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Coming and Going: Gains and Losses from Relocations Affecting Hungary

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Executive summary

Relocation is a way of reducing costs, thus increasing competitiveness, by splitting production and services between countries. The main argument kindling the relocation debate suggests that moving abroad generates job losses in the home country, while production and job gains appear only in the host country. However, positive effects are also present in the home country, due to increasing the overall competitiveness of the companies engaged in relocation, which allows the upgrading of products and jobs. Likewise, income repatriation is a financial gain for the home country, as it may generate further jobs.

The aim of this paper is to shed some light on the size and the labour market effects of relocations in new EU member states (NMS), most notably in Hungary. The discussion starts with an overview of the definition and expected impacts of relocation. Then it moves to the evidence provided by data on FDI and FDI-related income flows. The issue of job creation and destruction is discussed, based on the employment effects of FDI in host countries and on corporate restructuring data in both home and host countries. The main part of the paper is devoted to an analysis of reported relocation cases to and from Hungary between mid-2003 and September 2005.

We have found evidence for the existence of relocation from the EU-15 to the NMS. The number of cases in Hungary amounts to one fifth of the registered FDI projects. But the number of jobs transferred is fairly modest, concentrating in the automotive and the electronics sectors. Relocation-related job losses in home countries are not very numerous either; but they are sectorally and geographically concentrated in those countries which already suffer from unemployment and competitiveness problems. Relocation to and from Hungary is mainly confined to Europe, even if the owner of the transnational company is from a different continent. Also when moving out from NMS locations, multinationals remain in the vicinity and seldom go to China. We have found the FDI-related income transfers significant, but could not assess their impact on job creation in the home country of transnationals.

Key words: *relocation, offshoring, FDI, labour market, Hungary*

JEL classification: *F21, F23, D21, J23*

Coming and going: gains and losses from relocations affecting Hungary

Introduction

This paper takes a look at the recent movements in the international division of labour, focusing on the relocation of productive and services capacities. Relocations are more frequent now than they were in the past and the new EU member states (NMS) are among the preferred targets. Relocation has also gained importance as a driving force of foreign direct investment (FDI). But, as will be seen from the discussion below, only a small part of the FDI inflow into NMS can be directly associated with relocation.

Global FDI is currently lower than it was in the late 1990s when cross-border mergers and acquisitions (M&A) blew up the figures. But FDI into emerging economies thrives mainly due to fast growth of local markets and also due to relocation from more advanced countries (UNCTAD, 2005). FDI into NMS recovered in 2004 from its 2003 low, a trend that has continued in 2005 (Hunya, 2005). As privatization-related FDI is on the decline, an increasing share of investments targets the modernization and expansion of capacities.

M&A and relocation have common technological and institutional foundations. Along with the development of information and communication technology (ICT), the management of transnational corporations (TNCs) has become easier. Faster movement of information allows them to manage and coordinate globally split production lines and support services. With data transmission in digital form, IT-related services have become internationally tradable. Beyond technology, also the institutional environment has become more supportive. Increasingly liberal trade and international investment regimes allow companies to allocate production segments to locations where they can operate most efficiently. Another recent driving force of relocation is the increased cost pressure on companies due to weak demand or increased competition on main markets. They are now more eager to search for cost-cutting opportunities such as cheaper locations for production and services.

Product, capital and labour markets have become increasingly integrated and contested internationally. Based on comparative advantages, the international division of labour in the form of relocation can basically be regarded as a win-win business. But fast changes in international specialization may lead to frictions, such as unemployment. Also a redistribution of income between labour and capital may emerge. Due to these effects, relocation has become a widely debated topic. Particularly in countries from which larger segments of production or services are outsourced, such as the USA, Germany and France, public controversies have started to challenge the general wisdom of win-win.

Arguments appear that job losses due to relocation and off-shore outsourcing would not be counter-balanced by new, higher-standard jobs created in other sectors (Craig and Willmott, 2005; Sachwald, 2004; European Commission 2003, 2004; OECD, 2004).

The aim of this paper is to reflect on the ongoing relocation debate, by shedding some light on the size and the labour market effects of relocations in new EU member states, most notably in Hungary. The discussion starts with an overview of the definition and expected impacts of relocation. Then it moves to the evidence provided by international data concerning corporate restructuring. The main part of the paper is devoted to a presentation of reported relocation cases in Hungary between 2003 and September 2005. Based on these findings we discuss some aspects of the Europe-wide debate.

Relocation, outsourcing, offshoring, delocalization and their relevance for FDI

Companies expand, streamline and split their activities as a dynamic process. They shift corporate functions and operations between subsidiaries and locations. The following definitions (based on OECD, 2004 and Kirkegaard, 2005) should help to identify the scope of the issue:

- Outsourcing means that companies move part of their activity outside the firm. They can move it within the country or abroad (offshore). What they formerly produced up to a point within the company, they now buy from a supplier (service supplier, component producer). In the wake of offshore outsourcing, a company imports products and services from independent foreign-based companies, thus no FDI takes place. But FDI into low-cost locations may increase if there is growing demand for products and services produced there.
- Relocation (French *delocalization*, German *Auslagerung*) happens when companies move part of their production processes and/or service functions to a subsidiary in a cheaper location. The term is usually used in the sense of international relocation, and in this respect it means the same as offshoring. But the term offshoring has recently been mainly applied to the offshore outsourcing of ICT and ICT-enabled business support services.

Relocation is a way of reducing costs, thus increasing competitiveness, by splitting production and services between locations. In this way the comparative advantages of several countries are combined. On the other hand, economies of scale may also induce relocations, when the concentration of production capacities to the cheaper production site leads to lower costs. Relocation implies that jobs, products and services are moved from the home to a host country. The company terminates the production of some goods or components in the home country and imports it from a foreign subsidiary. It generates FDI and international trade.

In the FDI literature, relocation is identified as efficiency-seeking or vertically integrated FDI, as opposed to market-seeking or horizontally integrated FDI. The distinction between these two types of FDI has been replaced by the current debate on relocation. Export-oriented subsidiaries are set up by a vertically integrated multinational company in a host country with the aim to lower production costs or to seek, secure and diversify resources (Narula and Dunning, 2000). Local market-oriented FDI is set up by horizontally integrated multinationals to penetrate a market, increasing their market shares, diversifying the source of sale, and minimizing competition risk (Zhang and Markusen, 1999).

The main advantage of linking the relocation discussion to FDI consists in the fact that we have systematically collected data about international capital movements while such data are not available for relocation. Albeit in a less comprehensive way, there are also data concerning employment of foreign affiliates, which allow us to check the employment effects of FDI. We shall present this kind of knowledge about the NMS in subsequent chapters, following the discussion on gains and losses of countries affected by relocation.

Country-level gains and losses generated by relocation

The relocation of production and services activities has employment, trade and income effects in the home and host country alike. The main argument kindling the relocation debate is that moving abroad generates job losses in the home country, while production and job gains appear in the host country. The argument states that home-country plants are closed down, their machinery being transferred to the new location, resulting in a net loss for the home country. However, the more indirect effects are thereby overlooked: importing cheap products/components/services from a foreign subsidiary may increase the competitiveness of the home company, thus securing jobs and increasing incomes. Lost jobs may eventually also be recovered by developing worldwide markets for more sophisticated products and services. Product upgrading appears because firms that have outsourced their low-skill jobs will be able to spend more time on their core competencies. And this, in turn, may lead to new innovative goods and services that can be sold globally (La Londe, 2004). Relocation may thus shift the economy towards higher value-added production. It must be admitted, however, that the restructuring of employment away from the low value-added production to one that demands higher skills usually takes place via temporary unemployment. In the extreme case of de-industrialization, the employment and skills of whole industries are lost.

The pressure to relocate to cheap production sites emerges due to import competition. For freely traded goods and services, the price competition generated by low-cost, low-income countries is unavoidable. The prices of manufacturing products set in an international competition are low and cannot cover high local costs of labour, land etc. in the high-income country. Manufacturing companies in rich countries, except for the most

innovative ones, can survive only if they combine local with lower foreign labour costs. While part of the population may lose their jobs due to relocation in rich countries, most of them gain as consumers due to lower prices of imported goods.

Job movements are matched by capital movements and the relocation of earnings. Capital is abundant in developed countries, but the return on capital is relatively low. Capital owners can increase their return on capital by exporting it to countries where returns are higher. The interests of capital exporters and component importers coincide; both support relocation. Capital owners exporting capital receive earnings, part of which they repatriate into their home country. Repatriated profits can be invested in the home country in sectors where the rate of return is still satisfactory. This income can generate additional demand and new jobs in local market-oriented services. Spillovers of higher profits earned abroad that are shifted to the company headquarters may support investment in research and development. Also the home country's budget may benefit if the increased income of capital owners is taxed.

Not only home but also host countries of relocation experience both gains and losses. Host countries clearly benefit from increased economic activity and employment, which often has its price though. The host country of the investment provides the environment under which high earnings on capital can be generated. Governments may sacrifice short-term tax revenues in the hope of long-term gains. The benefits of FDI are often confined to the wages paid and the demand generated by locally sourced suppliers. Further spillovers can be expected from knowledge transfer or from the improved availability of non-tradable goods and services (such as banking through foreign bank subsidiaries). The price for the FDI capital is paid in the form of repatriated earnings to the investor. Another part of the earnings will take the form of reinvestment, thus financing further relocation and modernization.

The whole scheme of relocation functions under the condition that capital is more mobile than labour. Social and administrative barriers are more serious vis-à-vis migrating people than migrating capital. Unequal liberalization of the movement of the two production factors is just one distinguishing feature. Labour is less mobile than capital also because it can be relatively cheap only in its low-productivity/low-price environment. Low cost of living and generally lower living standards allow to keep wages down in less developed countries. The income gap at purchasing power parity is smaller than at the nominal exchange rate, which motivates people to stay where they are. Capital imports and faster increase of productivity can generate a higher rate of economic growth, which works towards narrowing the gap between developed and emerging countries such as between the EU-15 and the NMS. But the gap is large and therefore lasting, giving room for further relocation.

The main potential gains and losses of relocation for the home and host countries may be summarized as follows:

Losses for the home country:

- loss of jobs which are transferred abroad, increasing unemployment;
- negative spillover effects to local suppliers;
- lower tax revenues, higher social expenditures;
- increasing imports;
- lower investments.

Benefits for the home country:

- cost-saving increases profits and related tax revenues;
- consumers can benefit from lower prices;
- income repatriation from foreign subsidiaries;
- higher competitiveness and faster economic growth;
- part of the labour can be re-employed at higher wages in higher-qualification jobs;
- increasing business activity in transport, telecoms, logistics;
- increased exports.

Impact on the host country:

- increasing economic activity through subsidiary operations and linkages to local suppliers;
- additional jobs and higher wages, upgrading skills of the workforce;
- transfer of knowledge, upgrading skills;
- additional tax revenues, but curtailed by investment subsidies;
- re-invested income generates further economic growth;
- imports and exports increase;
- additional need for transport and telecoms infrastructure;
- income transfer back to the home country adds to the current account deficit.

Measuring the impact of relocation and services offshoring cannot rely on systematic statistics. There are numerous estimations of the extent of relocation, however, almost all of them have their methodological shortcomings. FDI flows, trade in parts and components, the share of imported intermediate inputs in exports, and intra-firm trade are all used as proxies for the extent of offshoring and outsourcing. Campa and Goldberg (1997) showed that in the manufacturing industry of the USA, Canada and the United Kingdom, the share of imported inputs was on the increase in the period between 1974 and 1993. Yeats (1998), examining parts and components within machinery trade (SITC 7), finds that trade flows in these commodities constitute 30% of total trade flows and that growth in their trade is faster than that of total trade. Ng and Yeats (1999) and

Kaminski and Ng (2001) point to the increasing share of trade in machinery parts and components in Southeast Asia and in Central and East Central Europe, respectively. Hummels et al. (1998) use the notion of vertical specialization and input-output tables of nine OECD countries in order to show that production fragmentation is more significant in smaller sized countries than for larger ones. Moreover, vertical specialization increases the most in those sectors (machinery industry, chemicals) which have the highest export growth rates. While the results differ on the extent and size of international outsourcing (including relocation), all agree on the fact that these processes grew dynamically starting from the third quarter of the last century and accelerated in the 1990s.

Econometric studies on the labour market impact of outsourcing concentrate on the changes in the demand and wages of low-skilled labour in certain Western European countries. Geishecker (2002) analysed German sectoral data and found that outsourcing was responsible for 19-24% of the decrease in the demand for low-skilled jobs. Egger and Egger (2003) examined the job impacts of outsourcing from Austria to the NMS and found that it accounted for around one quarter of the change in relative employment in favour of highly skilled labour. Marin (2004) analyses German and Austrian company level data and shows that jobs in NMS do not compete with jobs in the two 'old' EU countries. However, she confirms an increasing transfer of highly skilled jobs from the two aforementioned countries to the NMS. Egger and Egger (2005) take into account inter-sectoral spillovers, because indirect effects of outsourcing on the labour demand may be substantial. They show that earlier studies may have underestimated the labour market impact of outsourcing. Geishecker (2005) finds that outsourcing to the NMS explains to a considerable extent the decline in the relative demand for manual workers in Germany. In general, papers dealing with outsourcing have only limited relevance for the relocation problem; among the above studies only Marin (2004) relies on firm data and deals with relocations in a strict sense.

Most of the recent knowledge focuses on the size and impact of IT offshoring. The McKinsey Global Institute (Farell, 2004; Craig and Willmott, 2005) found that 1 USD offshoring of IT jobs from the USA to India generated 1.13 USD revenue for the USA, and this additional income generates more and better paid jobs than those which have been lost. The same amount of offshoring from Germany generated only 0.8 USD. The lower German revenues are explained by higher costs of offshoring due to language and cultural differences. Also the target of German offshoring was different: in 59% of the cases it was the Central and Eastern Europe countries (CEECs). The wage difference here is smaller than between the US and India, although telecom costs and taxes are lower. Gains to other economic sectors are also more limited as Germany does not have much IT hardware production and cannot increase high-tech exports to CEECs at the same rate as the US does to India. This source also finds that labour market inflexibility in Germany does not allow as much re-employment as in the US.

The related literature also shows that relocation and offshoring have their limits. While companies can produce more cheaply, they also face additional costs when moving abroad. The costs of communication as well as the risks attached to relocation may be higher than the labour and other factor cost difference between the host and the home country. Further costs are related to transport and logistics, increasing production time, etc. Just-in-time deliveries and fast reaction to changes in consumer demand are not possible from a long distance. In the case of most industrial finished goods, the share of labour in total costs amounts to 7-15%, thus it may not be the most important cost item. Cutting such costs to a third by importing from a low-wage country may increase the cost of logistics by even more. Also agglomeration advantages are lost when the production process is spread over long distances. There are numerous cases in which companies decide to produce close to the place where their products are in demand even if labour costs are high (Ritter and Sternfels, 2004). Offshore production may require lead times of about five to six months – too much for the fashion industry, but less of a problem for the mass-scale clothing industry.

Transferring business or IT processes to low-cost locations frequently fails to create the expected value (Bloch and Jans, 2005). Their survey comes to the conclusion that 30% of the offshoring cases failed and 20% have been only partially successful. The success rate is thus below that of investment projects undertaken in the usual environment of the company operations. Failures happen because managers underestimate or misunderstand the risks involved.

As pointed out above, the effects of relocation can only partially be estimated based on trade and FDI data. We therefore take a different approach. We try to prove the existence of at least some of the impacts on the home and host country in the European context by relying on various statistical sources: on FDI statistics and the balance of payments concerning capital flows and FDI income flows; on data on foreign investment enterprises in order to show the extent of job creation in host economies; finally, we also refer to company-related press reports to look at the employment impact of relocation.

New EU member states as targets of FDI

In this section, relocation is presented as a form of FDI in the new EU member states (NMS). In the first stage of FDI inflows into the NMS in the early 1990s, market-seeking FDI prevailed. The newly opened markets of the Central and East European region were supplied by TNCs not only from foreign production sites but also locally, by acquiring or building local production capacities. FDI partially substituted trade. In the second half of the 1990s more and more efficiency-seeking FDI emerged. Low-wage countries of the region were used as production platforms to supply the markets of high-cost countries. FDI took the form of relocation and generated trade. At the same time market-seeking FDI

expanded in financial and other business services and later also in utilities. More recently, efficiency-seeking FDI appeared in market services. Local market-oriented FDI has hit its limits and can grow only in line with the development of local demand. But the scope for hosting more relocation-type FDI is wide. It can grow in quantitative terms and also via upgrading. Manufacturing FDI develops from simple efficiency-seeking to more complex network-type integrated production.

FDI data prove the attractiveness of the NMS for FDI. In the eight countries the stock of inward FDI doubled between 2001 and 2004, reaching EUR 227.7 billion. The inward stock per GDP is 36.5%, considerably more than the world average. But there is no upward trend in the amount of annual FDI inflows. These were highest in 1999-2002, plummeted in 2003 and recovered only partially in 2004. About 80% of this stock is owned by EU-15 investors, which indicates a high level of corporate integration and relocation between the old and new member states.

Why are the NMS the target of relocation? Their relatively cheap and skilled labour, geographic and cultural proximity, and the agglomeration effect of already present FDI act as location advantages. The role of FDI incentives is limited, in particular concerning relocation decisions from the EU-15. But when choosing a location within the NMS region, the role of incentives may play a bigger role. There is a competition between the Czech Republic, Hungary, Poland and Slovakia for various large investment projects, but finally all of them receive one or the other project.

Gains of the NMS appear both in terms of reinvested earnings and in terms of job gains. In countries which started receiving FDI already in the early 1990s – Hungary, Estonia and the Czech Republic – reinvested earnings comprise about 60% of the FDI inflows of recent years (for details see Hunya, 2005). This means that new equity is less than the amount of reinvestment. Thus FDI is to a lesser extent due to the direct transfer of more and more capital into the region; it takes place primarily through the expansion of existing ventures. Relocation is mostly associated with new ventures, but it can also be financed from the retained profits of the subsidiary.

Gains of the capital-exporting countries appear in the form of repatriated profits. In Hungary the income on the FDI equity stock has been about 10% annually since the year 2000. But this share underestimates the return on FDI capital as the amount of the capital stock is not depreciated over time. Should depreciation be applied, the return ratio could be several times higher. Out of this FDI-related income, 42-50% was repatriated over the past three years.

As to the labour market effects, FDI in NMS can destroy jobs when it enforces the restructuring of former state-owned companies, while it can also create jobs when it goes

into new capacities. An increasing part of job creation takes place in vertically integrated export-oriented projects, part of which are the result of capacity relocations. The overall job effect of restructuring and FDI may be neutral. In the manufacturing sector, most of the NMS lost jobs in the period 1998-2001. But this loss was confined to the domestically owned companies, whereas job creation took place in the foreign affiliates (Hunya and Geishecker, 2005). The increase of foreign penetration speeded up structural change and a shift towards higher-skill jobs. While skills and also wages have increased due to foreign penetration, they still remain lower than in EU-15 countries.

New member states benefit from company restructuring

FDI statistics are not able to grasp the whole issue of relocation and offshore outsourcing: first, because FDI-related data have nothing to do with outsourcing to independent companies and, second, because one can hardly identify the FDI in vertically integrated, export-oriented subsidiaries. The sources of information are thus restricted to various media reports (Kirkegaard, 2005). The European Restructuring Monitor (EMCC, 2005) works with a large base of correspondents from various countries who read the press regularly and register company reports on downsizing, expansion and relocation. The restructuring cases reported in EMCC (2005) have moved at least 100 jobs and refer to announced plans to be realized in the coming one to two years, sometimes over an even

Table 1

Number and employment impact of reported corporate restructuring cases in 2005

	Period	Number of job creation cases	Number of jobs created	Number of job loss cases	Number of jobs lost	Net job effect
Czech Republic	01.01.2005 – 17.08. 2005	61	26000	20	11800	14200
Hungary	01.04.2005 – 10. 08. 2005	19	6100	10	5300	800
Poland	01.01.2005 – 10.08.2005	30	51500	22	16400	35100
Slovakia	01.01.2005 – 18.08.2005	41	17000	8	2200	14800
Bulgaria	01.05.2005 – 11.08.2005	17	5700	0	0	5700
Romania	15.03.2005 – 21.07.2005	28	18000	34	26000	-8000
Austria	01.01.2004 – 14.06.2005	7	1600	24	5400	-3800
Germany	01.01.2005 – 10.08.2005	27	18800	102	53000	-34200

Source: EMCC (2005).

longer period of time. They include not only cases with an international impact but also purely domestic restructuring cases. In the NMS, most of the job creation takes place in foreign affiliates and most of the job losses are related to the restructuring of state-owned enterprises such as railways and mines. Among the registered motivations of corporate restructuring, 'relocation' hardly appears. Downsizing or enlarging business is usually interpreted as a reaction to demand. Relocation is thus hidden but cannot be unrelated to the number of restructuring cases.

The database registers in the *Czech Republic*, in the year 2005 up to mid-August, 61 restructuring cases which created 26 thousand new jobs and 18 downsizing cases with a job loss of 12 thousand. Job creation took place due to new company setups and the expansion of businesses, predominantly in manufacturing. Non-manufacturing activities hardly show up in this list. While it is obvious that business expansions in the electronics and car industries have the purpose to increase exports, they are not announced as offshoring operations. In the category of downsizing, the state railways and the electricity distribution company are the most significant. There are only few restructuring cases in the manufacturing sector, except for the food and textiles industries, which significantly reduced their workforce. The Czech Republic benefits from job expansion by foreign investment mainly in the medium-high-technology industries, while it has registered some shrinking companies in lower-tech sectors.

For *Hungary*, information is available only for the period April to August 2005. In this short period there were 19 cases of job creation with 6100 newly announced jobs by foreign investors. The most significant ventures affect the chemical, motor and electronics industries as well as IT services. There are 10 cases of job reduction involving 5300 workplaces. Streamlining affects mainly telephony, food processing and also some activities linked to universities. One offshoring case was recorded: a major telephone equipment producer announced to transfer manufacturing from Hungary to Romania.

The restructuring cases reported for *Poland* cover a much wider range of activities than in the case of the Czech Republic or Hungary. They include a large share of service and construction investments, sectors which seem to be underreported for the other two countries. There are 130 expansion cases in the first seven and a half months of 2005 with a pledged job creation of 51,500. In manufacturing, the motor industry, electronics, and the electrical machinery industry are gaining the most new jobs. Offshoring has not been reported in any of these cases, 'business expansion' being the main reason for restructuring. As for downsizing, 22 cases were reported with 16,000 lost jobs. The largest of these are due to bank mergers and restructuring in mining, railways and the chemical industry.

Slovakia has become an important development site for the motor industry recently. The 41 cases and 17 thousand new jobs registered as expansions include, among others, a huge project of the South Korean car manufacturer Kia, which should be operational in 2007. There is one case of offshoring: a medical appliance company moved production from Denmark to Slovakia. Job losses were recorded in only 8 cases which affect 2200 jobs.

Comparing the above four larger NMS, Hungary is the least frequented location for new job creation and Poland the largest. But taking the size of the countries into consideration, Slovakia and the Czech Republic are ahead of Poland. As for creating manufacturing jobs, the Czech Republic is the preferred location to Poland. All the countries are net job gainers: the number of announced jobs created exceeded that of job losses by eight times in Slovakia, three times in Poland, two times in the Czech Republic, but by much less in Hungary. Offshoring to or from these countries is hardly reported. This may be a problem of the database, which does not look at this issue in detail. We shall show the results of a similar survey but with more careful identification of relocations in the next section.

Among the candidate countries, *Romania* has records for the period between 15 March and 21 July 2005. As major restructuring projects have been announced in the mining and the steel industries as well as in banks, prospective job losses surpass the number of jobs to be created. In the steel industry, streamlining follows the privatization to Mittal Steel, while in the mining and banking sectors it is undertaken before privatization. The jobs to be created are also numerous: 18,000 in 28 companies. The most significant case is the long-term development plan of the car-maker Dacia-Renault. For *Bulgaria*, records are available for the period May to August 2005 and include only job creation cases. The 17 projects are due to create 5700 new jobs. No instance of downsizing has been recorded, confirming that restructuring of the former state-owned industries is more advanced here than in Romania.

Among the old EU members, *Austria* recorded very few employment changes. Since the beginning of 2004 only seven projects have been announced with 1600 new jobs, while 24 closures have been reported with 4500 lost jobs. Offshoring was a reason for the loss of 500 jobs in two cases. One producer moved to the Czech Republic, another resettles to the Middle East, to China and to Germany. The marginal size of these projects explains why the relocation debate is not important in Austria. Much higher are the job losses in *Germany*: 53 thousand jobs in 27 companies are to be cut according to the projects announced in 2005. The largest cuts occur in the banking sector, in household appliances and in metal working. Most of the cases are due to business-related restructuring and cost reduction. Offshoring is mentioned only in ten cases. The targets are most often Poland, the Czech Republic and China. Only 27 companies plan to increase their workforce, altogether by 19 thousand. One third of these are in production, the rest in services. The

restructuring database thus confirms that the low-technology industries and local market-oriented services in Germany are hit particularly hard by downsizing restructuring. But the reason for these job losses is related to shrinking local demand rather than to increasing imports and relocation.

The restructuring database presented above (EMCC, 2005) identified substantial job creation in the NMS-8 and job losses in Germany. But based on the available information, one cannot establish a link between the two processes. Most of the job creation in the NMS was due to foreign investors, but very few investing companies admitted that they would cut employment elsewhere. This may in part be the problem of insufficiently accurate reading of the press reports. In the following we try to correct for this problem at least in the case of one country.

Relocation to and from Hungary – company-level evidence

Source and content of the data

The database on declared relocations to and from Hungary is based on information collected from various Hungarian newspapers, first of all from the economic daily *Világgazdaság*, in the period 1 July 2003 to 7 September 2005. This survey is more detailed and, it is hoped, more accurate than previous attempts.¹ Declared relocation means that either the piece of news says explicitly that there is a transfer of production capacities from another country, or an expansion in one affiliate parallel to a reduction in another, or an expansion in one affiliate while other affiliates' capacities do not change. (This definition of relocation is in line with Veugelers, 2005.) Capacity changes go hand in hand with employment changes. Only foreign investors' relocation projects have been included, not those by Hungarian companies. Announced investments in Hungary with no additional information about foreign sites were not included in the database.

For the 26-month period, information on altogether 299 foreign investment cases was found. Out of these, 65 projects, more than one fifth, were identified as clear-cut cases of relocation, 58 to Hungary and 7 from Hungary. 16 of them are new greenfield projects, the rest mainly expansions of already established capacities. The characteristics of these projects will be analysed in the following sections.

The information available for most of the relocation cases include: the date of the announcement (or of the newspaper article), the name and nationality of the investing or disinvesting company, the sector of investment or disinvestment, the location in Hungary,

¹ The UNCTAD (2003) survey for the preceding period January 2002 to June 2003 found ten cases of large relocations but missed a number of smaller cases. Compared to the EMCC database, which found only 3 relocation cases in the first eight months of 2005, we registered 15.

the direction of relocation (from or to Hungary), a detailed description of the activity carried out in the (future) company, the country of the other foreign location involved, and the labour market impact (meaning the envisaged number of jobs created or lost due to the investment, mostly spread about several years). In case any of the information was missing from the press report, we looked for it in other sources such as companies' internet sites or other newspaper articles.

Country of origin and of destination

Where do relocations to Hungary come from? If we add up the data², the overwhelming majority of relocations come from the European Union-15 (Table 2). In particular Germany and Austria stand out with high numbers of relocations to Hungary. One may assume that when the Western European country of origin is not specified, it is often Germany or Austria that is involved. Furthermore, France, the Netherlands and Great Britain register relatively high numbers of relocations to Hungary. Countries outside Europe are

Table 2

Relocations to and from Hungary: country of origin and destination

<i>Where from?</i>	<i>Number of cases</i>	<i>Where to?</i>	<i>Number of cases</i>
Germany	15	Romania	3
Austria	8	Austria	1
Western Europe, n.e.c.	7	Latvia	1
France	5	Poland	1
The Netherlands	5	Slovakia	1
Great Britain	4	Ukraine	1
Denmark	2	<i>Altogether</i>	8
Portugal	2		
Spain	2		
Sweden	2		
USA	2		
Belgium	1		
China	1		
Czech Republic	1		
Italy	1		
Ireland	1		
Slovakia	1		
Switzerland	1		
<i>Altogether</i>	61		

² There may be more than one foreign site involved in one case, but not all projects report the country of origin.

under-represented, which means that relocation is a geographically limited undertaking. While the owners frequently are from outside Europe, what they relocate is a business activity within Europe, most probably producing for the European market.

There are two relocations from new member states: the Czech Republic and Slovakia. In these instances, investors from a third country concentrate regional production capacities to the already existing Hungarian site. One interesting case is a relocation from China, which – more justly – may be called a re-relocation (see Box 1 on ‘Special relocation cases’ below).

Where do firms relocate from Hungary? The countries of destination are usually lower-cost countries further to the East. Romania stands out with three cases, and further four such countries are represented with one case each. The main driving force of the foreign investor is ‘rationalization’ and concentration of production for a larger regional market to one production site. Production concentration may be the reason for having Austria on this list.³

It is remarkable to find China, the most frequently named destination of relocation world-wide, with no case present on the ‘relocation from Hungary’ side of the table. Data for an earlier period, based on UNCTAD (2003), still found three cases of relocation to China and one to India, in addition to one targeting Ukraine. As we shall point out below, those had been global-producer electronics firms which streamlined and concentrated production due the world-wide crisis of the industry in 2002. More recently, Hungary is involved almost exclusively in intra-European relocations.

Nationality of investors

According to the nationality of investors,⁴ the USA and Germany stand out. US multinationals figure relatively highly both in relocation to and from Hungary. Comparing Tables 2 and 3 reveals that they mainly concentrate and rationalize their European production: in 13 cases when relocating to Hungary and in three cases when relocating from Hungary, other European sites are named. Only in two relocations to Hungary by US multinationals are US sites affected in addition to European ones. In the case of the six Japanese relocations to Hungary, in five instances only European locations are affected (no information is provided concerning the location of origin). On the basis of

³ Kraft Foods Inc. (USA) closed down its factory in Hungary in January 2004, and transferred its production to its Austrian and Slovakian plants.

⁴ In a few cases, after mergers, there is a ‘double’ nationality of the investor (e.g. Renault/Nissan, GlaxoSmithKline Biologicals or Sanofi/Aventis). In other cases, when the investment is realized through a foreign affiliate, the nationality of the parent company is taken into account.

available data, it is not possible to judge whether these relocations to Hungary result in higher global capacities or only mean a redistribution of existing capacities.

German multinationals rank second after the US, and they mostly relocate from their home country to Hungary. Other EU-15 investors, particularly Austrian, British, Swiss and French, show also relatively high numbers of relocation cases. This list is similar to that of the main direct investors. But the US investors relocate more often than their share in FDI would suggest – they behave more footloose when they move production from one host country to another. Also in the case of the European firms, there is indication that relocation from the home country of the TNC is relatively less frequent than moving foreign subsidiaries to a third country.

Table 3

Nationality of relocating foreign companies

<i>To Hungary</i>	<i>Number of cases</i>	<i>From Hungary</i>	<i>Number of cases</i>
USA	15	USA	3
Germany	14	Germany	2
Austria	6	Austria	1
Japan	6	Italy	1
Great Britain	4	<i>Altogether</i>	7
Switzerland	4		
France	3		
Sweden	2		
Denmark	2		
Canada	1		
Italy	1		
Norway	1		
The Netherlands	1		
<i>Altogether</i>	60		

Main industries affected by relocation

Similarly to the global relocation and restructuring processes, the electronics sector is among the most important ones affected by relocations in Hungary with 19% of the cases. This industry stands out also if compared to other NMS: Hungary has a clear-cut specialization in producing electronic products, parts and components, as well as related services (see e.g. Barry and Curran, 2004; Sachwald, 2004; Sass, 2005). Relocations in the electronics industry originate from other European countries, in particular Germany and Austria. They cover a large variety of products, such as special cables, semiconductors, and assembling of ICT appliances.

It is mainly US electronics companies which relocate to Hungary (six cases). Other countries with more than one case are Germany (three), Austria (two) and Japan (two, one jointly with the US). In our database there is only one outward relocation from Hungary to Romania (see Box 1 on ‘Special relocation cases’ below); but in the earlier survey by UNCTAD there is evidence of four cases in 2002-2003. Multinationals that relocated production from Hungary during the ICT crisis did not close down their Hungarian sites but either transferred other activities to Hungary (Philips) or maintained their less labour-intensive capacities there and even relocated some production-related services there (IBM).

The other sector most affected by relocation is the automotive industry. This corresponds to global and European trends and is similar to the situation in other NMS. In the case of Hungary, the main activity is the production of automotive parts and components. There are cases of concentrating European production to one site (Opel), and of relocating the production of specific car parts from other European locations. According to the nationality of investors, it is again US and German investors who stand out, however, the four remaining cases involve four different countries (Japan, Norway, Sweden and Switzerland).

Table 4

Sectors of relocations to and from Hungary

<i>To Hungary</i>	<i>Number of cases</i>	<i>From Hungary</i>	<i>Number of cases</i>
Electronics	12	Footwear, textiles, clothing	2
Automotive	12	Automotive	1
Business and related services	9	Electronics	1
Footwear, textiles, clothing	8	Chemical products	
Chemical products		(incl. pharmaceuticals and plastics)	1
(incl. pharmaceuticals and plastics)	6	Food	1
Household appliances	4	Machinery (n.e.c)	1
Food	3	<i>Altogether</i>	7
Machinery (n.e.c.)	2		
Metallurgy	1		
Furniture	1		
Precision instruments	1		
Toys	1		
Water cleaning technologies			
and systems	1		
<i>Altogether</i>	62		

The automotive industry is strongly interlinked with electronics when electronic automotive parts are produced. The relocation case with the biggest labour market impact in the sample is of that type: the German Robert Bosch GmbH has been gradually relocating its German and French capacities to three Hungarian sites, creating 2-2.5 thousand jobs.

Another electronics & automotive case is that of Clarion: the Japanese multinational produces car-radios in its new plant in Hungary, the production of which was relocated from France.

In the manufacturing of textiles, clothing and footwear, relocation to Hungary is still more important (eight cases) than from Hungary (two cases). This happens despite the competition from China and the increase in local labour costs. But relocations to Hungary involve small projects, and many cases belong to the higher value-added activities of these industries. Luxury clothing (e.g. underwear by the Swiss-German Felina) or luxury footwear (e.g. French Heschung) are produced in the new Hungarian plants. In other cases, more complicated, higher value-added activities are transferred (e.g. computer-aided cutting by the German Mustang). It is the more simple activities that are relocated from Hungary, in both cases to neighbouring Romania. German relocations to Hungary in this sector are the most numerous, and Italian companies are also involved (one from Hungary to Romania and one from Slovakia to Hungary – the latter one indicates a concentration of capacities).

Cases of chemical products in a wide sense include two pharmaceutical investments, two plastic industry cases, and the production of paints and tires with one case each. Mainly German companies are involved in these relocations. As far as the relocation from Hungary is concerned, it is the transfer of pharmaceutical production to Poland.

In the production of household appliances, the most important cases are related to the relocation of refrigerator and vacuum-cleaner production, by the Swedish Electrolux, from Italy, Germany, Spain and Sweden to Hungary. This had the largest job impact in the period analysed. Another important relocation in this sector is that of the Danish Alto, which relocated its vacuum-cleaner production from Germany to Hungary.

Besides manufacturing, nine of the relocations are in services. Export-oriented business services are a new target of FDI in Hungary. They cover a wide variety of activities, including the establishment of regional headquarters (two cases), financial services (two), administrative services (one), call centres (one), accounting services (two), logistics and warehousing (one), etc., in the majority of cases more than one activity per case. Large projects dominate, with a significant job-creating impact. Big multinationals with regional headquarters or European centres (of certain activities) transferred to Hungary include the US companies GE Capital, EDS and IBM or the British Diageo and Avis.

Job impact of relocation

The database permits to make a rough estimate of jobs created and destroyed over a time span not precisely defined. Only 44 of the reported cases mention the number of jobs involved (Table 5). The net job creation of these relocations is at least 7000 jobs: more

than 8200 created and 1200 lost in Hungary. This balance is much more positive than reported by the UNCTAD for the year 2002 and the first half of 2003. In that period a net job loss was recorded: only 2000 new jobs were established against 5400 lost. This was mainly due to the transfer of IBM production of hard disc drives to China (loss of 3700 jobs) and the transfer of the X-box production by Flextronics to China (loss of 1000 jobs). Similarly large job losses have not occurred since mid-2003. The biggest two in our database are found in the electronics sector (Artesyn to Romania, with 370 jobs) and in the food sector (Kraft Foods to Austria and the Czech Republic, 320 jobs). In the period covered by the EMCC survey, the number of jobs created was in the range of 1900-2100, and that of jobs lost was 370.

In most cases the database contains only the number of jobs to be created in Hungary, not the jobs lost in the source country. When indicated, the number of jobs created is usually lower than the number of jobs lost in the country of origin. This indicates that productivity in the new subsidiaries can be higher than in the original location. Table 5 contains very rough estimations of the job effect by country. It is evident that first of all German jobs are transferred to Hungary: about three thousand in the period under survey. They represent the highest number of cases as well as the highest number of jobs created in Hungary as a result of relocation.

Table 5

Country of origin of jobs created through relocation to Hungary

<i>Country</i>	<i>Number of cases</i>	<i>Number of jobs created in Hungary</i>
Germany	12	3040
Western Europe, not specified	5	1715-1765
France	2	1280
Italy	1	600
USA	2	375-400
The Netherlands	4	300
Austria	6	259-279
Sweden	2	220
Denmark	2	170-220
Great-Britain	3	122
Spain	1	70
Portugal	1	50
Switzerland	2	45-50
Ireland	1	24
<i>Altogether</i>	<i>44</i>	<i>8270 - 8420</i>

The concentration of jobs relocated is relatively high in the case of France and Italy: two and one projects, respectively, result in considerable job losses in these countries. On the other hand, in the case of Austria, small-size relocations dominate. The relatively large

number of job transfers from non-specified Western Europe induces one to handle these results with caution.

Table 6

Top job-creating sectors

	<i>Sector</i>	<i>No. of projects</i>	<i>No. of jobs, approximately</i>
1.	Electronics	7	3100
2.	Business and other services	8	2200
3.	Household appliances	3	870
4.	Automotive	7	600
5.	Machinery	2	400
1-5	<i>Altogether</i>	27	7170

Only 27 cases report both the sector and the number of jobs but these cover more than 85% of the estimated job creation. The largest job-creating projects can be found in the electronics sector (Table 6). The automotive industry, which is in prominent position as to the number of projects, ranks only fourth concerning the number of jobs created. This confirms that the new automotive investments involve mainly small suppliers and not large assembly plants. Services create about 30% of the relocated jobs, related to the labour-intensive activities of the service centres quoted above.

Box 1

Special relocation cases

The following cases draw attention to the wide variety of motivations and strategies of relocation. Some companies are on the move, they relocate when production costs increase (case 1). They may even learn from own mistakes (case 2). Some companies continuously change production structures and frequently move jobs between countries in order to maintain their competitiveness (case 3). Others stick to their chosen site and upgrade the products to keep up with rising labour costs and changing demand (case 4). Lasting presence can be built up in the course of subsequent investments (case 5).

Case 1: *Extremely footloose*. The US company Artesyn relocated, in 2003, its production of power supply units for telecommunication equipments from Kindberg, Austria to Tatabánya, Hungary, to its already existing plant. The transfer of production equipment was finished by March 2003. In 2005 the company announced that the plant would be closed down and the production transferred to Romania to its contract partner, the Canadian Celestica. According to the CEO, the board of directors of the parent company decided in favour of the relocation in spite of the fact that even in 2005 they invested several millions of euros in the Hungarian plant. The reasons for the relocation are – according to the CEO – that purchaser demand has diversified to a great extent. Moreover, because many of the purchasers of the company's products relocated their production to India, Brazil and China, they prefer their suppliers to follow them there. (However, relocating from Hungary to Romania will not considerably reduce the distance to the above purchasers.) Artesyn has plants in Hungary (up until now) and China. It will lay off 370 workers.

Case 2: *Re-relocation*. The Austrian 'Robust Plastik Assembling' assembled cordless phones for the French company Sagem in Hungary. This activity was moved to China, but after a few months it was relocated back to Hungary. The reasons for the return were, first, proximity to the market and, second, that the Hungarian plant provided higher quality.

Case 3: *Flying geese-type upgrading*. Philips has three production sites in Hungary. In all sites, production started out with lower value-added processes. In Székesfehérvár, assembling of video recording apparatus and combined TV-video were the main products at the time when the investment was made. Later the product mix of the company was upgraded to produce DVD-recorders and players, large-screen TV-sets (relocated from France), and home cinema systems. In Szombathely, the production of traditional computer monitors has been replaced by the production of LCD monitors. In Győr, assembling of car-radios was supplemented by the production of parts and components of DVD-recorders. The more labour-intensive activities were either outsourced locally or internationally, or relocated from Hungary to neighbouring countries with lower labour costs or to China.

Case 4: *Upgrading with product development and new plants*. Samsung started its Hungarian investment in 1990; it invested around EUR 100 million and currently employs around 3000 persons. It has three plants in Hungary: in Jászfényszaru, Göd and Szigetszentmiklós. The Jászfényszaru plant is the biggest TV-set factory in Europe. Production of traditional TV sets was gradually supplemented by the production of projector TV-sets, LCD TV-sets, and other higher-technology products. The production of the Samsung factory in England was relocated to Jászfényszaru in 1998. In 2000, the plant in Szigetszentmiklós was opened, which produces electronic parts and components. In 2003, other Western European plants were closed down and their cathode-ray tube production was relocated to Göd. Samsung plans capacity extensions in the near future in all three plants. Four years ago, the company started to build up a local R&D capacity in Hungary, which at present employs 30 engineers; its main activity is to adapt the products to the European market.

Case 5: *Gradual business services relocation*. EDS (Electronic Data Systems), the US multinational, opened its regional headquarters in Hungary in 2003, which involved the relocation of certain activities from Western Europe and the US. The Request Management Centre is among the three biggest EDS centres in Europe. In 2005, they extended the existing capacities, and relocated other business service activities to Budapest. At present they employ 650 persons.

Conclusions for the European debate about relocation

Relocation is not a new phenomenon, but it has accelerated in a globalized world economy with intensified competition. In these new circumstances, EU enlargement has offered a unique opportunity for companies operating in Western Europe to keep up their level of international and European competitiveness without moving out considerably from their cultural and business environment. On the other hand, the new member states have been provided with an opportunity to become engaged in international production networks, receiving an additional impetus to economic growth.

We have found evidence for the existence of relocation from the EU-15 to the NMS. The number of cases in Hungary amounts to one fifth of all FDI projects registered between

mid-2003 and August 2005. But the number of jobs transferred is fairly modest. Other NMS, such as the Czech Republic and Poland, may be more intensively involved in relocation than Hungary. The main home country of relocated jobs is Germany. Thus, the problem of job losses may be country-specific rather than Europe-wide. Still, we saw indication that a much higher number of jobs is destroyed in Germany on account of recession-related downsizing of businesses rather than in the wake of direct relocation.

Relocation to and from the NMS has its geographic borders. It is mainly confined to Europe even if the owner of the TNC is from a different continent. Even when moving out from NMS locations, multinationals remain in the vicinity and seldom go to China. Not global but intra-regional competition drives these movements.

Our findings may be relevant to the current debate about the effects of relocation in Europe. According to one opinion, relocation destroys jobs and the generation of value-added. But others consider de-industrialization a necessary evil, since through relocation companies will be able to keep costs down and thus boost sales, which will ultimately benefit and stabilize their home operations (see Europactive.com, 21 April 2004). A recent workshop organized by DG Economic and Financial Affairs (European Commission, 2005) came to the conclusion that protection would be counter-productive. It suggested to decrease the regulatory burden, develop a knowledge-based economy and design sectoral policies while strengthening overall competitiveness. It is just a matter of thinking in European terms to come to the Commission's conclusion – that relocation to the NMS may enable companies to keep production within the EU that would otherwise have been transferred to Asia, and to maintain their competitiveness (European Commission, 2004). The existing wide gap in wages between the EU-15 and the NMS suggests that there is still considerable scope for further relocation in manufacturing and services offshoring to the new member states. As the example of Hungary confirms, the NMS represent an alternative to moving to China if the targeted market of the final products is in Europe.

We also draw attention to the one-sidedness of the European debate. While relocation-related job losses are not very numerous, they are sectorally and geographically concentrated and affect mainly those countries which already suffer from unemployment and competitiveness problems. The European debate does not look at capital incomes and possible job creation financed by repatriated earnings. Based on balance-of-payments data, we came to the conclusion that about 40-50% of FDI-related earnings is repatriated. The related political issue is not the size but the distribution of this income. Incomes are concentrated but, if spent, job creation can be more widely spread. Finally, we still lack sufficient investigations concerning the impact of relocation on the price level in order to assess the assumed benefit to consumers in high-income countries.

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