those locations that provide the most favourable conditions (including subsidies), and may then use the results throughout the corporation. At the same time, there is a potential for positive effects on local development through various kinds of spillover effects. In fact, it has been argued that the promotion of R&D and other activities that facilitate the diffusion of innovations are particularly important for reducing regional inequality and promoting growth (Martin 1999). However, it should be noted that the R&D intensities in central provinces like Stockholm and Uppsala, where the large multinationals have concentrated the bulk of their Swedish R&D, were consistently higher, peaking at levels above 8 percent of sales in the late 1990s. This suggests that the concentration of R&D to

¹⁰ The R&D data are only available for firms with 50 or more employees.

supported regions has not taken place at the expense of research activities in central locations, but rather at the expense of other remote locations that do not qualify for equally generous support.

Figure 7. Manufacturing R&D expenditure in supported and unsupported remote Swedish provinces, 1990-2000



Note: R&D expenditure in % of sales; firms with more than 50 employees.
Source: Statistics Sweden, Financial Statistics database.

Summarising this section, it does not appear that the kinds of investment incentives allowed under Objectives 1 and 2 of EU regional development policies have had any fundamental impact on the pattern of FDI in Sweden. Furthermore, there do not appear to be any distinct effects of regional support on employment, labour productivity, and education levels, but there are signs that access to regional support has promoted R&D in foreign and Swedish firms located in remote provinces. This is encouraging, since it may contribute to the diffusion of technology in the supported regions, but it does not provide any strong evidence for the view that FDI has helped reduce the regional gaps in Sweden.

Overall, investment incentives under EU regional development policies do not seem to have affected the regional pattern of FDI in Sweden.

6. Concluding comments

This paper has highlighted the role of FDI in the regional integration process. Many of the expected benefits of regional integration are related to restructuring the production pattern in the integrating region. As market size increases, tougher competition will trigger a structural adjustment process as companies aim to grow large enough to exploit economies of scale. Much of this growth will take place through mergers and acquisitions involving firms from other countries in the regional integration area, and the growing market will also attract the attention of investors in other parts of the world.

However, not all parts of the region will benefit equally from the integration process. The largest inflows of FDI are likely to be drawn to relatively strong parts of the integrating regions, where production conditions are favourable thanks to a central location or various agglomeration effects. At the same time, there are also forces reducing the importance of some of the traditional determinants of investment location. In particular, the liberalisation of regional trade tends to reduce the advantages of a large local market. Even small countries can compete strongly for investments if they can provide sufficiently favourable investment conditions. This has created a potential to use FDI as an instrument of regional policy, to support the development of countries and regions that have earlier lagged in income and development.

The use of investment incentives provides one way to create an attractive investment environment. Various types of incentives are therefore commonly used in the competition for FDI, particularly by those countries and regions that are not favoured by strong fundamentals related to agglomeration or geographic location. Recent studies have also shown that FDI incentives have become more important with the reduction of trade barriers and the convergence in other policy areas resulting from regional integration. However, incentive competition is clearly not compatible with the harmonisation of trade and competition policies that lie at the centre of modern regional integration agreements. The EU has therefore in principle prohibited such competition, with one important exception: subsidies for regional development. Through the EU's Cohesion and Structural Funds, countries can support investment, employment creation, training, and research activities in regions designated as disadvantaged in terms of income or other conditions. The main empirical question of this paper has been whether EU's regional support packages, with a focus on Objective 1 and 2 support, have any impact on FDI, and whether this impact is strong enough to affect the regional development gaps.

There are no signs that FDI contributed to reducing the regional income and development gaps in Sweden.

Some recent studies (Basile *et al.* 2003; Mayer, this volume) have examined the impact of regional support on FDI location decisions, and come up with mixed evidence. This suggests that the relation between centrifugal forces (investment subsidies favouring relatively remote locations) and centripetal forces (various agglomeration effects) varies between countries and industries. Hence, it can be expected that regional support may influence the investment decision of foreign firms in industries where external economies of scale are relatively weak, but that the chances of creating new clusters are low. Comparing FDI in Swedish regions with and without access to Objective 1 and 2 support, we also found little impact of the regional subsidies at the macro level. Employment in foreign-owned enterprises in provinces qualifying for regional support grew during the 1990s, at the same time as productivity and education levels increased. However, these increases were significantly lower than those in more central provinces, and not much different from those in remote provinces that did not qualify for regional support. In other words, although the behaviour of some individual firms may have been influenced by the various subsidies available in supported provinces, the effects were not strong enough to show at the regional level. These conclusions match those of Bergström (1998, 2000), who examined the firm-level impact of Swedish regional support during the late 1980s and early 1990s, without finding any significant effects on employment or productivity.¹¹ In sum, given the stronger performance of foreign-owned firms in other parts of the country, it can be argued that there are no signs that FDI contributed to reducing the income and development gaps in Sweden.

The main exception from this relatively pessimistic conclusion concerns R&D. There are signs that regional support may have allowed both foreign-owned and domestic firms in supported regions to reach higher R&D intensities than what would otherwise have been possible. To the extent that these research activities result in technology diffusion and other positive externalities, they are likely to further regional growth and development. In general, it is likely that policy interventions supporting R&D, training, and other activities with positive spillover effects will have a stronger positive impact than subsidies on capital investment (where the benefits can be internalised to a much larger extent). The obvious caveat concerns the relation between the costs and benefits of support programmes. So far, we have not discussed the fiscal consequences of regional support in any detail, and it is clear that further research should examine this more in depth. Furthermore, there are very few analyses focusing on cross-country and industry differences in the impact of regional support policies, and more work is required to distinguish the cases where various kinds of subsidies can be expected to be most efficient.

11 The Swedish regional support programmes that were in place before EU membership were similar to Community programmes, and they were largely directed to the same regions that qualify for Objective 1 and 2 support. See Bergström (1998).

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