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**Article**

## The employment effects of foreign direct investment

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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.<sup>1</sup> 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.

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<sup>1</sup> 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).



Jozef Konings

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 integration<sup>2</sup>

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

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<sup>2</sup> 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).<sup>3</sup> 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)<sup>4</sup> 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

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

<sup>4</sup> 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.<sup>5</sup> 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.

<sup>5</sup> 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.<sup>6</sup> 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.*

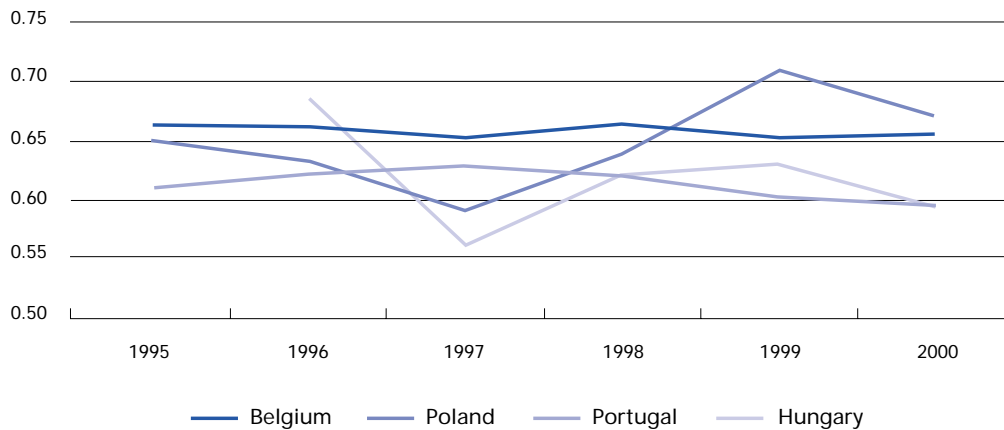
While the ratio of labour cost to productivity gives an idea about the relative competitiveness of countries, it ignores other important factors, including capital productivity and countries' public infrastructure, that play a crucial role in the (re)location decision of production. Furthermore, aggregate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

<sup>6</sup> 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.
<b>Group 1:</b>					
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
<b>Group 2:</b>					
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
<b>Group 3:</b>					
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.

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

## 4. Employment relocation within transnational corporations<sup>7</sup>

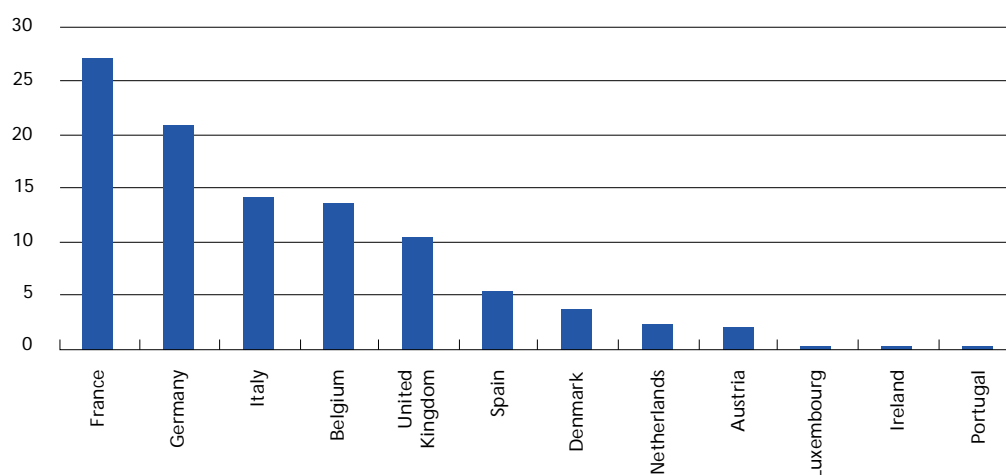
### 4.1 Location and activities of European transnational corporations

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.<sup>8</sup> We only take into account direct ownership links<sup>9</sup> 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)

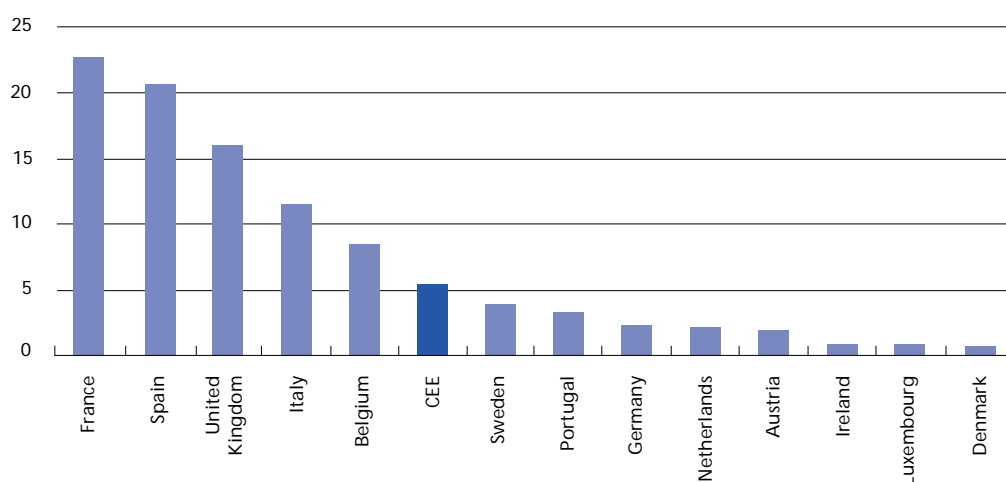


Source: Own calculation based on AMADEUS dataset.

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

<sup>9</sup> 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%

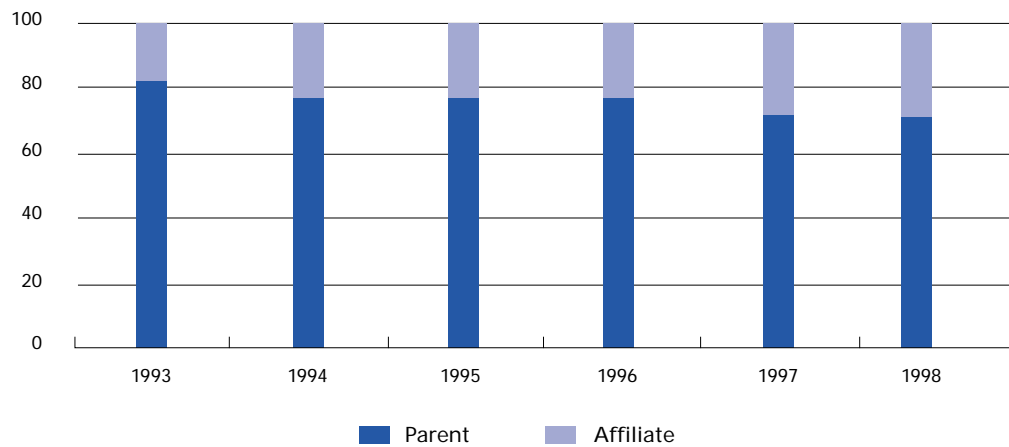
Note: Parents of TNCs from the EU-15; affiliates of these TNCs in the EU-15 and in CEE.

Source: Own calculation based on AMADEUS dataset.

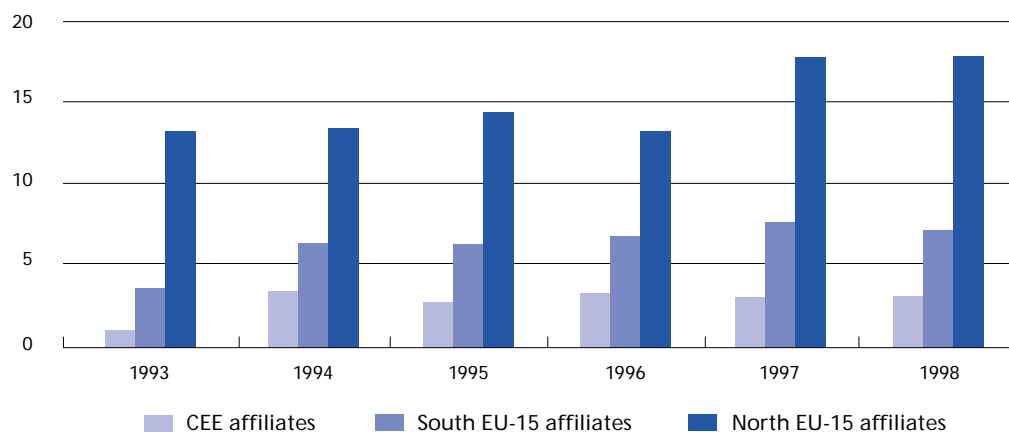
Turning to parent firms in the non-manufacturing sector, Table 3 shows that almost 60 percent of them control affiliates only in the non-manufacturing sector, but a substantial fraction (about 25 percent) of parents in non-manufacturing have affiliates in manufacturing only. The latter fraction could 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.<sup>10</sup> 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.

<sup>10</sup> 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
<b>Employment</b>		
Parents	1,873	4,444
Affiliates	257	409
EU-15	243	390
EU 'south'	225	354
EU 'north'	252	407
CEE countries	460	577
<b>Wage cost per worker per year (in euro)</b>		
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
<b>Valued added per worker per year (in euro)</b>		
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
<b>Ratio of wage cost to productivity per worker</b>		
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,  $\varepsilon_{it}$  = 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 ( $\alpha_2$ , 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
$\alpha_1$ : impact of $W^p$ on $L^p$	-0.89***	-1.03***	-0.69***	-0.76***	-0.67***
$\alpha_2$ : impact of $W_{NEU}^A$ on $L^p$	0.018**	0.032**	-0.02	0.022**	0.018**
$\alpha_3$ : impact of $W_{SEU}^A$ on $L^p$	0.002	0.009	-0.013	0.001	0.038
$\alpha_4$ : impact of $W_{CEE}^A$ on $L^p$	0.024	0.015	0.04	0.019	0.029
$\alpha_5$ : 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 <sup>2</sup> within	0.35	0.42	0.26	0.56	0.32
R <sup>2</sup> between	0.62	0.64	0.59	0.56	0.48
R <sup>2</sup> 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) R<sup>2</sup> between = R<sup>2</sup> corresponding to OLS applied to the model in means (over time), R<sup>2</sup> within = R<sup>2</sup> corresponding to OLS applied to the model in deviation of individual (firm) means, R<sup>2</sup> overall = R<sup>2</sup> 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 ( $\alpha_2$ ,  $\alpha_3$  and  $\alpha_4$ , 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 combining 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
<b>Poland</b>					
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
<b>Estonia</b>					
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
<b>Slovenia</b>					
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
<b>Bulgaria</b>					
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
<b>Romania</b>					
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 Romania<sup>11</sup>. The job creation and destruction rates are computed relative to the total employment in each category<sup>12</sup>. 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,

<sup>11</sup> Ownership information is not available for Estonia and Slovenia.

<sup>12</sup> 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
<b>Poland</b>					
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
<b>Bulgaria</b>					
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
<b>Romania</b>					
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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