

UNIVERZITA KARLOVA V PRAZE
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Institut ekonomických studií

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**International business and financial relocation in
connection to CEE region**

Vypracoval: Bc. Robert KELLER

Konzultant: Prof. RNDr. Ing. František TURNOVEC, CSc.

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Prohlášení:

Prohlašuji, že jsem diplomovou práci vypracoval samostatně a použil pouze uvedené prameny a literaturu.

Declaration:

I do hereby declare that I have written this thesis independently and that I have used only the sources listed.

Prague, 16 May 2006

.....
Bc. Robert Keller

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Master thesis

International business and financial relocation in connection to CEE region

Student: Bc. Robert KELLER
Consultant: Prof. RNDr. Ing. František TURNOVEC, CSc.
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Goal: In many developed countries, international business and financial relocations are currently a very hot topic. Recently, the new enlargement of the European Union to Central and Eastern European countries, and the suppression of quotas on textile imports, especially from China, have resumed fears about international relocations, which are assumed causing both employment losses and deindustrialization of developed countries. The focus of this paper is to look on what has been the past development in this area. Is this phenomenon rightfully labeled as a job destructive with significant effect on national labor market? What are the most concerned sectors and which countries from CEE region seem to benefit the most? Basic methodology used to identify for relocation in home country is either foregone production or large downsizing in personnel related to specific production and simultaneously increase of either intra-firm trade or imports of the same type of good from host country. Foreign direct investment might be a good guideline for rough selection of potential sectors affected by relocation in home country and benefiting from it in host country.

Content:

1. Introduction
2. Economic background of relocation

3. Relocation in USA and western developed countries to China and India
4. Relocation in EU region
5. Conclusion

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Bc. Robert KELLER

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Prof. RNDr. Ing. František TURNOVEC, CSc.

Abstract

The focus of this master thesis is to introduce reader to the topic and range of international business and financial relocation to countries with lower cost of production, i.e. low-cost countries. It represents another step in globally organized activities with various effects on the host and home economy, especially in area of job creation or destruction. It focuses on the phenomenon progression in two main European economies, Germany and France in connection to mentioned low-cost countries, especially to Central and Eastern Europe region. On the other side it focuses on Czech Republic, which is the number one target of foreign direct investment (FDI) per capita among V4 countries, and thus potential destination for relocated activities, stressing primarily not only sector analysis of FDI but also of non-domestic sales.

Abstrakt

Cieľom diplomovej práce je oboznámiť čitateľa s problematikou a rozsahom medzinárodnej delokalizácie obchodných a finančných aktivít spoločností do krajín s nižšími výrobnými nákladmi, tzv. nízkonákladové krajiny. Ide o ďalší stupeň v organizácii aktivít na globálnej báze s rôznorodými dopadmi na hostiteľskú i domovskú ekonomiku, predovšetkým v oblasti tvorby, resp. zániku pracovných miest. Práca mapuje vývoj tohto fenoménu v dvoch hlavných európskych ekonomikách, v Nemecku a Francúzsku vo vzťahu k spomínaným nízkonákladovým krajinám, v danom prípade štátom strednej a východnej Európy. Na druhej strane sa zameriava na Českú republiku, ktorá je hlavným cieľom priamych zahraničných investícií (PZI) na obyvateľa z krajín V4, a teda ako potenciálnu destináciu delokalizovaných aktivít s dôrazom predovšetkým na sektorový rozbor jednak PZI, tak i tržieb z priameho vývozu.

Table of Contents

LIST OF TABLES	3
LIST OF FIGURES	3
1. INTRODUCTION	4
2. THEORETICAL BACKGROUND OF RELOCATION.....	7
2.1. The neo-classical approach	8
2.1.1. External and internal factors.....	8
2.1.2. "New economic geography".....	10
2.1.3. Summary	11
2.2. The behavioral approach	11
2.2.1. Key elements.....	13
2.2.2. Summary	15
2.3. Institutional approach.....	15
2.3.1. "Geography of enterprise"	16
3. MOTIVES AND FORCES BEHIND THE PHENOMENON	18
3.1. Relocation and offshore outsourcing.....	18
3.2. Companies' reorganization on global base	20
3.3. Companies' motivations	21
3.3.1. Wage differentials as primary factor.....	23
3.3.2. Other cost savings vs. additional costs	24
3.3.3. Growing market with excellent talent pools	26
3.3.4. Favorable business environment	28
3.3.5. Offshoring opportunities	30
3.4. Range of the phenomenon	31
3.4.1. Reference scenarios of relocation.....	32
3.4.2. Effects on employment and growth.....	33
3.4.2.1. Home economy	37
3.4.2.2. Host economy	40
3.4.3. Measures taken in industrialized countries	41
3.4.3.1. Legal framework within EU	42
4. GERMANY'S APPROACH TO CEE REGION	46

4.1. Trade and investment integration	46
4.2. New Member in the Global Division of Labor	47
4.2.1. Market seeking versus Cost advantage seeking	50
4.3. An exodus of jobs	53
5. RELOCATION IN FRENCH MANUFACTURING INDUSTRIES	56
5.1. Job losses to low as well as high wage countries	58
5.2. Large multinationals relocate more often	59
5.3. Sector issues	61
6. CZECH REPUBLIC	64
6.1. Past FDI development	64
6.1.1. Investment incentive program	65
6.1.2. Volume and time factor	67
6.1.3. Geographical breakdown	69
6.1.4. Sector attractivity	70
6.1.5. Non-domestic industry sales	72
6.1.6. Sector wage development	74
6.1.7. Foreign owned companies	74
6.1.7.1. The effects of foreign capital	75
7. CONCLUSION	78
REFERENCES	81
APPENDIX	85

List of Tables

Table 1: GDP figures of CEE countries and China.....	26
Table 2: Ranking of labor availability.....	27
Table 3: Comparison of business environment.....	29
Table 4: Relocation layoffs of more than 50 employees in USA (1Q2004)	36
Table 5: Germany's trade integration with CEE countries.....	46
Table 6: Low Wage Imports to Germany as a percentage of its GDP.....	46
Table 7: Germany's investment integration with CEE region.....	47
Table 8: German multinationals' outsourcing activity to CEE countries.....	51
Table 9: German multinationals' investment and outsourcing to CEE region by sector (1997-2000).....	52
Table 10: Germany's intra-firm trade in total trade with CEE (1996-2000).....	53
Table 11: German multinationals' job relocations to CEE (1997-2000).....	54
Table 12: Main destinations of French relocation.....	59
Table 13: Frequency of "large downsizing" and relocation by size of the group.....	60
Table 14: Frequency of "large downsizing" and relocation in independent firms and groups.....	61
Table 15: Relocation by industry and destination.....	62
Table 16: Main industries with a high frequency of relocation to low wage countries.....	63
Table 17: Dynamics of cumulated FDI per person during 1996 – 2005 period.....	69
Table 18: Geographical breakdown of FDI to Czech Republic.....	69
Table 19: Non-domestic industry sales.....	73
Table 20: Average nominal monthly wages in the industry sector.....	74

List of Figures

Figure 1: CEE countries vs. China's cost savings.....	22
Figure 2: Hourly wage by profession in USD.....	23
Figure 3: Cost savings for Western European companies.....	24
Figure 4: Potential cost savings by industry and migration possibilities.....	25
Figure 5: Offshoring opportunities across the organization.....	31
Figure 6: Value potential to US from \$1 of spend relocated to India.....	38
Figure 7: Value potential accrued from \$1 of spend relocated to India.....	40
Figure 8: Comparative advantage of Germany with CEE countries.....	49
Figure 9: Total FDI in V4 countries during 1995 – 2005 period.....	67
Figure 10: FDI per capita in V4 countries during 1995 – 2005 period.....	68
Figure 11: FDI sector attractiveness in Czech Republic.....	70
Figure 12: Number of foreign owned companies in Czech Republic.....	75
Figure 13: Foreign trade balance during 1993 – 2005 period.....	76

1. Introduction

Consumer electronics, footwear, and apparel blazed a path to low-cost countries several decades ago. Since then, the world has seen major changes in the composition of its production process. The environment has become much more sophisticated. Falling transportation and communication costs, coupled with rapid technological changes and logistics technology, information flows, management of supply chains, intensified competition, and economic liberalization have facilitated the process of global economic integration. Furthermore fragmentation of production process, rising weight of certain emerging countries in international trade and expansion strategy of multinationals are the main explanatory factors of growth in flows of international trade and investments. Among these flows, relocation/offshoring provokes particular anxiety.

Relocations simply constitute new manifestation of development of trade between industrialized and emerging countries. It is an economic phenomenon, which refers to an international transfer of productive activities from one country to another, as a result mainly of international cost difference and is in the centre of employment concerns in developed countries. Relocation is very controversial and affects every part of business from manufacturing through to design, software development, financial control, logistics management, customer support and sales. It has been praised as cost-effective, efficient, productive and strategic but also condemned as evil, money-grabbing, destructive, ruthless, exploiting the poor. If handled badly, business process outsourcing can damage corporate image, weaken a brand, unsettle customers, and result in lower quality of products and services. But when handled well, the results can be good enough to save a falling corporation.

As international business and financial relocation has recently become hot topic of discussions in various countries that are more or less involved in foreign trade with CEE region the aim of this paper is to look on what has been the past development in this area. Is this phenomenon rightfully labeled as a job

destructive with significant effect on national labor market? What are the most concerned sectors and which countries from CEE region seem to benefit the most? As there are no direct official data for relocation available, indirect way of analysis must have be used and adjusted to available data. Identification of relocation is crucial to obtain correct results. Overestimating or underestimating the problem is a significant threat and therefore results must be taken as such. Basic methodology used to identify for relocation in home country is either foregone production or large downsizing in personnel related to specific production and simultaneously increase of either intra-firm trade or imports of the same type of good from host country. Foreign direct investment might be a good guideline for rough selection of potential sectors affected by relocation in home country and benefiting from it in host country.

This paper is basically divided into 7 chapters, including introduction and conclusion. Chapter 2 gives theoretical notion of companies' incentives to move from one location to another, we can talk about "geography of enterprise". What are the push and pull factors and how different economic approaches (neo-classical, behavioral and institutional) see it. For this general overview I refer to Hayter (Hayter, 1997) and Krugman (Krugman, 1995) and Scott (Scott, 2000) and references there in. Chapter 3 is drawing us nearer to the core of the worldwide relocation phenomenon and identifying specific motivations for relocation to CEE region comparing various case studies and examples. Moreover it shows what the political attitude towards the relocation is and what legal framework has been implemented. Chapter 4, 5 and 6 are country oriented, Germany, France and Czech Republic respectively. In these chapters available macro and micro data are analyzed. Chapter 4 is dedicated to Germany as the country closest to CEE region and its trade and investment integration with this region. Whether new global division of labor is emerging due to relocation and what effect does it have on German labor market. This part is supported by German companies' survey carried out by University of Munich. Following chapter handles France, specifically its manufacturing industries, which data are available by French Statistical Office INSEE. Chapter identifies large downsizings in French companies as possible relocations and check for companies' characteristics which play its role while relocating. The

pattern of host countries for relocations is also recognized. Final chapter is trying to see the phenomenon from other side. If there are some signs of incoming relocations to Czech Republic in specific sectors and if there are potentially some positive effects for Czech economy in this way.

2. Theoretical background of relocation

Due to changes in markets, preferences in consumers, environmental regulations, technological progress etc. firms are constantly adjusting to new situations. But also internal changes in firms may lead to other locational preferences. Firm relocation is a particular form of locational adjustment of the firm. Locational adjustment usually involves the restructuring of activities that are spread out over multiple locations. To get insight in the relevance and scope of firm relocation I start with an overview of theories which shed light on firm relocation and the underlying causal factors. Location theory, has witnessed a proliferation of theories and approaches in the last two decades, none of which seems to dominate the field at present (Scott, 2000). Broadly speaking, following Hayter (Hayter, 1997) and Machlup (Machlup, 1967), a division in three types of location theories may be made: a neo-classical, a behavioral and an institutional approach. For a general overview of location theories I refer to Hayter (Hayter, 1997) and references therein. Here, I'm not dealing with location theories per se, but with relocation theories. Theories about firm relocation are rare. In general, they are treated as a special case of one of the location theories.

Firm relocation differs from firm location because it explicitly takes account of the fact that one location is substituted for another. The firm has a history, and this history is likely to have an influence on the locational outcome of the process. This locational outcome is therefore a conditional one. The specific nature of these conditional effects is important for any theory of firm relocation. Another way to look at this is to separate the relocation process into two sequential steps: first the decision to move, and second, conditional upon a move, the decision to relocate to another location. A similar distinction is between push and pull factors of migration. Location theory focuses on the optimal locational choice, which is about locational factors determining the attractiveness of a site for firm location, or pull factors. Relocation theory also takes into account the first step, the push out of the present location. In this section,

I will emphasize both elements of relocation. I follow the classification in three types of location theories given above.

2.1. The neo-classical approach

The neo-classical approach, which is derived from standard classical economic theory, focuses on cost-minimizing or profit-taking theories. General principles of the classical location theory, which goes back to Adam Smith, are given in Isard (Isard, 1956).

In Weber's approach (Weber, 1929); the transportation costs of industry inputs and outputs determine a least transportation-cost surface. Other location factors, such as labor or external economies, determine similar least-cost surfaces. By aggregating the cost surfaces of all location factors a total-cost surface is derived. The firm is able to make a profit in any location where total revenues exceed total costs. By subtracting the total cost surface from the revenue surface, the total area is divided into profitable and unprofitable areas. In this regard, the concept of the spatial margins to profitability for a firm may be defined (McDermott, 1973). These margins enclose the spatial area within which the firm is able to make a profit.

2.1.1. External and internal factors

In an equilibrium situation, the optimal location for the firm is fixed, and relocation is not necessary. However, both the firm and the environment may change over time, which may be denoted as firm internal and external factors. Factors external to the firm are, for instance, changing factor prices, or changing external effects (e. g. congestion). These will lead to a changing shape of the cost and revenue surfaces, and, hence, of the spatial margins to profitability of the firm. Firm internal factors may relate to expansion or to the changing character of the production process. This may result in a different compensation of factor inputs, and in turn to changing spatial margins to

profitability. Assuming that location costs and revenues change over time, it can be found that most existing firms do not occupy the "optimal" profit maximizing location. Nakosteen and Zimmer (Nakosteen and Zimmer, 1987) provide a theoretical framework in which firms continuously monitor their profits relative to a fixed target threshold. As long as the firm exceeds this profit rate (or in other words is within the margins to profitability) the firm will most likely stay at the present location and will not try to move to the "optimal" location, for three reasons:

- First, there may be significant relocation costs. Relocation costs may be direct costs of moving, as well as search and information costs of finding new markets, labor, suppliers and deliverers, etc. A move to another geographical market is to a certain extent similar to a start-up, with large investments, and uncertain revenues. However these types of indirect costs are generally disregarded in the simple neo-classical framework, with its emphasis of full information and rational behavior.

- Second, there may be a substantial amount of capital inertia (Auty, 1975). For instance, in many cases existing buildings and other equipment at the old location may already be written off, and still be operational at low costs. The firm is therefore able to make a profit at a sub-optimal location where a new firm would not be able to make a profit.

- Third, the cost or revenue elasticity of any of the location factors is in general low, which means that the cost and revenue surfaces are rather flat. In other words, locational choice is often not a decisive factor in determining profit or loss. The firm may choose between many sites that are almost equally profitable. Only when at another location the profits are much higher the firm may decide to relocate in spite of the fact that also at the present location they make a profit.

The other possible outcome of the monitoring may be that due to the changing shape of the cost and revenue surfaces the current location is no longer inside the spatial margins to profitability. Then adjustments are

necessary, otherwise the firm will fail. Besides other adjustments, spatial adjustments may be able to solve this problem. One of the most common forms of internal change of the firm is growth, which is often driven by process innovation and resulting economies of scale. Within the neo-classical framework of the spatial margins to profitability this means that the level of the cost surface is higher for small firms than for large firms in all locations, and these margins span a larger area for larger firms. Then the level of the cost surface for small firms will be higher than the revenue curve everywhere. Therefore, small firms cannot escape failure by relocating to another location, but must grow in order to remain profitable. Here, the firm faces a trade-off between on-site expansion (intra-site growth), relocation to another site, or setting up one or more new sites (inter-site growth). This distinction is similar to Krumme's (Krumme 1969a) division in three types of spatial adjustments. If the firm chooses to relocate, it is not driven by the traditional location factors, but by the need to adjust to internal dynamics. It is also possible that economies of scale can only be realized at particular locations (for instance urban areas with a large market) where at other locations (rural areas) this is not possible. The spatial adjustment process to firm growth in relation to the external environment is one of the key explanatory factors of firm relocation, which may be explained by the internal dynamics of the firm, a process that also fits in a neo-classical framework. Nevertheless, it has not received much attention in neo-classical location theory, with its focus on external location (pull) factors.

2.1.2. "New economic geography"

The spatial dimension has got renewed in mainstream economics since the beginning of 90's due to the work of Krugman c. s. on what is labeled as the "new economic geography" (Krugman, 1995). According to Neary *"the key contribution of the new economic geography is a framework in which standard building blocks of mainstream economics (especially rational decision making and simple general equilibrium models) are used to model the trade between dispersal and centripetal forces"* (Neary, 2001, pp. 536). Although mobility of economic activities is a crucial adjustment mechanism in these models to

explain agglomeration, Neary argues that the *“model has almost nothing to say about individual firms. Except for the fact that it incorporates increasing returns, the new economic geography has industrial organization underpinnings which are rudimentary. In particular, the assumption of free entry¹ allows almost no role for strategies interactions between firms. As a result while costs are fixed they are never sunk, so firms and industries are always free to move.”* (Neary, 2001, pp. 549 – 550). Because in the new economic geography model space is one-dimensional and firms are identical and infinitesimal these models have hardly anything to offer that is valuable for the explanation of the actual spatial behavior of firms. In this respect micro-economic models based on neo-classical ideas but extended with search behavior and taking into account uncertainty have more to offer.

2.1.3. Summary

Summing up, it can be concluded that neo-classical relocation theory not only focuses on location factors that are well covered in location theory, and could be denoted as locational pull factors, but also covers the factors triggering relocation, the push factors. The spatial margins to profitability discriminate between profitable and unprofitable locations, and are therefore useful in determining where a firm should locate (pull). However, as it turns out they usually span quite a large area within which firms may operate profitably. Changes in these boundaries are therefore often not sufficient in explaining why firms want to move (the push factors). In addition, it is necessary to look for internal processes within the firm, of which firm growth as a result of economies of scale is the most common one.

2.2. The behavioral approach

The simple neo-classical theory is useful as a benchmark that defines the “optimal” behavior of the firm in economic terms, under the assumptions of

¹ It means perfectly elastic supply of firms at all locations.

rationality and perfect information. However, it does not take into account the internal dynamics of firms in a context with imperfect information and uncertainty where profit maximizing behavior is not the ultimate goal. This motivated Simon (Simon, 1955 and 1957) and Cyert and March (Cyert and March, 1963) to develop a behavioral theory of the firm, which is based on more realistic notions of limited information and bounded rationality. Here, optimizing behavior is replaced by "satisficer" behavior. The behavioral approach was also successfully introduced in location theory, primarily by Pred (Pred, 1967 and 1969). Apart from the general points of criticism towards neo-classical theory, the application of these behavioral ideas in location theory was also motivated by the limited discriminating power of regional economic conditions in determining the optimal location of industries (Benoit, 1995), or, equivalently, spatial margins to profitability approach (Hayter, 1997). If regional economic conditions show limited variation this leaves many profitable sites to choose from. Then firm specific economic factors or non-economic factors may become of more importance for the explanation of firm relocation. The behavioral approach takes these factors explicitly into account.

The behavioral approach is especially geared towards firm relocation. I noted above that the key difference between location and relocation theory is that location theory is more concerned with locational pull factors, whereas relocation also deals with push-factors: the trigger to moving. This fits directly into a simplified description of the decision process of the firm. In fact, usually more than two phases are distinguished:

- The decision whether to move or not.
- The search for alternative locations.
- The evaluation of alternative locations.
- The choice of the new location.

The fifth stage might be added in which the implemented decision is assessed and evaluated. In view of emphasis on relocation theories, with equal interest in push and pull factors, this staging of the process has a similar bias towards the locational pull factors as neo-classical theory. The decision to move is considered to be one step, but following Krumme (Krumme, 1969a), relocation is one possible outcome of an adjustment to change process. Adjustment may also be sought in reorganization, or in other investment strategies. Moreover, spatial adjustments may be in the form of on-site change, in inter-site reorganization, and opening up of new sites. The decision to relocate is therefore the outcome of a complicated decision process that may involve more than one stage and feedbacks between the various stages. Other possible outcomes may be for instance on-site expansion, or the opening of a new subsidiary plant, without the closing down of the old site (Schmenner, 1982).

2.2.1. Key elements

Apart from the decision making process, which is made explicit, there are four key elements in behavioral location theory:

- The role of limited information.
- The ability to use information.
- Perception and mental maps.
- Uncertainty.

These elements were combined by Pred (Pred, 1967 and 1969) into the behavioral matrix, where firms are classified along two dimensions, namely the availability of information, and the ability to use information. Firms with high information levels and a large ability to use it come close to the classical "homo economicus", and may be expected to locate near optimal. Firms at the other

end of the scale know little and cannot utilize this information, and thus may be expected to locate at less profitable or unprofitable locations. Many of them will fail in the end. Despite its simplicity and popularity, Pred's behavioral matrix offers no more than a conceptual basis for constructing a behavioral location or relocation theory (McDermott, 1973). In the behavioral theory, it is the perception of reality, not only reality in itself that matters.

Limited information, limited ability, perception and uncertainty all lead to a large spatial bias in relocation decision making. First, more distant locations are less well known and therefore it is likely that nearer locations are chosen more frequently. Second, distant locations are more difficult to imagine than nearer places. Third, there is a strong distance decay, which is of course partly related to the amount of information, but also with the perceived attractiveness of the place. Finally, firms face uncertainty, not only because they have a knowledge gap or are not able to digest the available information, but also because investment decisions are based on anticipated future situations, which are by definition uncertain. Anticipating the future for other locations that are not familiar adds to the uncertainty. The larger the relocation distance, the larger the amount of uncertainty about future points in time. On-site investments are therefore much more certain than investments in a new site. Relocation to another geographical market may even be comparable to the inherent uncertainty of a start-up.

As a result of the behavioral approach to firm relocation, a large body of literature has developed that gives detailed descriptions of motives and reasons for moving, both on the push and the pull side of the process. Frequently given push reasons are both internal and external to the firm. Again, the main internal reason is related to firm growth: limited expansion space at current location, or limited representativity of the present location (the need for it usually increases with the size and age of the firm). External factors include limited labor supply, or high location costs. Pull factors are largely the opposite of the internal factors: enough space, accessibility to deliverers, suppliers, customers, the labor market, representativity, low costs, and often also locational amenities, such as the housing market, environmental conditions.

2.2.2. Summary

It can be concluded that the behavioral approach adds to the neo-classical view, by exploring the many motives, both economic and otherwise, that are important in the decision making process of the firm, and that leads to a particular location. The approach seeks to understand actual behavior of entrepreneurs, and focuses on the decision making process, that may lead to a relocation and takes also path dependency into account. On the one hand this is very valuable information, for understanding and policy making, but at the same time it shows the weaknesses of the approach. Often based on questionnaires and detailed empirical work, it is largely descriptive and explorative and to a much lesser extent an explanatory model. Similar to the neo-classical framework, too much attention is given to locational factors as such, and the link with internal firm processes of production, investment and growth is weak. Another drawback is that the behavioral approach focuses too much on sociological, psychological and other "soft" variables (Scott, 2000) often ignoring the (neo-classical) economic factors. Therefore, an eclectic combination of the behavioral and neo-classical approaches seems to be more fruitful.

2.3. Institutional approach

The neo-classical and the behavioral approach have one view in common: the firm as an active decision making agent in a static environment. The firm has to choose from a number of alternatives. In doing so, it takes economic and non-economic factors into account, and the decision-maker is either "homo economicus" or "satisficer man". In either view the environment is a surface of location factors, or a "bed of information" that is processed by the firm (Hayter, 1997). In 80's this simplistic view of locational behavior of the firm was increasingly being questioned in a number of new research directions. These new developments, no matter how different they may work out, share one common belief that economic processes in space are mainly shaped by society's cultural institutions and value systems. In other words, we have to

look, not only to the behavior of the firm, but also to the social and cultural context in which this behavior is embedded. Institutional approaches have dominated the field since then (Martin, 1999). Although some mainstream economists have discovered the spatial dimension as a key factor in economic theory (Krugman, 1995) and labeled it the "new economic geography", it is interesting to note that many "traditional" economic geographers have turned away from this field, and now may be labeled institutional geographers. Among them are e. g. neo-Marxist theorists. For relocation theory most of approaches are less relevant, except for the "geography of enterprise" (Krumme, 1969b).

2.3.1. "Geography of enterprise"

The "geography of enterprise" views the firm in interaction with its environment, which is a regional system, or industrial district. Firms have to negotiate with deliverers and suppliers, local, regional or national government, labor unions and other institutions, about prices, wages, taxes, subsidies, infrastructure, and other key factors in the production process of the firm. Locational behavior is the result of the outcome of these negotiations. The implication of this view is that the geography of enterprise is more suited for large corporations. Larger corporations have more negotiating power, and are able to exert a substantial influence upon their environment, whereas small firms usually have to accept the restrictions and constraints imposed upon them by their environment (Hayter, 1997). Regional systems are important contexts for firm growth. Important examples are Silicon Valley or Emilia-Romagna. These regions have a particular favorable entrepreneurial culture, in which key resources such as venture capital and knowledge are shared through intensive networks. In this regard, new terms were introduced, such as incubator regions, new industrial spaces, learning regions, etc. (Scott, 2000).

These terms may be important as general concepts that help to understand historical processes of regional growth, and the evolution of particular corporations, but they are less helpful in explaining actual locational behavior of the many small and medium sized firms in the economy. In general,

most attention is focused on larger corporations. Nevertheless, small and medium sized firms also operate in an institutional environment, which has a significant impact of their locational behavior. There are two types of institutions that are important for relocation behavior of small and medium sized enterprises: governments and the real estate market. Whereas in 60's and 70's the role of the government in relocating economic activities was large, at least when viewed from many regional policy intentions in those days, nowadays it is more modestly seen as largely facilitating or inhibiting locational choices of firms. Governmental facilitating factors are for instance infrastructure, zoning, subsidies and tax reductions. Fiscal incentives and subsidies may produce a local trough in the cost surface, which may have the effect that some locations are now inside the spatial margins to profitability. The role of government is important for constraining and restricting firm behavior as well. Again, zoning regulations are important, but, for instance, also environmental regulations.

The three above-mentioned schools of thought on location provide the theoretical background for studies of firm relocation. The earliest known study on firm relocation², at least the earliest one which is mentioned rather regularly in the international literature on firm location, is beyond any doubt McLaughlin and Robock's study "Why industry moves South" (McLaughlin and Robock, 1949). This book describes the mid-century shift of manufacturing industry in the United States from its original concentration area in the Northeast to the Southeast states, where low cost labor was more abundantly available and trade unions were less active. McLaughlin and Robock in this "classical" study thus stressed the importance of firm external factors, in their case this was the external pressure in the form of increases in labor cost and militancy in the US Northeast.

² To name just one for all.

3. Motives and forces behind the phenomenon

3.1. Relocation and offshore outsourcing

Relocation in strict sense can be defined as a closing of production unit at the national territory followed by opening identical production unit abroad, which would supply same national territory or serve same markets. Even though such a phenomenon can be observed on microeconomic level, it is extremely difficult to measure it statistically (Fontagné, Lorenzi, 2005).

Opening of foreign affiliate, principally in emerging country, corresponds in any way to disappearing of equivalent production unit at home which could have carried out the same production (even if only for export). And this is already deviation from the definition in strict sense by omitting two phenomenons which release immediate connection to disappearance of home production unit.

- From one point of view, implementation into foreign country is in average driven first of all by the access to the markets and its perspective development³. Thus it is incorrect to suppose, in medium term, that production of foreign branch could be ensured from home country.
- From the other side, opening of "identical production unit" abroad is not necessarily carried out by the same company but could be confided to external partner, for example in form of offshore outsourcing⁴.

Basically the difficulty of comprehension of the relocation phenomenon lies in at least two aspects:

³ It can be proven by large external balance surplus with its foreign affiliates and significant part of resale in its overall sales.

⁴ Sometimes there is a distinction between outsourcing to country that is close (onshore outsourcing) and that to country that is far away (offshore outsourcing). There is no such distinction in this paper and either close or far away outsourcing is referred to as offshore outsourcing.

- Effects of macroeconomic clusters, with their temporary dimension concerning the location decision with complex motives and consequences.

- Necessity to distinguish between “relocation” aspect and “specialization effect” of each country.

Specialization leads naturally to reduction of certain activities in favor of others. That is from one side understood as reduction of employees or company's disappearance from extremely competitive activities with commercial import of substitutes to ensure the needs. And from the other side, by export to sectors where the position of countries is outstanding⁵, what cause companies' establishing or development of existing ones.

Relocations take crucial form in moving labor intensive activities to emerging countries. But it is necessary to underline that not all foreign investments, comprising those realized in emerging countries, are necessary the relocations. Contrary, the majority of FDI, in general, target to serve new markets and thus not constitute the relocations. In the same way, offshore outsourcing represents only limited fraction of international trade with emerging countries and competition that is exercised due to this phenomenon.

In reality, it's extremely difficult to distinguish these two phenomenons, as companies combine different strategies in time: offshore outsourcing can be occasion to “test” the country before implementation of relocated production unit over there; FDI designated to conquer emerging market can, in second phase, give place for global restructuring of production mechanism and thus be considered as relocation⁶.

⁵ All this depends also on worldwide economic growth, which is influenced by taken decisions concerning market opening.

⁶ Offshore outsourcing and relocations are therefore used as synonyms in this paper.

3.2. Companies' reorganization on global base

Reorganization of the companies in the international context can take different forms. Companies thus have multiple motivations: to get the production closer to the clients, to reduce production costs or to specialize the production units in order to create more value added. What we are facing right now is the acceleration of international reorganization of activities in order to improve economic efficiency of companies.

During first phase of internationalization process, companies produced in their countries of origin and gained part of economies of scale in order to trade and distribute their products in the whole world. Industrial sites in their countries of origin were prospering.

In the second phase, large western enterprises started to duplicate their production units to access new markets (market seeking) with keeping close control of all their establishments. They did not increase capacities of existing industrial sites even if they were left in production. New factories were implanted into new industrial zones, close to new markets.

In the third phase, we could have seen global reorganization of new activities (efficiency seeking) through specialization of divisions in sub-activities and implementations of production units into low-wage countries. Existing ones have been restructured, concentrated, modernized and sometimes closed while their new production units were gaining power with unbeatable costs.

This evolution has been reinforced lately by externalization of new activities and recurring offshore outsourcing. Mother company stays powerful even if the transfers of activities concerns labor, accountancy and financial activities. The ultimate state of this reorganization is external research and development (R&D). Sites that have been modernized with high costs have barely maintained. Proximity of European demand, which stays important even if it is not dynamic, forbids in any way relocation of numerous activities that

have "local" character, mainly products with difficult transportation or specific know-how.

3.3. Companies' motivations

The business practice of offshoring focuses on the relocation of labor-intensive service industry functions to locations remote to the business center, such as Ireland, CEE and SEE countries or India. It has been enabled by two main changes in the business environment. First, the improvement in international telecommunications capacity, and the concomitant step-change reduction in global telecommunications costs, is fundamental to the economics of offshoring. Second and just as important, over the past two decades the PC has enabled the computerization and digitization of most business services. As a result of these two changes information can now be transmitted over long distances at very low cost and with little loss of quality. These changes make organizational boundaries and national borders much less important in deciding the location of service functions.

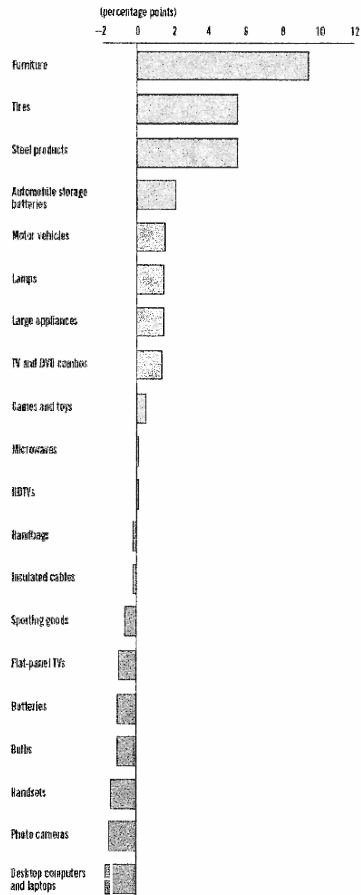
In seeking the competitive advantage to be gained by sourcing and manufacturing in developing or emerging economies, companies may be tempted to follow the rush to Asia, and particularly to China or India, without exploring opportunities closer to the markets they want to serve. Rapidly developing economies (RDE) of CEE region offer features that make the region highly competitive as can be seen in figure 1. China leads over CEE countries⁷ in industries with relatively smaller goods easily transportable like cameras, laptops, flat-panel TVs, sporting goods, while CEE countries leads significantly in furniture, tires, steel products or other large appliances.

For a product which labor content (direct plus overhead) amounts to 30 percent of its cost, the difference in total labor cost between manufacturing in China and in CEE countries amounts to less than 3 percent of total cost and

⁷ CEE countries in the figure consist of the Czech Republic, Hungary, Poland, Russia, Slovakia and Turkey.

that is before taking into account China's transportation penalty. When it is factored in along with the costs of labor, materials, and inventory, China's cost advantage declines to at most 2 percent (Boston Consulting Group, 2005).

Figure 1: CEE countries vs. China's cost savings⁶



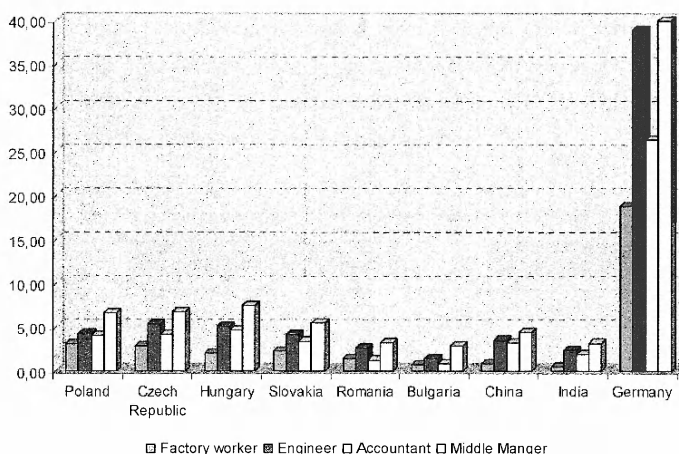
Source: Boston Consulting Group

⁶ Positive „cost savings“ imply that total landed cost from CEE countries into Western Europe is lower than total landed cost from China to Western Europe. Cost savings are based on cargo value, labor cost, and content as well as logistics costs.

3.3.1. Wage differentials as primary factor

As is commonly realized, the prime motivation for relocation is that it reduces labor costs. There are very large differences in the wages paid for equivalent skills between the US and developing countries such as India⁹ or slightly smaller but still large differences between Western Europe and emerging economies such as CEE countries¹⁰, see figure 2.

Figure 2: Hourly wage by profession in USD



Source: BusinessWeek

However, there is also a second reason why offshoring and relocation brings economic benefits. Whereas in the Western Europe and US many of the offshored jobs are seen as relatively undesirable or of low prestige, in the countries where they are offshored are often considered desirable and

⁹ The equivalent of a software developer who costs \$60 an hour in the US costs only \$6 an hour in India. Similarly, a data entry agent who costs \$20 an hour in the US costs only \$2 an hour in India (McKinsey Global Institute, 2003).

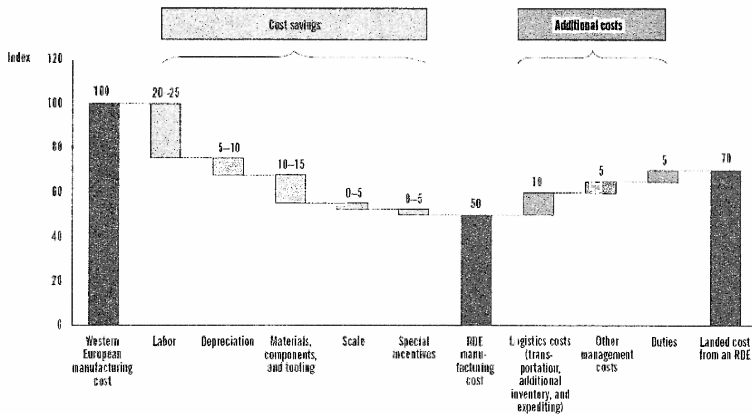
¹⁰ The equivalent of an engineer who costs \$38.90 an hour in Germany costs only \$5.38 an hour in Czech Republic and only \$4.15 in Slovakia. Similarly, factory worker who cost \$18.80 an hour in Germany cost only \$2.81 in Czech Republic and only \$2.21 in Slovakia. Differences in Bulgaria or Romania are even higher \$1.43 an hour, \$2.58 an hour respectively for engineer position and \$0.73 an hour, \$1.41 an hour respectively for factory worker position (BusinessWeek, 12/19 December 2005).

attractive. As a result, workers in low-wage countries often have higher motivation and outperform their counterparts in developed countries in terms of performance measures such as the number of transactions per agent, or the number of errors per transaction.

3.3.2. Other cost savings vs. additional costs

The differential in wages alone exaggerates the potential economic benefits. Though the wage-saving is substantial, additional costs are incurred in terms of telecommunications, transportation, and the management of the offshore facility. Nevertheless once these costs are taken into account, there is at least 30 percent saving in the cost base, see figure 3. Reengineering the process design can further increase potential saving.

Figure 3: Cost savings for Western European companies

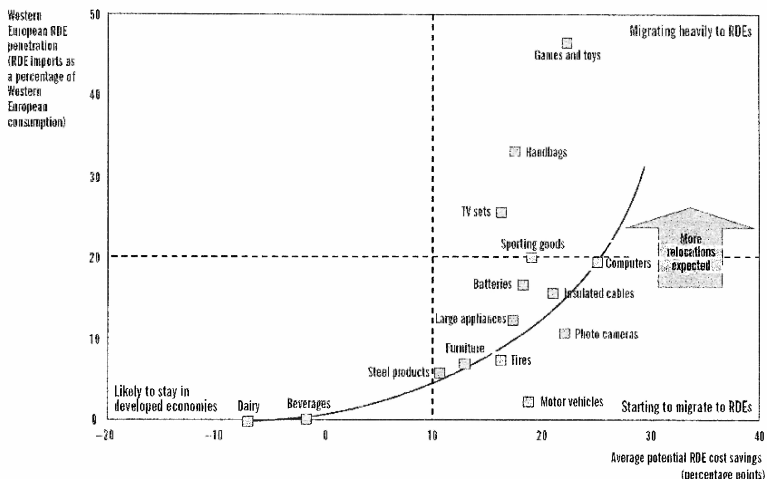


Source: Boston Consulting Group

Naturally, potential savings vary widely by industry, product line, and location, driven primarily by differences in labor content and cargo value per volume, which determines transportation cost as a percentage of product value. Costs vary to some degree by region, by country, and even by area within a country. One factor affecting local costs is the established industrial landscape

in the region. For example, the Czech Republic and Slovakia have emerged as centers of production for the assembly of automobiles, Poland for white goods, and Turkey for auto parts and some assembly. Taking advantage of such preexisting “clusters” enables companies to save time and cost in ramping up their production facilities. Number of industries has an opportunity to save 15 percent or more, therefore industries are likely to migrate to RDE and source from new locations Western Europe, see figure 4.

Figure 4: Potential cost savings by industry and migration possibilities



Source: Eurostat

In addition to significant cost savings, companies are also using relocation as an opportunity to drive revenue growth. For example, by leveraging cheap labor, airlines are now able to chase delinquent accounts receivables that they would earlier be forced to ignore. Similarly, computer manufacturers are increasing market penetration by offering customers services they could not afford to offer earlier¹¹. As a result, by offshoring, many companies are creating far more value from increased revenues than from reduced costs.

¹¹ For example: service call centers.

3.3.3. Growing market with excellent talent pools

Taken together, the countries of CEE represent an attractive and growing market opportunity. While the region is much smaller than China, with 380 million people versus 1.3 billion, it generates nearly the same GDP and nearly four times as much GDP per capita, see table 1.

Table 1: GDP figures of CEE countries and China

	Country	GDP 2003 (\$ billions)	Real GDP CAGR (%) 2004-2008	GDP per capita in 2003 (\$ thousands)
CEE countries in EU	Poland	209	4.1	5.4
	Czech Republic	85	4.2	8.3
	Hungary	83	3.9	8.3
	Slovakia	33	4.5	6.0
	Slovenia	27	3.0	14.1
	Lithuania	18	4.7	4.9
	Latvia	10	4.7	4.2
	Estonia	8	4.6	6.0
	Total	473	4.1	6.4
Other CEE countries	Russia	434	4.6	3.1
	Turkey	238	4.5	3.4
	Romania	57	4.7	2.6
	Ukraine	49	5.9	1.0
	Bulgaria	20	4.2	2.5
	Belarus	18	4.7	1.8
Total	816	4.7	2.7	
Total CEE		1,289	4.5	4.0
China		1,410	8.0	1.1

Source: Economist Intelligence Unit, World Bank, Euromonitor.

In CEE, more than 25 million households have annual disposable income of over \$7,500 and the number of such households is expected to reach 30 million in the next four years as the economies continues to rise, given real GDP CAGR¹² of 4.1% (Boston Consulting Group, 2005). These customers represent a market that is only beginning to be tapped.

In addition to low costs and healthy markets, CEE provides a pool of skilled laborers and qualified engineers who are generally more educated than those in other RDE. In some CEE countries, levels of skill and training are competitive with those in developed countries. Throughout the region, both the

¹² Real GDP CAGR – Real GDP cumulative growth rate.

availability and the quality of the skilled work force are currently very high, see table 2. Especially qualified engineers in Czech Republic, Hungary and Slovakia rank among top 5 in the survey. It is not only capital well equipped jobs but also qualified workforce that helps companies to reach productivity similar to those in home countries, however with lower labor costs.

Table 2: Ranking of labor availability

Country	Overall weighted rank	Skilled labor	Qualified engineers	Competent senior managers
India	1	2	1	2
Ireland	2	3	4	3
United States	3	1	7	1
Turkey	4	6	6	4
Hungary	5	7	3	5
Czech Republic	6	4	2	11
Slovakia	7	8	5	9
Taiwan	8	5	10	6
Poland	9	10	9	10
Russia	10	9	8	14
Italy	11	13	11	8
United Kingdom	12	12	13	7
Slovenia	13	11	12	13
China	14	14	15	15
Estonia	15	15	14	12

Source: IMD

Workers in CEE countries are also more akin to those in most multinational companies in terms of language, education, training, and culture than are workers in China. The percentage of the population that speaks English continues to increase and is particularly high among the labor pool of people under age 40. In the Czech Republic, for example, almost 15 percent of people aged 24 to 30 actively use English or claim knowledge of English equal to their knowledge of their mother tongue (Boston Consulting Group, 2005). German and French are also widely spoken.

It should be noted that one area in which the CEE region has not yet caught up with the highly developed economies is the capabilities of local middle- and senior-level management. Many of these managers have had difficulty letting go of the antiquated management processes prevalent during the Communist era and embracing a more business-oriented mindset. This

orientation is already changing, and the change process will accelerate as the younger generation of workers moves into the ranks of management.

3.3.4. Favorable business environment

The major countries in the CEE region, such as Poland and the Czech Republic, compare favorably with China and other Asian RDEs in terms of various kinds of risk, creating a relatively safe environment for investing, see table 3. Political, legal and regulatory risks are currently significantly lower in these countries than in China. So is intellectual property risk, an area in which China is known to harbor a host of issues¹³.

Of course, intellectual property risk, like other elements of the business environment, varies greatly among CEE countries. Russia, for all its resources and large end-market potential, is comparable to China in terms of risk. In contrast, the new EU member states represent a more secure business environment, with regulations governing intellectual property rights being harmonized with EU standards.



Also affecting the general business environment is basic infrastructure. While the quality of the transportation and telecommunications infrastructure varies across the region, CEE countries can often offer much more convenient, faster, and cheaper communication links with Western Europe than can China¹⁴. The new EU member states will benefit not only from shorter transit times within the EU but also from significant investments in highway networks and other transportation infrastructure.














¹³ The vulnerability of multinational companies to intellectual property risk is illustrated by recent disputes over intellectual property between Cisco Systems and Huawei Technologies; between Magnequench and major Western retailers and electronics companies; between global drug companies and the Chinese government; and between Lucent and two of its employees, as well as by the furor over WAPI (Wired Authentication and Privacy Infrastructure) standards.

¹⁴ Turkey, for example, ranks twelfth in the world in the total number of kilometers of highways and has excellent expressway linkages to the EU, as well as more than 100 ports and eight international airports (Boston Consulting Group, 2005).

And then there are other, less tangible but very important factors, such as the ease of managing plants that are in the same time zone as headquarters; the cost and the ease of travel back and forth between sites; deliver on time and the efficacy of management across similar cultures. Management can avoid some problems by designing processes and products to address host countries¹⁵. Such factors are harder to quantify than labor costs and market growth rates, but they can have disproportionate impact on RDE operations, sometimes determining the difference between success and failure.

Table 3: Comparison of business environment

Impact on business risk  Favorable  Adverse

Potential risks	Methodology	Established EU		CEE countries in EU					Other CEE countries				Asia	
		Germany	France	Czech Republic	Hungary	Poland	Slovakia	Bulgaria	Russia	Romania	Turkey	Ukraine	India	China
Political stability	EU political stability risk ¹ (0-100; 100 = high)	10	NA ²	20	15	35	25	35	55	45	55	80	45	65
Financial stability	Fitch country sovereign rating (0-AAA; AAA = high) Inflation, 2003 (%)	AAA 1.0	AAA 2.7	A- 0.1	A- 4.7	BBB+ 0.8	BBB+ 8.6	BBB- 2.3	BB+ 17.6	BB 15.3	B+ 25.3	B+ 5.2	BB+ 5.4	A- 1.2
Legal and regulatory stability	EU legal and regulatory risk (0-100; 100 = high)	13	NA ²	25	25	38	38	40	70	58	45	73	60	73
Currency	Expected cumulative change in FX rate, ³ 2003-2006 (%)	+2.5	+2.5	+13.2	+5.8	+6.7	+10.3	4.5	-12.9	-11.5	-38.8	-0.7	+3.3	-3.6
Corruption	Tr. transparency international index (0-10; 10 = low)	7.7	6.9	3.8	4.8	3.8	3.7	3.9	2.7	2.8	3.1	2.3	2.8	3.4
Intellectual property rights (IPR)	EU IPR protection index (0-5; 5 = high)	5	5	4	4	4	3	3	2	3	3	2	3	2
Overall environment														

¹ EU = Economist Intelligence Unit.

² NA = not available.

³ X = foreign exchange.

Source: OECD, Economist Intelligence Unit, Amnesty International, Fitch

Ratings

¹⁵ Management could simplify the product for more manual operations or change the specifications so that local materials could be used. Or a product might be reconfigured so that subassemblies can be unbundled or re-bundled to optimize sourcing and assembly in various locations with various suppliers.

Companies take portfolio approach to each sourcing decision, analyzing a variety of locations for each product line and carefully weighing all the factors that make up each location's unique business and financial opportunities and challenges.

3.3.5. Offshoring opportunities

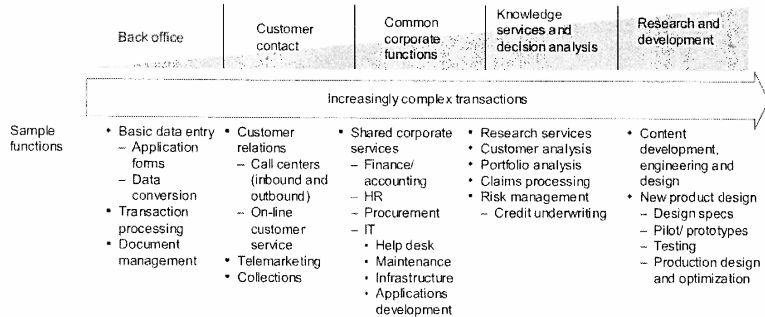
Questionable practices that influence companies' decisions are sometimes supported by state in form of tax brakes (income tax exemption for IT workers in Romania) or in form of social politics (specifically designed social politics in some Indian regions in order to attract employment in services, duty-free zones, non-necessity of application of fundamental social norms (Fontagné, Lorenzi, 2005)). These forms of "unfair" competition require special attention but constitute only marginal phenomenon to explain relocations.

Other characteristic of relocation is that it is a choice of the company: choice to provide service or produce goods at lower cost, through the branch or subcontractor in another country. That is exactly the reason why companies that relocate are accused of provoking the loss of employment, while companies that reduce their personnel or cease their activities as a consequence of international competition could not be subject of same criticism.

"US businesses dominate the global share of offshoring, accounting for some 70% of the total market. Europe and Japan account for the remainder of the market, with the UK as a dominant player" (McKinsey Global Institute, 2003, pp. 2). Both the US and the UK have liberal employment and labor laws that allow companies greater flexibility in reassigning tasks and eliminating jobs. This flexibility is essential to capture offshoring opportunities effectively. Back-end processing, call centers and accounting are among first functions that are being offshored. Higher-value work has been added continuously, particularly in areas where there is an offshore abundance of what are otherwise scarce skills, e. g. software maintenance and development. Other high-end relocations include automotive and aerospace component design, or

even pharmaceuticals research. Their range is substantial and is widening constantly.

Figure 5: Offshoring opportunities across the organization



Source: McKinsey Global Institute

3.4. Range of the phenomenon

The range of relocation can be understood through the diverse global assessments that completely or partially relativize this phenomenon:

- Firstly, import of goods manufactured in emerging countries realized directly by industrial companies reflects, in an imperfect way¹⁶, trade generated by relocations in the industrial sector.
- Secondly, possibility to specify the part of country's relocations via FDI to emerging and developing countries¹⁷.
- Thirdly, the impact of relocations on employment seen through the empirical evidence from concerned companies.

¹⁶ These imports can be due to relocation investments/offshore outsourcing but can be also due to other factors, like development of company's supplying from emerging countries. In contrary some relocations cannot be taken into account, if they are considered as re-imports of finished goods via other entity than original company.

¹⁷ It can be done via settling certain level of foreign affiliate's exports back to home country.

3.4.1. Reference scenarios of relocation

To categorize motivations for relocations they can be labeled as follows¹⁸:

- Accompanied relocation; subcontractor follows his contractor.

Accompanied relocation: Valeo in Abrera, Spain

The plant in Abrera was opened in 1999 for the synchronous production of wiring harnesses to supply Volkswagen Group's production site in Martorell. Volkswagen's transfer of one part of Seat Ibiza production to Slovakia in 2002 and the competition of other suppliers that relocated their production to countries with lower costs forced French car-part makers to stop their production at the site and transfer them to other areas in Morocco, Tunis and Portugal (www.prnewswire.co.uk, 12 June 2003).

Offensive relocation; it allows company to concentrate on what it makes the best and accelerate its development.

Offensive relocation: UK producer of pocket-free vacuum cleaners Dyson

This company, established in 1990, decided in 2002 to subcontract production of vacuum cleaners to Malaysia, and to layoff 800 workers (www.guardian.co.uk, 5 February 2002). After producing 9 millions vacuum cleaners in United Kingdom, Dyson does not have any producing facilities in this country today. The founder of the company justify his choice by indicating that offshore outsourcing helped him to leave his centre of research and development (R&D) in United Kingdom and to follow the growth of the group on the new markets. Thus in the headquarters in Malmesbury, which counts 1,200 employees, 350 persons work in the centre of R&D.

- Defensive relocation; companies see themselves to be obliged to imitate their competitors to ensure their survival.

¹⁸ These are proxi cases and one can find numerous "mixed" ones.

Defensive relocation: Lafuma

After the deterioration in 1986 group Lafuma (sport and outdoor items) relocated part of its production activities (creation of subsidiary in Tunisia) and laid off one quarter of its staff. French production personnel (320 persons) now creates 27% of company's turnover (camping furnishings and high-end shoes), the rest is produced either by Lafuma factories in abroad (Tunisia, Morocco, Hungary since 1992 and China) or is subcontracted (Fontagné, Lorenzi, 2005). Lafuma personnel in France¹⁹ have been rising in the past years. According to the president of the group, company would have been "dead" without relocation.

According to McKinsey Global Institute (McKinsey Global Institute, 2003) relocations are expected to grow at the rate of 30 to 40 percent a year over the next 5 years.

3.4.2. Effects on employment and growth

In economic theory, relocations have the similar effects as other developed forms of trade between industrialized countries and emerging countries.

They are part of international specialization, which is in principle win-win situation for all concerned countries. Labor intensive production in the country that receives relocation is progressing. Country that "undergoes" relocation does not lose either for three reasons:

- Consumers (people and companies as well) benefit from lower prices due to fall of production costs as a consequence of moving the production abroad.

- When the relocation is in the form of investment, it allows keeping activities' controlling and receiving important dividends. Thus FDI

¹⁹ Totally, there were more than 700 employees at the end of 2003.

revenues between e.g. France and foreign countries, which were negative in 1995, have reached during 1999 and 2003 in average almost EUR 13 billion or quadruple of its trade surplus (Fontagné, L., Lorenzi, J. H., 2005).

- Finally, as the relocations make solvent demand in receiving countries more favorable, export especially of high skill labor-intensive products benefit.

Jobs that are destroyed and created are not of the same kind, destruction of low-skilled vs. creation of more sophisticated ones. If both countries gain from trade, this phenomenon can contribute to the increase in salary inequality between qualified and non-qualified labor force. Or it can contribute to the rise in unemployment of non-qualified workers in the countries, where adjustment to lower the wages is difficult.

In any case, all the figures concerning loss of jobs because of relocations are insufficient to fully comprehend this phenomenon. This is mainly due to their limitations to single direct effects.

Analysis of relocation effects on employment and growth face three difficulties:

- Precise identification of relocation.
- The choice of “reference” scenario. For example in the case of company Lafuma, is there a destruction of hundreds of jobs in France or vice versa maintaining and even creation of new jobs in connection to the scenario of disappearance of Lafuma. Even Boston Consulting Group (Boston Consulting Group, 2004) shows that number of employees in 16 large industrial groups have increased due to their globalization from 366,000 in 1995 to 432,000 in 2003, while their number could have been reduced to 275,000 as a consequence of productivity gains.

- The evaluation of induced effects on the rest of the economy (additional export, jobs created in other sectors...etc.).

As European companies, especially in the UK ramp up their relocation spending in countries like India, China but also CEE countries, they will increasingly displace substantial numbers of employees from their current roles. According to Forrester (www.forrester.com, 18 August 2004), Europe will lose a cumulative 1.2 million jobs due to relocation by 2015, with the lion's share of the impact falling in UK. Financial firms will move most aggressively offshore. Computing and clerical staff should suffer most. Despite the pain involved in job losses in Europe, the European countries that are reluctant, such as France and Germany, will likely lose as a result, as aggressive offshore user countries like the UK get an economic boost from relocated efficiencies.

Forrester's modeling shows that relocation spending in Western Europe will grow from €1.1 billion in 2004 to more than €3.6 billion in 2009, at a compound annual growth rate of 27%. The UK will command 76% of the spending offshore by 2009. In countries like France and Germany, companies are looking mostly to other locations than UK's ones, like Czech Republic, Russia or Tunisia.

Japanese investors in Asia induced loss of 62,000 jobs in industry on Nippon archipelago during the period from 1987 to 1998. 576,000 jobs lost because of relocations have been almost compensated by the creation of 514 000 jobs through the investment to "conquer the market" (Rieti, 2001). In USA, investment bank Goldman Sachs (Goldman Sachs and Company, 2003) has estimated that relocation affects 15,000 to 30,000 jobs per month, what represents 10 to 20% of lay offs of more than 50 employees. On the other side, US Bureau of Labor Statistics three month empirical survey has brought milder results. During observed period of first quarter 2004, 2 percent of layoffs were due to relocations, see table 4.

Table 4: Relocation layoffs of more than 50 employees in USA (1Q2004)

	Number of events	Number of touched positions	Share on all touched positions
Layoffs of more than 50 employees	1,204	239,361	
Out of them: Relocations	34	4,633	1.9%
<i>Within company</i>	21	2,976	1.2%
<i>Outside company (subcontracting...)</i>	13	1,657	0.7%

Source: Bureau of Labor Statistics

Although several factors limit the possibility to transfer services abroad (necessity of client proximity, concern about losing control over intellectual property or sensible ideas, language barrier...), international competition does not concern only "blue collars" but also "white collars". They constitute by far the most numerous employees. According to Forrester survey (www.forester.com, May 2004); relocation constitutes first concern for European service unions, ahead of production automation.

Nonetheless, dominant scheme represent transfer of low value added activities abroad, while strategic functions or more qualified production move to the country of origin²⁰. The example of shoemaker Nike is likewise innovative: the costs of shoe production, realized in Asia, represent only 4% of selling price (www.nike.com, June 1998); essential of value added is intangible (marketing...) and it is located in USA.

Research units created in RDE correspond, from the companies' side, either to creation of new R&D units, which are the supplement to existing ones in the logic of global research policy (i.e. General Electric R&D center in India), or to rearrangement of R&D centers on the regional base (R&D center installed in CEE region by car makers). Furthermore, some real transfers of R&D centers have been registered between industrialized countries but not in direction to emerging countries.

²⁰ Like in the case Dyson company, the case of Mitsubishi company in Rennes (relocation of production of GSM cell phones to China, but leaving the cell phone R&D centre in France), the case of French Faurecia company to Romania (partial relocation of foaming activities and car upholstering sewing while all other complex high value added weaving activities leaving in France).

The presence of strong R&D in the country can lead to maintain of production site, that is threaten by relocation, in the country, like we can see from following example. General Motors (GM) decided in 2004 to produce in his Strasbourg site new generation of gearboxes. This long-term investment helped Strasbourg branch of American group and its 1,750 workers to keep their jobs. There was a competition between Strasbourg and Hungarian branch of GM. The presence of 160 person centre in Alsacian site since 1996 which contributed to development of new model of gearbox has been decisive in comparison to Hungarian site, which doesn't have R&D center. In the case of Hungarian choice, number of employees would have been slashed to one half with the end of production of old gearboxes at the end of 2004 (Fontagné, L., Lorenzi, J. H. 2005).

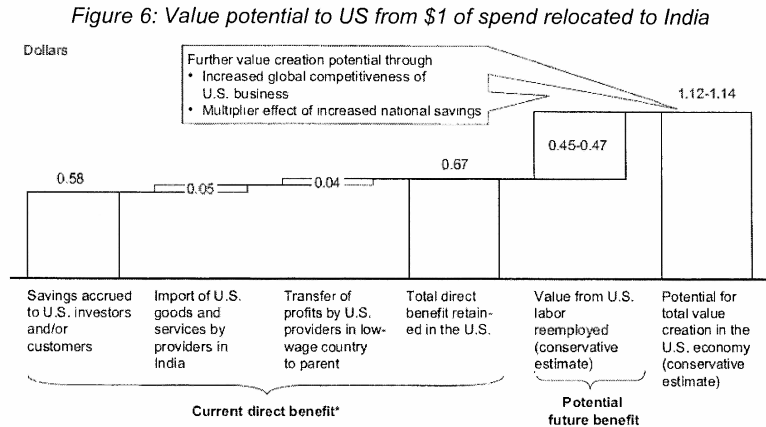
3.4.2.1. Home economy

The evidence suggests that fears about job losses, however reasonable they might be, tend to overplay the likely impact of relocation. For illustration, the vast majority of economy is composed of services such as retail, restaurants and hotels, personal care services, and the like spanning very broad wage and value added ranges. These services are necessarily produced and consumed locally and therefore can't be relocated.

Even in good times, job losses are an inescapable fact of life in a dynamic market economy. It is not only relocation that can result in job displacement: technological change, changes in consumer demand, business restructuring, economic slowdown, and public policy, including trade liberalization or environmental regulation all can and play their part. The recent changes driving relocation are not that different or radical from the changes that dynamic, competitive, technologically evolving economies have experienced for the last few decades.

Following illustration of McKinsey Global Institute (McKinsey Global Institute, 2003) allows evaluating, at least in theoretic way, the effects of

relocating activities abroad. The US can capture economic value through several different channels: reduced costs, increased revenues, repatriated earnings, and the redeployment of additional labor, see figure 6.



* Estimated based on historical reemployment trends from job loss through trade in the U.S. economy

Source: McKinsey Global Institute

- **Reduced costs:** Cost savings represent the largest form of economic value capture. For every dollar of spend relocated, 58 cents are captured as net cost reduction to businesses even as they often receive an identical (or better) level of service. Initially, the savings flows to investors, or they are invested in innovations or new business ventures. Eventually, as relocation becomes more prevalent, competition will yield the savings to consumers. In either case, relocation contributes significantly to increasing national earnings.
- **New revenues:** For every dollar of spend relocated, relocation services providers buy an additional 5 cents worth of goods and services from the US economy, thereby creating exports and extra revenue for the US economy. Providers in low-wage countries require US computers, telecommunications equipment, other hardware and software. In addition, they also procure legal, financial, and marketing services from the US.

- *Repatriated earnings*: Several providers serving US relocation market are incorporated in the US. These companies repatriate their earnings back to the US, which amounts to an additional 4 cents out of every dollar of spend relocated.

- *Redeployed labor*: As low value-added service is sourced from overseas, US workers previously engaged in providing those services are freed up to take other jobs. If redeployment continues at the rate it has over the past two decades, then for every dollar of spend offshored, the economy will capture an additional 45 to 47 cents per dollar of relocation from the new jobs that are generated.

Far from being bad for the US, relocation creates net additional value for the US economy that did not exist before, a full 12 – 14 cents on every dollar relocated. Indeed, of the full \$1.45 to \$1.47 of value created globally from offshoring \$1 of US labor cost, the US captures \$1.12 to \$1.14²¹. Trade benefits are immediate for consumers who see falling prices of numerous consuming goods.

This case study, which figures need to be considered with caution, underlines the fact that even countries touched with relocation could be gaining, in terms of growth and employment. In this analytical framework, relocation weakness constitutes worrying sign about future competitiveness of economy and its companies, rather than some kind of trump. But the materialization of this gain supposes two hypothesizes. It is necessary to know that country, where the relocation comes from, benefits in return from sufficient business flow and in particular its labor market is sufficiently dynamic in order to re-employ the majority of those who lost their jobs.

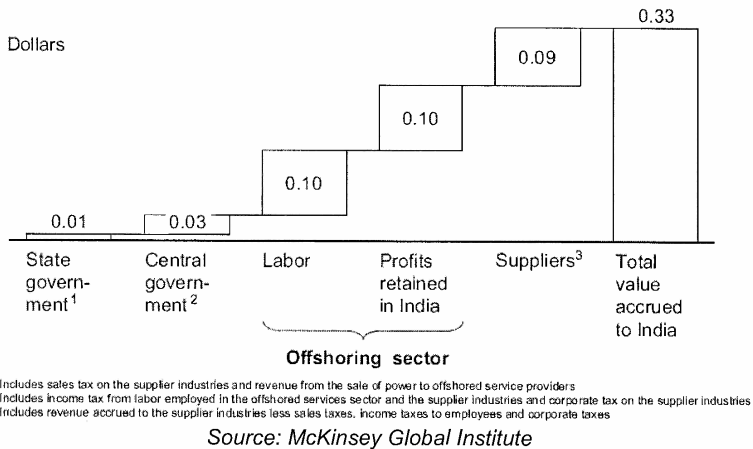
So, net balance of employment can be positive in long term but it all depends on the capacity of economy to redirect positions from relocated sectors to new fields of employment.

²¹ In the same way, Evalueserve (Evalueserve, 2003) evaluated that \$1 transferred to India creates revenue of \$1.41 in United Kingdom.

3.4.2.2. Host economy

The effect of relocation on receiving country is positive in more evident way, even if not all the revenues from relocation, by definition, stay in the country. The basic benefit for host country is new jobs and decrease of unemployment, increase economic activity in the country, possibility to attract other relocations and finally also improved standard of people living. Same study as previously referenced of McKinsey Global Institute (McKinsey Global Institute, 2003) evaluated that transfer of \$1 of activities to India generates revenue of 33 cents over there (wages, retained profits, taxes etc.), see figure 7.

Figure 7: Value potential accrued from \$1 of spend relocated to India



In receiving countries main questions relate diffusion of wealth and know-how across whole economy (for example in the case of duty-free zones) and the capacity of economy to expand as after couple years of presence, activities are relocated to other countries because the production cost became too high.

3.4.3. Measures taken in industrialized countries

Several industrialized countries are confronted with reemerged discussion about relocations. It is either the case of USA where the question of offshore outsourcing in relation to services was raised due to political ambitions, then in Germany and France, where the relocations towards new accessed countries to EU provoked political uproar or also in Netherland, Sweden but in little less degree.

Authorities of industrialized countries underline that relocations represent international labor specialization and participation on development of RDE. All this contribute to the progress of high value added activities in their own economies. In general, they put measures that would specifically penalize relocations ahead of potential negatives on competition and receive of FDI. So higher value added specialization and social improvements constitute the most frequent answer to relocations. However, there are some nuances: as the organization of relocation policy for Japanese companies to Asia is doubled by Nippon vigilance in a case of intellectual property, when there are worries of losing technological leadership in favor of China.

Two pole cases could be shown as an example: UK and USA. While the extent of relocations in those two countries was similar, the policy has different orientation, at least in appearance:

- In UK principal political answer to relocations is the accent on FDI attraction, innovation (augmentation of approved money for research, consolidation of excellence centers), lifelong education, and social dialog (Union meetings and protection against the offshoring phenomenon). Tony Blair, who repeatedly expressed himself about this subject (e.g. March 22, 2004 speech to Goldman Sachs), excluded all defensive reactions: "protecting industry and commerce from the inevitable is impossible, expensive and damaging". Therefore a great part of created service jobs in UK does not correspond to government vision that

responds to international competition by higher value added specialization.

- In USA, just few specific measures had been envisaged in order to fight against relocations (fiscal measures to promote production in USA or to penalize relocating companies, projects aiming to exclude relocating companies from public subventions, propositions to divulge physical locations of call centers, etc.) but majority of them were rejected, because of interrogations concerning economic efficiency of proposed dispositions. In reality, American administration has kept favorable attitude to market opening and restrictive measures have been adopted only in a case of federal or some state public affairs. Social security, considering poor unemployment compensation, was furthermore reinforced in 2002 (extension of Trade Adjustment Assistance Program, that provides employees from closed companies due to imports and relocations to the countries connected with USA by preferential trade agreement, financial aid for retraining) without dispersing doubts concerning real reasons of job loses as these are difficult to identify.

3.4.3.1. Legal framework within EU

Recent adoption of a report on relocation in the context of regional development, Members of European Parliament (MEP) called on the Commission to penalize companies which, having received EU financial aid²², relocate their activity within seven years after the granting of the aid. These companies would be forced to repay misused financial aid and in addition banned of receiving similar funds during same period in the future.

According to interested MEPs, the completion of European Monetary Union (EMU), enlargement and the increase in international trade are legitimate sources of concern when it comes to the issue of industrial relocation following in their wake, both within and out of the EU and the EMU. Within the EMU, and

²² Financial aid for vocational training, retraining of workers etc.

to a lesser extent within the EU, temporary corrections of unsatisfactory competitiveness and productivity levels can no longer be carried out by adjusting exchange rates; this furthermore increase the role played by production costs differentials when companies decide to set up and to relocate. In addition they point out recent instances of relocation or the use of lower salaries and increased working hours supposed to prevent relocation that have hit both the headlines and, to an even greater extent, the employees concerned. For the latter, relocation generally means job losses or worsened working and salary conditions. Insofar as the closure of companies following the relocation constitutes a social cost borne by the Member States (MS) in terms of unemployment benefits and staff retraining costs, they see a right to ask about the impact that the European Structural Funds (ESF) could bring to bear on any decision to relocate.

Parliament demands that practices that are not conducive to the achievement of economic cohesion and the strategic goal of full employment, such as unjustified relocation likely to cause job losses, should not be financially supported by the EU. The features of the relocation problem vary somewhat in terms of whether it is taking place within or out of the EU.

Within the EU, it must be acknowledged that the free movement of persons, goods and capital is enshrined in the Treaty establishing the European Community and it is therefore difficult to advocate an absolute ban on a company's right to choose the places where they set up their industrial plant, and all the more so since the immobility that such a ban would bring with it would be very negative for the European economy. The objective of Cohesion Policy rests on the harmonious and solidarity-based development of all of Europe's regions. To make up for the backwardness of the economic and social development of certain regions by favoring methods which leads to a development deficit in other European regions runs flat counter to the objective of social cohesion.

Implemented reforms of the Structural Funds should provide legal tool which would enable EU to prevent programs co-funded by the Structural and

Cohesion Funds from encouraging measures which contribute to direct or reverse relocation. The MS and the Commission must deny any involvement in the Structural Funds to any company which is or has been the subject of a recovery procedure following the relocation of productive activity within a MS or to another MS or third country, as well as to companies which threaten to relocate their activities in order to force their workers to accept increased working hours with no increase in wages, with a view to making substantial cuts in the wage bill. Furthermore, companies whose headquarters are in a MS and which relocate their productive activity to another MS should not be able to benefit from the Structural Funds. A similar provision, designed to prevent the granting of national subsidies to these companies, should form part of the new guidelines on regional state-aid.

At the present, there is no sufficient detailed statistical tool to enable EU to make a precise diagnosis and draw up a tailor-made response to the phenomenon. Thus European Relocation Observatory within Dublin Observatory should be set up, to study, evaluate, follow-up and make specific proposals. *“One of the new observatory’s tasks would be to measure the real, quantified impact of the granting of European subsidies on relocation, to investigate the effect and significance of the employment shifts caused by relocation, and, where appropriate, identify the sectors most concerned and the policies which would allow to negative effects of relocation to be neutralized”* (European Parliament, 2006, pp. 11). Although company relocations are not easily identifiable at macro-economic level and this might be good way to obtain some real data, the proclaimed tasks of intended new established institution seems too ambitious.

Furthermore, when subsidies are being granted under the Structural Funds, it is imperative that the Commission ensures that the granting of the aid is fully accompanied by guarantees of long-term employment, which could take the shape of long-term agreements in the field of employment and local development, to be signed by the management of the company concerned. In the same way, so as to assess the future risk of possible relocation, it is

supposed to be useful from the Commission's point of view to demand that the company receiving subsidy fill out the questionnaire evaluating the risk.

More measures of the same spirit are asked, like provisions on information and consultation of workers, companies' social plans in consultation with the trade unions to adopt code of conduct which they would have to respect. This code of conduct should include "European good practices", and not only local legislation.

As EU is implementing these counter-relocation measures, European economy becomes more and more rigid entity, which tries to preserve current European social model, which drags the whole European economy down. Moreover, short-sighted EU measures are predominantly aimed on newly accessed countries and less on real threat stemming from Asian countries. More reasonable measures would be not "tightening the screws" but encouraging research and development, support of higher education, infrastructure development etc.

All this converge to the common finding:

- Relocations/offshore outsourcing are the basic tendencies that concern all industrialized countries.
- This phenomenon concern first of all industry and low skilled workers, but services and high value added activities are more and more concerned as well.
- Although the importance of this phenomenon is significant, its part in international trade and investments is only minor, as well as in the movements observed on the labor market.
- Some countries are exposed to this phenomenon more than others.

4. Germany's approach to CEE region

4.1. Trade and investment integration

Since the fall of communism trade integration with Eastern Europe has taken place on a fast pace. In 2004 8.3 percent of Germany's exports were going to CEE region and 9.9 percent of its imports are coming from this region. The trade shares with CEE region have been about 3 percent immediately after the fall of the iron curtain in 1990 and since have been growing steadily, see table 5.

Table 5: Germany's trade integration with CEE countries

	1990	1994	2001	2004
Export share ¹	3.0%	4.1%	7.8%	8.3%
Import share ²	2.8%	4.4%	8.8%	9.9%

¹ Of total Germany's export

² Of total Germany's import

Source: Statistisches Bundesamt

As a result Eastern Europe accounts now with 4.0 percent of GDP (CEE region by itself with 2.84 percent) for more than 60 percent of all low wage imports in Germany, see table 6.

Table 6: Low Wage Imports to Germany as a percentage of its GDP²³

	1995	2001	2004
Eastern Europe	1.69	3.32	4.00
China	0.46	0.96	1.63
Mercosur	0.19	0.25	0.29
Asean	0.50	0.76	0.63

Source: Eurostat, Statistisches Bundesamt

During the 1990s Germany's investment integration with CEE region has been less pronounced than trade integration, thus on a global scale Eastern

²³ Eastern Europe includes Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Estonia, Croatia, Hungary, Latvia, Lithuania, Macedonia, Moldova, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Czech Republic, and Ukraine; Mercosur includes Argentina, Bolivia, Brazil, Paraguay, Uruguay; and Asean includes Brunei, Indonesia, Cambodia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

Europe was of little importance as a host region for Germany, see table 7. Nevertheless, Germany is one of the most important investor in this region. Since the mid 1990s there has been a relocation of FDI from stellar performers of region (Czech Republic and Hungary) to Poland and more significantly to catching up Slovak Republic.

Table 7: Germany's investment integration with CEE region

	Outgoing FDI ¹		Incoming FDI ²
	average 1992-1994	average 1999-2001	1999
FDI to Eastern Europe in % of total FDI	5.4%	2.4%	-
CEE countries	90.7%	83.6%	-
Czech Republic	32.8%	18.1%	29.6%
Hungary	36.9%	12.5%	28.0%
Poland	16.7%	27.9%	17.3%
Slovak Republic	3.4%	22.9%	22.0%
Slovenia	0.3%	0.9%	12.0%
Baltic States	0.7%	1.2%	12.9%

¹ Of total outgoing FDI flows to Eastern Europe

² Of total FDI stock in Eastern Europe

Source: Deutsche Bundesbank

4.2. New Member in the Global Division of Labor

In the last decades the world economy has gone through a dramatic change. A new international division of labor is emerging in the world economy. The global firm produces one input in one location which is then send for refinement to a second location. The refined input then gets further refinement in a third location. Thus, firms geographically separate different production stages across the world economy to exploit differences in production costs²⁴. Take the example of the German company Siemens. As other global corporations, Siemens has organized its activities in a global value chain with its R&D and engineering activity located in Europe and the US, procurement and logistics located in South East Asia, its assembly activity located in Eastern Europe, and its marketing activity organized on the local market or via the

²⁴ The new features of globalization are described in the Globalization Report to the European Commission, see Bourguignon et al. (2002)

internet²⁵. Although this is a specific example we can see as follows that CEE is becoming an important location for German firms in their global organization of production.

There is a distinction between replication of production facilities in CEE countries and exploitation of differences in factor costs between Germany on the one hand and CEE countries on the other. The former is a horizontal FDI and is primarily motivated to gain access to the host country market. The latter is a vertical FDI and is motivated by wage differentials²⁶. One reason why it might be interesting to distinguish between these two forms of multinational activity is to identify their potential effects on wage inequality and employment levels in Germany.

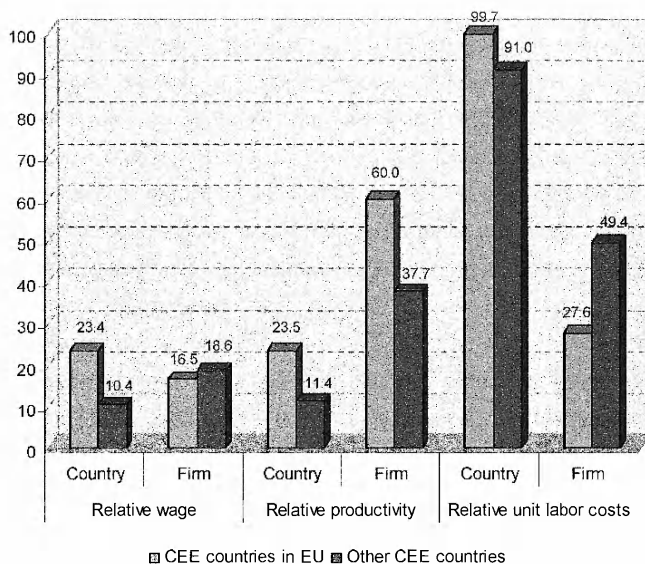
If an outward investment to CEE region is just an expression of German firms taking control over assets in Eastern Europe without a cross-border shift in production capacity, then foreign investment in CEE countries will have little effect on wages and employment levels in Germany. If an outward investment actually involves a shift in production capacity, then the issue is whether the outgoing investment is vertical or horizontal in nature. In a vertical FDI European firms outsource the labor intensive part of their production to a low wage country in CEE countries and cut this production stage in the skill labor abundant European Union. Thus, a vertical FDI leads to an increase in the wage of skilled relative to unskilled labor or to an increase in unemployment of unskilled labor in the European Union when wages are not allowed to adjust. In a horizontal FDI the European firms produce the same products in their affiliates in CEE. Horizontal FDI is driven by market access considerations, while vertical FDI is motivated by differences in factor prices between the European Union and CEE countries. Thus, FDI is more likely to generate wage inequality or unemployment in the European Union when it is vertical in nature.

²⁵ See Financial Times, 12 December 2003.

²⁶ For the theory of vertical FDI, see Helpman (1984), for theories of horizontal FDI, see Brainard (1993, 1997).

When multinational firms wish to exploit differences in factor costs in CEE region, they explore how much in terms of labor costs they can save. In figure 8 it can be seen a comparison of relative wages, relative productivity and relative unit labor costs between Germany on the one hand and the CEE countries in EU²⁷, and other CEE countries²⁸ on the other.

Figure 8: Comparative advantage of Germany with CEE countries²⁹



Source: Statistisches Bundesamt

It appears from the figure that wages in the accession countries are about 23 percent of those in Germany, while these countries' productivity

²⁷ These include Czech Republic, Poland, Slovakia, Hungary, Slovenia, Estonia, Latvia, and Lithuania.

²⁸ These include: Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Macedonia, Romania, and Serbia.

²⁹ Relative wage: country – average wage in CEE relative to Germany in 2001; firm – average wage of affiliates in CEE relative to parent firms in Germany (1997-2000).

Relative productivity: country – GDP per employee in CEE relative to Germany in 2001; firm – sales per employee of affiliates in CEE relative to Germany (1997-2000).

Relative unit labor costs: country – average wage divided by GDP in CEE relative to Germany in 2001, firm – average wage divided by sales of affiliates in CEE relative to parent firm in Germany (1997-2000).

reached about 23 percent of Germany's productivity level. As a result, labor unit costs in the accession countries are the same as in Germany. Thus, when German firms buy input goods in one of the accession countries they don't save on costs for the input good compared to when the input is produced in Germany. However when we look on possibility to reduce the costs when multinational firms open an affiliate in CEE countries in EU and produce the input themselves, it can be seen that German affiliates in the accession countries pay 17 percent of their German parent wages but are increasing their productivity to 60 percent of the parent's productivity level. Therefore, they can reduce the labor costs by 72 percent relative to their parent firms' cost in Germany. In other CEE countries both wages and productivity are low so the unit labor costs are 91 percent of Germany's unit labor costs. Furthermore, these costs are not reduced by as much as in the CEE countries already in EU when Germany firms produce locally in these countries (labor cost are reduced by 50 percent), since producing locally does not help to increase productivity as much as in the CEE countries in EU.

From these numbers it appears that the accession countries are a particularly attractive location for German investors due to the relatively high productivity levels of their affiliates in these countries. Other CEE countries, however, do not appear to bring as much in terms of labor cost savings.

4.2.1. Market seeking versus Cost advantage seeking

There is a question if German companies primarily moving their activities to CEE region to exploit differences in factor prices or they want to be close to CEE market by producing locally. One way to answer this question is to look at the pattern of intra-firm trade. In table 8 there is the pattern of intra-firm trade as a criterion whether German FDI in CEE are market seeking or cost advantage seeking. FDI in CEE can be defined as a multinational outsourcing activity driven to exploit differences in factor prices when parent firm in Germany export input goods to their affiliates in CEE as well as import these goods back from their affiliates in CEE after refinement. Thus, in an outsourcing activity affiliates

in CEE do not produce exclusively for the local market. This way, multinationali outsourcing involves an intra-firm export from the parent firm in Germany to their affiliates in CEE as well as an intra-firm import from their affiliates in Eastern Europe to Germany.

Table 8: German multinationals' outsourcing activity to CEE countries

	Share to all German FDI in the country (1997-2000)
CEE countries in EU	46.68%
Czech Republic	75.95%
Hungary	27.18%
Poland	14.50%
Slovak Republic	68.71%
Slovenia	12.44%
Baltic States	28.43%
Other CEE countries	55.68%
Bulgaria	71.94%
Romania	63.68%
Other	14.29%

Source: German companies' survey, author's calculations

On average 51 percent of all German investments to CEE fulfill the criteria and are outsourcing activities of German companies motivated by lower wages in CEE region. The importance of outsourcing becomes, however, much larger for individual CEE countries. Outsourcing dominates among German investment in the Czech Republic, Bulgaria, Slovakia and Romania (share of around 70 percent). It plays little role in Slovenia and Poland.

German multinationali investment and outsourcing across sectors as can be seen from table 9 is predominantly engaged in manufacturing activity in CEE region (almost 60 percent of total FDI), of which "manufactured goods" and "machinery and transport" are the most important sectors. It appears from the table that 90 percent of German investments in machinery and transport are outsourcing investments. More surprisingly however, outsourcing is not confined to manufacturing and has become a dominant phenomenon in services as well such as logistic services – "transport, storage and communications" – with 79 percent of outsourcing investment in Germany. However "financial intermediation" is the sector the least outsourced from Germany.

Table 9: German multinationals' investment and outsourcing to CEE region by sector (1997-2000)

	Share of FDI in CEE on total FDI	Share of outsourcing on total FDI in sector
Manufacturing¹	56.45%	54.20%
Food and beverages	4.89%	6.67%
Raw materials	6.24%	21.00%
Chemicals and related products	3.64%	1.93%
Manufactured goods	11.95%	25.97%
Machinery and transport	29.74%	90.27%
Services²	43.55%	12.52%
Construction	0.77%	48.50%
Wholesale and retail trade	7.93%	14.99%
Transport, storage and communications	21.71%	79.27%
Financial intermediation	10.94%	1.02%
Real estate, renting and business activities	1.11%	9.04%
All sectors	100.00%	45.44%

¹ SITC sector classification

² ISIC sector classification

Source: German companies' survey, author's calculations

The importance of firms' outsourcing activities to CEE region for Germany's international trade can be indicated by the share of intra-firm trade³⁰ in foreign trade between Germany and CEE countries. Although companies' outsourcing activity is dominant feature of German investments in CEE, it is not very important for its trade with CEE. Only 12 percent of Germany's exports to CEE are intra-firm exports and 22 percent of its imports from CEE are intra-firm imports. But again there is considerable variation across individual countries, see table 10. For example, Germany's trade with the Slovak Republic is dominant by intra-firm trade. 65 percent of Germany's imports from Slovakia and 34 percent of its exports to Slovakia are trade within the multinational enterprise between German parent firms and their affiliates in Slovakia.

Pattern of vertical specialization that has emerged between Germany and CEE suggests that some of CEE countries like Hungary and Slovakia have clearly become new members in the international division of labor. CEE countries not in EU still awaits for a move in the international division of labor

³⁰ It is trade which takes place inside the multinational enterprise between parent company and their affiliates in host country.

and their prospects for EU accession can only help them to achieve this position.

Table 10: Germany's intra-firm trade in total trade with CEE (1996-2000)

	Share of intra-firm exports in total exports to CEE ¹	Share of intra-firm imports in total imports from CEE ²
CEE countries in EU		
Czech Republic	6.83%	15.64%
Hungary	11.95%	40.46%
Poland	17.77%	15.34%
Slovak Republic	34.01%	64.98%
Slovenia	-	-
Baltic States	5.19%	14.41%
Other CEE countries		
Bulgaria	-	-
Romania	3.86%	7.17%

¹ Intermediat inputs delivered by parent firms to CEE affiliates.

² Intermediate of final goods delivered by CEE affiliates to parent firms for marketing or further reprocessing.

Source: German companies' survey, author's calculations

4.3. An exodus of jobs

As previously demonstrated German companies can save a substantial amount of labor costs (between 50 to 72 percent) by outsourcing activities to CEE. Moreover, 51 percent of German FDI in CEE region are motivated by lower wage in CEE countries into which these companies outsource labor intensive production stages. Obviously there might be concerns about job losses in Germany as a consequence of these outsourcing activities. The motivations that companies consider are access to the CEE market, market size, lower production costs, availability of well trained skilled labor, avoidance of transport costs, exchange rate risk etc.

The calculation is given in table 11 below. German multinationals have created 364,816 jobs in CEE. According to calculation these newly created jobs in CEE have led to direct loss of 102,117 jobs in Germany due to multinational relocations to CEE. These figures are obtained by computing the jobs created by German companies in CEE when investors have given low costs or outsourcing as the prime motivation for the investment. Out of this motivation German companies have created 183,193 jobs in CEE, which accounts for 50.2

percent of total German affiliates' employment in CEE. Note however, that German affiliates in CEE have on average 56.6 percent of the productivity level of their parent companies only. Therefore, one job created in CEE is equivalent to a 0.57 job lost in Germany implying a relocation induced job destruction of 103,731 jobs in Germany.

Table 11: German multinationals' job relocations to CEE (1997-2000)³¹

Relocation induced jobs	
due to: offshore production	-91,055
low production costs	-92,138
Affiliate to parent productivity	56.62%
Job destruction	-103,731
Trade induced jobs	
due to: induced exports to CEE	28,809
induced imports from CEE	-27,195
Job creation	1,614
Net job destruction	-102,117
of parent employment	-0.85%
of total employment	-0.30%
Total affiliates employment	364,816
Total parent employment	12,044,598
Total employment	34,133,000

Source: German companies' survey, author's calculations

But the opening of a subsidiary in CEE creates new trading opportunities. German parent companies typically deliver inputs for further refinement to their affiliates in CEE. These intra firm exports to CEE create 28,809 jobs in Germany. The number is obtained by computing the number of jobs created in Germany due to inputs delivered by parent companies to affiliates in CEE. To compute the number of jobs created in Germany, the value of inputs send to affiliates in CEE was divided by the parent' value added per worker. Thus,

³¹ Offshore production: number of jobs created in CEE affiliates, when firms classified the investment as a relocation activity from Germany.

Low production costs: number of jobs created in CEE affiliates, when investors ranked low production costs as decisive or important motivation for the investment.

Affiliate to parent productivity: ratio of sales per employee in CEE affiliates to sales per employee in parent companies.

Induced exports: number of jobs created in Germany, due to inputs delivered by parent companies to affiliates in CEE. The value of inputs is divided by parent companies' value added per worker to obtain the number of jobs created in Germany.

Induced imports: number of jobs lost in Germany, due to intermediate and final goods sent by affiliates in CEE to parent firms. The value added of CEE affiliates is divided by parent companies' value added per worker to obtain the number of jobs lost in Germany.

28,809 workers in Germany were used to produce the value of inputs sent to CEE affiliates.

CEE affiliates, in turn, deliver the refined inputs or final goods back to parent companies. These intra firm imports from CEE destroy 27,195 jobs in Germany. Again this number is obtained by computing the number of jobs destroyed in Germany due to CEE affiliates' delivery of goods to parent firms in Germany. The value added of CEE affiliates is divided by parent companies' value added per worker. Thus, 27,195 workers are not used in German production, because the value added is produced by CEE affiliates. The described intra-firm exports and imports lead to a net trade job creation of 1,614 jobs. This adds up to a net destruction of 102,117 jobs in Germany. The computed loss of 102,117 jobs in Germany accounts for 0.3 percent of total employment there. That is indeed a small number.

The computation in table 11 is a rough calculation and has to be taken for what it is. Thus, the computed job numbers have to be interpreted with caution. In particular, the calculation has the following shortcomings. As the calculation is based on firms' perspectives, it assumes that one job lost at the level of the firm translates into one job lost to the economy as a whole. Thus, the computation ignores any general equilibrium effects. Typically, when workers lose their jobs at one particular company, they are reemployed at some other company with an accompanied adjustment in wages. Ignoring such general equilibrium effects may be justified when wages are not allowed to adjust due to labor market rigidities. As relative wages remained more or less fixed in late 90's beginning of 00's, applying the 1 to 1 assumption does not seem to be completely unrealistic for Germany. In any case, the computation results in stronger job losses in Germany than would have taken place otherwise with flexible wages when general equilibrium effects are taken into account and thus can be seen to represent an upper bound of the true job losses due to outsourcing.

5. Relocation in French manufacturing industries

As it has already been mentioned phenomenon of relocation has been the subject of many debates also in France. It is one of the main sources of concern in the French public opinion nowadays. In the recent years, a few plant closings fed this concern. Relocation constitutes a significant part of the debate on the deindustrialization of France. However, deindustrialization is a much broader phenomenon than that of relocation. It is also explained by other factors, both internal and external. Internal factors are for example productivity gains and externalization of some activities towards services sectors. External factors include the consequences of international trade, offshore outsourcing being only one aspect of the latter. Conversely, relocation does not relate only to industry: It also concerns services, especially call-centers or R&D activities. However I'll focus mainly on manufacturing industry as this seem to be the most pronounced category in a French case.

Several reports were published in France dealing with the topic of relocation, e.g. the Grignon report (Grignon, 2004) from the French Senate, and Fontagné-Lorenzi report (Fontagné, Lorenzi, 2005) from the Economic Analysis Council. All the reports conclude that the phenomenon remains limited. Nevertheless they all underline the fact that this diagnosis remains weak, since there is no precise measurement of job losses due to relocation. In almost all studies, the extent of relocation is assessed indirectly, for instance asserting that low wage countries represent a small share of French imports of French FDI. Let's see on estimation of the number of job losses and establishment closure due to relocation. Identification strategy is based on two conditions. An establishment closure of large downsizing is identified as the consequence of relocation when both conditions are fulfilled.

- A firm of business group strongly reduces the labor force in one of its manufacturing establishment during a relatively short period of time. This downsizing corresponds either to a reduction by at least 25% of initial level of the labor force, or to the closing of the establishment.

- In same time, this group increases its imports of the same type of good that was produced in France, coming from a given foreign country. The amount of this increase in imports is at least equal to certain fraction of the foregone French production. This fraction depends on the country of origin: it is worth 100% or less, according to whether labor costs in the country are comparable or lower than those in France.

It needs to be stressed that there is no perfect method and this one does not escape the rule. It can lead either to over- or under-estimating the consequences of offshore outsourcing on domestic employment. There will be over-estimation when certain cases identified as “consequences of relocation” are not truly perceived as such in the public opinion. For example, a group can perform relocation even if there is no plan closure: a group can partially relocate an activity by reducing the labor force without completely closing the plant. Relocation does not imply the creation of a new factory abroad: the group can increase production capacities in a foreign plant that already exists, or subcontract to a foreign firm that it does not own.

Moreover there can be “relocation”, even if it is done towards an industrial country, whose average labor costs are higher than in France. Indeed there can be other reasons than decreasing labor costs why groups may decide to perform relocation. Rationalization is one of them. When a group owns several establishments producing the same good in several countries, it may decide to concentrate production in one plant and close all the other ones. Considering only closing of the establishment and relocation towards a low wage country, the estimated number of job losses would be equal to 25% of what is without the restriction.

Conversely, some cases perceived as relocation cannot be identified as such applying above mentioned approach. It only detects a case of relocation when the outsourced production is intended to the French market. This restriction is due to the availability of the data: the substitution of a production intended to French customers is observable via the re-importation of the good by the group in France. Moreover it doesn't detect cases where the offshored

production is not re-imported by the group, even if it is intended eventually to French customers. It is the case if the marketing is entirely done by the foreign producer, or if the group of firm keeps no establishment at all in France, even for sale.

5.1. Job losses to low as well as high wage countries

Taken into account about mentioned two identifying conditions for relocation, between 1995 and 2001, about 95,000 jobs have been lost in manufacturing industries in France due to relocation. This corresponds to an average yearly loss of 13,500 jobs per year. Comparing this result to the average yearly loss of 500,000 jobs per year in manufacturing in France, this estimate for job losses due to relocation seems quite low. It would represent 0.35% of the total number of jobs in manufacturing industries³² in France (3.9 million jobs) each year, i.e. slightly less than one job out of 300.

Relocation leads to a large downsizing in an establishment, which may imply plant closing or not. Referring to “large downsizing” designate all cases of downsizing were at least 25% of the total number of jobs in the establishment are destroyed and were the diminution occurs in a period of time that do not exceed 3 years. If we take into account only large downsizing cases, share of relocation in this case corresponds to 12%. However this number should not be interpreted as the contribution of relocation to the aggregate diminution of employment in manufacturing as this refers only to part of all downsizing occurring there.

Relocation towards low wage countries as can be seen from table 12 represents 6,370 jobs lost per year on average, i.e. less than half of all job losses due to relocation. This represents 0.17% of the total number of jobs in manufacturing each year and 6% of “large downsizing”.

³² It excludes all energy sectors.

Table 12: Main destinations of French relocation

Low wage countries		High wage countries	
<i>Jobs lost per year</i>	6,370	<i>Jobs lost per year</i>	7,175
China	30%	Spain	16%
Brazil	8%	Italy	15%
Morocco	8%	Germany	14%
Tunisia	8%	USA	13%
Czech Republic	6%	Belgium	10%
India	5%	United Kingdom	8%
Poland	5%	Netherlands	7%
Vietnam	4%	Switzerland	4%
Rumania	4%	Portugal	2%
Bulgaria	3%	Ireland	2%
Indonesia	2%	Sweden	2%
Turkey	2%	Finland	1%
Venezuela	2%	Japan	1%
Malaysia	1%		
Madagascar	1%		
Guinea	1%		
Lithuania	1%		
Hungary	1%		
Russia	1%		

Source: INSEE, author's calculations

Relocation implies more job losses when it occurs towards high wage countries than towards low wage countries. Main destinations are countries with a border with France (e.g. Spain, Germany, Italy, etc.) and the United States. Among low wage countries, China is the main destination. It corresponds to one third of all jobs transferred to low wage countries. Other destinations are countries in South America (mainly Brazil), North Africa (mainly Tunisia and Morocco), Asia and also CEE where Czech Republic is the top destination out of these countries with 6% share.

5.2. Large multinationals relocate more often

The frequency of relocation in business groups increases with the size of the group, see table 13 below. As a frequency of "large downsizing" decreases with the size of the group, the probability that such a large downsizing is due to relocation is larger as the group is larger. For instance, business groups with more than 500 workers represent less than half of the total number of jobs in manufacturing in France, but more than two thirds of the total amount of job

losses due to relocation. The increase of the frequency of relocation with the size of the group is much steeper when it occurs towards a high wage country. This may stem from the fact that this kind of offshoring happens much more frequently in highly concentrated sectors, such as car industry, the manufacture of pharmaceuticals and aeronautics. The results presented in table 13 mean that the impact of globalization is different in small and large groups: it rather implies closing in small firms and relocation in large groups.

Table 13: Frequency of "large downsizing" and relocation by size of the group

Size of the group ¹	Share of the total number of jobs in manufacturing	Job losses in "large downsizing" ²		Job losses due to relocation ²	
		All groups	Excluding groups that close	Towards high wage countries	Towards low wage countries
<10 workers	11%	6.9%	2.7%	0.02%	0.02%
10 to 49	17%	3.8%	1.5%	0.01%	0.05%
50 to 499	23%	2.7%	1.6%	0.05%	0.13%
500 to 4,999	24%	2.0%	1.9%	0.29%	0.21%
>5,000	25%	1.6%	1.5%	0.41%	0.32%
Avg. all groups	100%	2.9%	1.8%	0.19%	0.17%

¹ This size of the group is the average number of workers of the group in France

² Percentage of the total number of jobs in the category.

Source: INSEE, author's calculations

About 25% of all job losses due to relocation between 1995 and 2001 were lost in 10 large groups. If these 10 groups are excluded, relocation leads to 10,500 job losses on average each year, i.e. 10% of all job losses due to "large downsizing". As the relocation cannot be observed directly but only identify as likely, an error in the identification of one or more of these large groups can lead to a substantial deviation of the estimates.

Relocation happens more often in groups of firms than in independent firms, see table 14. Between 1995 and 2001, on average 0.08% of jobs were lost in independent firms due to relocation whereas this figure rises to 0.51% in groups of firms. The probability that a job losses is due to relocation is therefore five times larger when it occurs in a firm that is owned by another firm than when it occurs in an independent firm. Relocation towards a high wage country is more frequent when the firm belongs to a foreign group. On the contrary, there is no clear difference between French-owned and foreign-owned firms as far as relocation towards low wage countries are concerned.

Table 14: Frequency of "large downsizing" and relocation in independent firms and groups

Type	Share of the total number of jobs in manufacturing	Job losses in "large downsizing" ¹		Job losses due to relocation ¹		
		All groups	Excluding groups that close	All destinations	Towards high wage countries	Towards low wage countries
Independent firms	40%	4.4%	1.9%	0.08%	0.03%	0.05%
Groups (owned by)	60%	1.9%	1.7%	0.51%	0.28%	0.23%
French firm	41%	1.8%	1.6%	0.48%	0.23%	0.25%
European firm (excl. French)	13%	2.3%	2.1%	0.59%	0.42%	0.17%
Non-European firm	6%	2.0%	1.9%	0.66%	0.41%	0.25%
Avg. all types	100%	2.9%	1.8%	0.36%	0.19%	0.17%

¹ Percentage of the total number of jobs in the category.

Source: INSEE, author's calculations

5.3. Sector issues

Not surprisingly, relocation towards low wage countries occurs more frequently in industries with a large share of unskilled workers, such as the manufacturing of clothing and textiles. However, it is also quite frequent in a few middle-tech or high-tech industries, such as the manufacturing of electric and electronic equipments and components. Relocation towards high wage countries occurs more often in concentrated industries, where most producers belong to large multinationals. This is the case of the manufacture of pharmaceuticals, or aeronautics, for instance. Within industries, there is no clear link between the amount of job losses due to relocation and the variation of total employment. Industries like the manufacturing of motor vehicles, chemicals and electronics components have a relatively large amount of job losses due to relocation, but the employment in these sectors rose between 1995 and 2001. Even in industries where globalization has been highly detrimental to employment in France, such as clothing or textile, relocation does not seem to be the main driver for job losses. For instance, relocation implies on average that 0.8% of jobs are lost each year in clothing, which is much lower than 5.8%, the average yearly decrease in employment in this industry.

Relocation can be observed in almost all manufacturing industries. Among 60 manufacturing industries in the French NES 114 classification, at least one case of relocation between 1995 and 2000 was in 56 industries, see table 15. It points out basic comparison of high and low wage countries, with further CEE region breakdown of latter.

Table 15: Relocation by industry and destination

Country	Number of industries	Number of groups	Job losses due to relocation	Number of establishments where relocation has been identified	Number of establishments where relocation has been identified with more than 10 job losses
	Total during 1995 -2001		Yearly average		
Total	56	1,224	13,545	467	203
Total (high wage countries)	55	694	7,175	291	111
Total (low wage countries)	52	597	6,370	177	92
<i>Czech Republic</i>	17	20	371	6	3
<i>Poland</i>	22	32	297	7	3
<i>Romania</i>	8	17	227	5	4
<i>Bulgaria</i>	6	16	197	4	3
<i>Turkey</i>	10	23	156	10	4

Source: INSEE, author's calculations

Relocation towards high wage countries usually concerns a large number of industries. For some countries, one industry represents a prominent share of all jobs relocated towards this country. For example, motor vehicles to Spain, aeronautics to Germany or pharmaceuticals to Switzerland. This usually corresponds to the geographical implementation of large multinationals. Relocation towards low wage countries is usually concentrated in a small number of industries; however some countries like China, but also Czech Republic and Poland where relocation is in a large number of industries. Relocation towards last two mentioned countries occurs in industries with a low share of unskilled workers, i.e. industries for which a low wage unskilled labor force is a lesser determinant for relocation. In these countries, the size of market may be an important determinant for relocation. Not all countries from CEE region play significant role for French relocation. As depicted in table 16 Hungary, although it is relatively same size market as Czech Republic, plays only marginal role when referring to manufacturing.

Table 16: Main industries with a high frequency of relocation to low wage countries

Country	Average job losses per year	Main industry	Share ¹⁾	2nd main industry	Share ¹⁾	3rd main industry	Share ¹⁾
Czech Republic	371	Electric equipments	73%	Electric components	11%	-	-
Poland	297	Sound and image	23%	Chemicals	21%	Electric components	19%
Romania	227	Clothing and textile	84%	-	-	-	-
Bulgaria	197	Clothing and textile	46%	Machinery and equip.	32%	Mining	13%
Turkey	156	Machinery and equip.	46%	Clothing and textile	34%	Electric components	13%
Hungary	57	Clothing and textile	53%	Electric equipments	22%	Sound and image	18%
Russia	50	Manufacture of metal	73%	Food products	13%	-	-

1) Industry share of all jobs relocated towards concerned country

Note: yearly averages over 1995-2001 period

Source: INSEE, author's calculations

Three industries have a relatively large number of job losses due to relocation towards low wage countries: clothing and textile, electronic components and electronic equipments. One out of three job losses due to relocation towards a low wage country occurs in the clothing or textile industry. The main destination in CEE region is Romania with 84% share of all French relocations there.

6. Czech Republic

Czech Republic represents one of the possibilities for international business and financial relocation from countries like Germany, France, Netherlands or even UK. As it has already been stated, one of the possibilities to check for relocations is via FDI and consequently international trade pattern of the country. Czech Republic as the dominant CEE host country for FDI per capita in couple past years can serve as a good example. The size of FDI that comes due to large privatization projects distort the statistics for our purposes, however aggregate data from micro level are not accessible in Czech Republic and thus represent at least some indication of possible development of relocation activities in the region.

6.1. Past FDI development

FDI is considered to be the initiator and catalyst of changes in industrial structures. In the short term, workers and their representatives in more developed EU countries may perceive changes and adjustments in industrial structure initiated by FDI as a negative phenomenon leading to structural or regional unemployment and limiting domestic capital, so reducing the potential for the creation of new jobs and growth. Criticism may also focus on cases in which firms relocate production abroad and so increase unemployment and social tensions in home countries. At the same time, workers and their representatives in CEE may also regard foreign penetration negatively. Foreign investors are suspected of buying domestic companies only for the purposes of liquidating a potential competitor. The decision of investors to expand or to relocate resources in open economies is explained theoretically through the concept of comparative advantage. In practice, investors' decisions to expand into another country or to relocate production abroad are influenced by both the macroeconomic situation and microeconomic policy.

FDI inflow to the RDE is considered as one of the key factors for the dynamics and quality of the RDE's economic performance. Although Czech Republic together with other CEE countries did not represent significant role in worldwide flow of FDI of past couple years³³, FDI inflow could besides other generally positively identified effects be an indicator for economic credibility. After multinational companies find a way to new countries, mid-size and small-size companies can start to exploit similar possibilities these markets offer. FDI served also as a good source of financing CEE current account deficits which reached record highs in transformation process.

6.1.1. Investment incentive program

Until 1998 Czech Republic attracted FDI without explicitly specified and consistent investment incentives program (IIP), which resulted in worse position of Czech Republic in previous years. In 1998 government IIP decree was approved and in 2000 IIP act resulted into the creation of the regime in which foreign and domestic investors receive relatively consistent, transparent and competitive package of government incentives and stimulus. Czech IIP is fully compatible with directives of EU and thus accepted EU-wide. For the purpose of investment incentives Czech Republic has been divided into four district groups according to corresponding unemployment rate in relation to the national average.

As a part of IIP, two accompanying programs were approved:

- Program to support subcontractors: dedicated to increase the competitiveness of local contractors via information awareness between them and investors.

³³ For example according to UNCTAD annual report of FDI (UNCTAD, 2004, pp. 3), after a record year 2002, when FDI inflow to CEE reached USD 31bn (less than 5% of worldwide FDI flow), it fell sharply in 2003, to USD 21bn (less than 4% of worldwide FDI flow). Inflow into the EU accession countries shrunk from USD 23bn to USD 11bn respectively.

- Program to support creation of industrial zones: financial aid to municipalities to ensure area preparation for specific investor, who already asked for investment incentive or just general support to create industrial zones for potential investors.

Given that all the legal conditions are met, Czech Republic provides these incentives³⁴:

- Full 10-year income tax relief in a case of newly-established company, or partial 10-year income tax relief in a case of expanding or modernization of existing company.
- Financial aid for new job creation in amount of CZK 200,000 per employee in districts, where the unemployment rate is 50% or more above the national average, CZK 100,000 per employee in districts, where the unemployment rate is 25% or more above the national average.
- Employee training or retraining grants covering 35% of training costs per employee, where the unemployment rate is above the national average.
- Transfer of infrastructured land at a discount.
- Transfer of land owned by the Czech state at a discount.

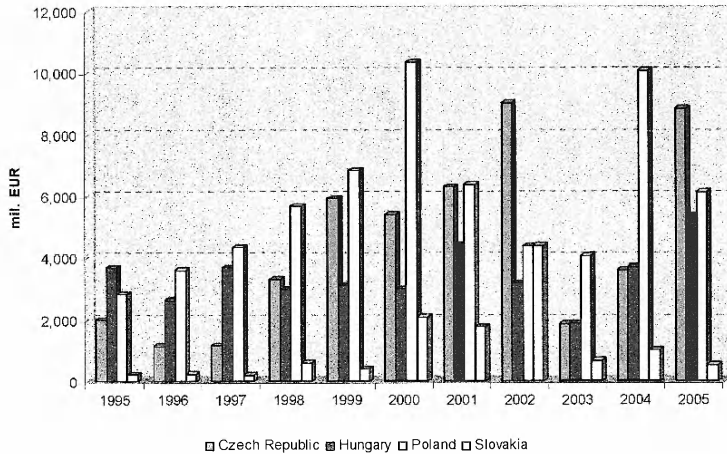
An investor in a given region can receive incentives of a maximum 20% to 50% of the investment into long-term tangible and intangible assets. The total amount of state aid is not only limited in terms of percentage but there is also an absolute maximum calculated from the estimated investment. The total amount of state aid actually granted cannot exceed this fixed, absolute amount for a given project. State aid is understood as tax incentives, financial support for creating jobs and, if applicable, the transfer of land at a favorable price.

³⁴ Valid as of May 1, 2004.

6.1.2. Volume and time factor

As it can be seen from figure 9 below, year 1998 was a breaking point in FDI development.

Figure 9: Total FDI in V4 countries during 1995 – 2005 period

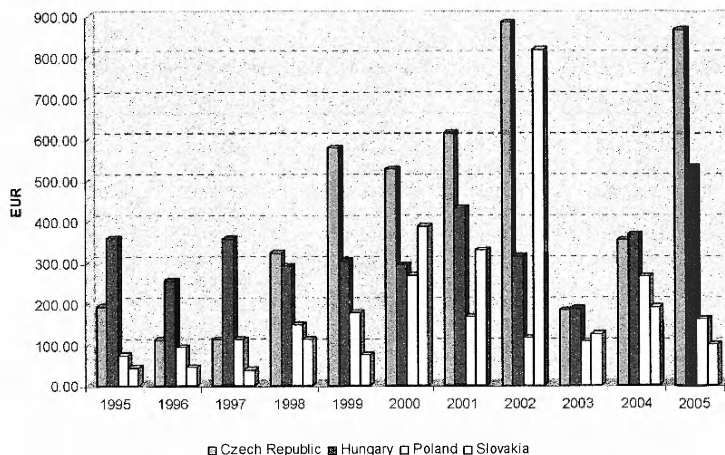


Source: Eurostat

At that time FDI inflow started to accelerate, Czech Republic caught up its main competitor, Hungary. Extremely high values of FDI inflow during 1999 - 2002 period were mainly due to large privatization projects³⁵. 1998 landmark is also important from already mentioned investment incentives point of view. As a matter of this positive change, Czech Republic has the highest or close to highest FDI per capita among V4 countries since 1998, see figure 10 below. Although there was a slowdown in 2003 and 2004, Czech Republic kept a step with its main competitors. In 2005 FDI plummeted back close to record highs, driven mainly by further privatization projects like Cesky Telecom and Unipetrol.

³⁵ Transgas privatization to RWE, biggest banks: Komerční banka, CSOB and Česká spořitelna to name just few.

Figure 10: FDI per capita in V4 countries during 1995 – 2005 period



Source: Eurostat, author's calculations

For the next periods, FDI into smaller projects than privatization ones are expected to gain importance. The location of these investments doesn't depend only on low costs but also on quality of labor, institutional environment and ability to innovate. Czech Republic's position in these FDI seems to be more favorable in comparison to other CEE countries. According to CzechInvest (Hospodarske noviny, 9 March 2006) Czech Republic managed to tackle well the competition for high value added FDI in 2005 and attracted 39 new projects in this segment. Czech Republic is competing for FDI not only with countries like Poland, Hungary, Slovakia or other new EU accessed countries, but also Republic of South Africa and obviously China, together with India.

Besides, Czech Republic ranks first in cumulative FDI per capita since 2000. In connection to possible relation of FDI to economic performance in longer term, it can be useful to look at average dynamics of cumulated FDI per capita during 1996 – 2005 period³⁶. From this point of view Czech Republic

³⁶ It is year-on-year percentage change in cumulated FDI per capita.

ranks third with the value of 32.63%, after Slovakia (38.71%) and Poland (32.92%).

Table 17: Dynamics of cumulated FDI per person during 1996 – 2005 period

	Czech Republic	Hungary	Poland	Slovakia
1996	34.85%	71.14%	81.30%	40.48%
1997	26.14%	58.40%	54.17%	24.53%
1998	59.73%	29.99%	45.90%	58.07%
1999	66.95%	24.05%	37.82%	24.43%
2000	36.57%	18.77%	41.57%	101.93%
2001	31.23%	23.19%	18.29%	42.92%
2002	34.27%	13.69%	10.61%	74.58%
2003	5.28%	7.16%	8.93%	6.50%
2004	9.68%	13.16%	20.32%	9.27%
2005	21.64%	16.83%	10.29%	4.44%
Average	32.63%	27.64%	32.92%	38.71%

Source: Eurostat, author's calculations

6.1.3. Geographical breakdown

Given the geographical breakdown of FDI to Czech Republic in table 18, we can see that Germany is the largest investor with more than 25% share, followed by Netherlands with almost 17% share and Austria with 9% share. This breakdown shows also countries with negative flow as FDI comprises not only primary investments in relevant year but also reinvested profit generated by previous investments, i.e. dividends transferred back to home country.

Table 18: Geographical breakdown of FDI to Czech Republic

In mil. EUR	2000	2001	2002	2003	2004	2005	Total 1993-2005
Belgium	57	180	464	-224	-42	148	2,088
Denmark	112	175	100	-11	-40	-10	414
France	252	1,718	151	603	-142	177	3,433
Germany	1,433	1,466	4,942	144	610	896	12,973
United Kingdom	171	484	-234	563	15	186	1,907
Italy	39	-2	135	64	41	23	430
Netherlands	1,123	1,059	1,305	-936	1,613	1,596	8,493
Austria	800	295	809	429	354	369	4,640
Sweden	160	23	115	-44	-26	234	686
Switzerland	247	196	288	121	148	207	2,295
Canada	168	81	-119	116	-99	0	169
United States	328	273	201	136	407	86	3,072
Japan	50	33	123	291	31	111	709
Other	464	317	731	611	1,136	4,814	8,927
Total	5,404	6,296	9,012	1,863	4,007	8,837	50,236

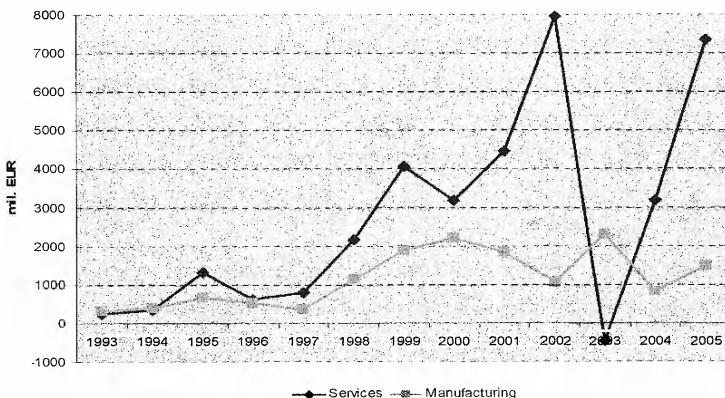
Source: Czech Statistical Office

Although the Germany leads the countries' ranking, the gap between Germany and Netherlands has been somewhat closing recently. Germany invested some EUR 1,500m in 2004 and 2005 together, while Netherlands more than EUR 3,200m. Figures for Netherlands are however distorted upwards as companies investing in Czech Republic officially come from Netherlands, which are in fact European filial and acquisition centers of US and sometimes UK based corporations. On the other hand, data for Germany and Austria might be distorted downwards due to potential impact of cross-border investments in close frontier regions, which are not fully reflected in the statistics.

6.1.4. Sector attractivity

It is straight forward from the figure 11 that majority of FDI in Czech Republic were directed into non-manufacturing sector, about 70%. Similar structure was seen in Hungary, while Polish and Slovak manufacturing sector accounted for about 60%.

Figure 11: FDI sector attractivity in Czech Republic



Source: Czech Statistical Office

There are only rough estimates about the real purpose of FDI inflows to Czech Republic. *“About 40% of FDI were due to mergers and acquisitions related to privatization projects of state owned property, then 30% were in form of so called “greenfield” and “brownfield” projects and finally remaining 30% represents other private mergers and acquisitions (joint-ventures, filial), when new companies were established”* (Král, P., 2004, pp. 19). It is second and third category that relates the most to the notion of business and financial relocation.

Let's look more rigorously at some specific sectors. Four categories within service sector are worth mentioning³⁷. The most important one is “Financial intermediation” as it accounts for more than 1/4 of all service classified FDI. Although this is significantly biased by the privatization of three biggest banks at the end of 90's and beginning of 00's, in 2005 FDI rebounded again to levels over EUR 1bn. It can be assumed that this is partly caused by more intensive financial relocation of back office tasks as well as more rigorous ones to Czech Republic, however the extent is questionable. Another important category is “Transport, storage and communications” with approximately same share as financial intermediation. There are two positive peaks visible, year 2002 and 2005. Similarly to banking sectors, privatization of Transgas in 2002 and Cesky Telecom in 2005 biased time series. There are two other categories with more than 15% share on total FDI into service sector, i.e. “Real estate and business activities”, and “Trade, hotels and restaurants”. Although service sector represents majority of FDI it is special category when we take it in connection to relocations. Only “Financial intermediation” and “Transport, storage and communications” can represent a possibility to meet the relocation classifications, however in limited way.

Manufacturing sector seems more appropriate to check for relocations. If we look at past development we can note that FDI into manufacturing sector has been constantly declining from the levels over 50% in 1993 to only 16% in 2005 and total share for the whole period of 30%. “Machinery and equipment” represents more than 1/3 of all FDI in this sector. In contrary to several hikes in

³⁷ See appendix A for detail sector structure of FDI in Czech Republic.

service sector due to privatization process, these FDI are less affected by this phenomenon and therefore more meaningful for analysis. Other sectors with the share over 17%, 15% and 11% are “Basic metals and metal products”, “Refined petroleum and chemicals”, and “Food and tobacco” respectively. Similarly to service sector, majority of categories within manufacturing sector achieved in 2005 increase in comparison to pre-EU entry year 2003. Taking these figures alone does not provide a real information about the phenomenon called relocation. Therefore it is necessary to look at least at non-domestic sales from these sectors abroad.

6.1.5. Non-domestic industry sales

As it can be seen from table 19, several sectors achieved important improvements in non-domestic sales. This can be partially explained by increased FDI in previous years. The most significant effects can be seen in sectors like “Food and tobacco”, where FDI increased significantly last year and non-domestic sales were up 30.3%. “Wood, paper and publishing” sector had 13.9% and 17.2% non-domestic sales increase in past two years, while FDI in this sector soared in 2004 to EUR 223m and accounted for 1/5 of all FDI in this sector in 1993 – 2005 period. Although “Refined petroleum and chemicals” sector saw FDI increase in 2004 and 2005, growth in non-domestic sales by 30.3% and 22.1% respectively is definitely influenced by dramatic crude oil price hike in the mentioned period. Another sector worth mentioning is “Basic metals and metal products” as FDI inflow since 2003 accounts for almost 60% of all FDI in the sector during 1993 – 2005 period. And this has been transferred into significantly higher non-domestic sales in 2004 and 2005. And finally “Machinery and equipment” sector seems as a good example although the important FDI came partly already in 2000 – 2001, and then in 2003. Thus augmentation in export sales can be seen already in 2002, continuing forward in 2004 and 2005. Completely opposite development can be seen in “Textiles, wearing apparel, and leather” as FDI inflow was negative in 2002 – 2004 period and export sales declined or remained more or less flat.

Table 19: Non-domestic industry sales

n mil. EUR	2001	2002	2003	2004	2005
Mining and quarrying	188	175	166	169	241
<i>y/y change</i>	<i>n.a.</i>	<i>-6.8%</i>	<i>-5.3%</i>	<i>2.2%</i>	<i>42.3%</i>
Manufacturing	23,711	28,247	29,339	35,995	41,329
<i>y/y change</i>	<i>n.a.</i>	<i>19.1%</i>	<i>3.9%</i>	<i>22.7%</i>	<i>14.8%</i>
Food and tobacco	726	740	787	942	1,227
<i>y/y change</i>	<i>n.a.</i>	<i>1.9%</i>	<i>6.4%</i>	<i>19.6%</i>	<i>30.3%</i>
Textiles, wearing apparel, and leather	1,434	1,418	1,310	1,312	1,327
<i>y/y change</i>	<i>n.a.</i>	<i>-1.1%</i>	<i>-7.6%</i>	<i>0.2%</i>	<i>1.1%</i>
Wood, paper and publishing	1,260	1,315	1,376	1,568	1,838
<i>y/y change</i>	<i>n.a.</i>	<i>4.4%</i>	<i>4.6%</i>	<i>13.9%</i>	<i>17.2%</i>
Refined petroleum and chemicals	1,839	1,819	1,827	2,380	2,907
<i>y/y change</i>	<i>n.a.</i>	<i>-1.1%</i>	<i>0.5%</i>	<i>30.3%</i>	<i>22.1%</i>
Nonmetallic products	2,500	2,836	3,073	3,646	4,038
<i>y/y change</i>	<i>n.a.</i>	<i>13.4%</i>	<i>8.4%</i>	<i>18.7%</i>	<i>10.7%</i>
Basic metals and metal products	2,917	3,237	3,397	4,351	5,064
<i>y/y change</i>	<i>n.a.</i>	<i>10.9%</i>	<i>5.0%</i>	<i>28.1%</i>	<i>16.4%</i>
Machinery and equipment	12,115	15,805	16,452	20,508	23,337
<i>y/y change</i>	<i>n.a.</i>	<i>30.5%</i>	<i>4.1%</i>	<i>24.7%</i>	<i>13.8%</i>
Recycling and other manufacturing	933	1,078	1,117	1,288	1,592
<i>y/y change</i>	<i>n.a.</i>	<i>15.6%</i>	<i>3.7%</i>	<i>15.3%</i>	<i>23.6%</i>
Electricity, gas and water supply	228	328	435	320	325
<i>y/y change</i>	<i>n.a.</i>	<i>44.0%</i>	<i>32.8%</i>	<i>-26.5%</i>	<i>1.6%</i>
Industry total	24,133	28,749	29,940	36,484	41,895
<i>y/y change</i>	<i>n.a.</i>	<i>19.1%</i>	<i>4.1%</i>	<i>21.9%</i>	<i>14.8%</i>

Source: Czech Statistical Office

To summarize this, we can suppose that some relocation activities have been in "Machinery and equipment", "Wood, paper and publishing", "Basic metals and metal products" as well as "Food and tobacco" sectors in direction to Czech Republic as it is considered according to EIU 2005 (www.eiu.com) as third most favorable country for offshore outsourcing after India and China. Although the relocation activities don't play such an important role on aggregated industrial basis, some acceleration has been noticed in past years within specific sectors. Undisputedly the phenomenon is more pronounced in services. In the Czech Republic, investments in such sectors as software and customer-service centers rose 150% in 2004 (Business Week, 2005, pp. 45). According to IBM, Hungary, Poland and Czech Republic ranked among the top 10 global destinations for R&D jobs in the 1H 2005. In Europe, only Britain attracted more R&D work.

6.1.6. Sector wage development

Although sectors attracted FDI in different volume, this development is not as obvious in changes of average nominal wages there as can be seen from table 20. One of the explanations might be that FDI represent only limited part in the whole sector and thus on average basis these differences are wiped out. It is however obvious that average nominal monthly wages are still relatively low and Western European companies can exploit these differences via relocations.

Table 20: Average nominal monthly wages in the industry sector

in CZK	2001	2002	2003	2004	2005
Mining and quarrying	17,661	18,808	19,720	21,169	22,479
<i>y/y change</i>	<i>n.a.</i>	6.1%	4.8%	7.3%	6.2%
Manufacturing	14,050	14,947	15,839	16,987	17,798
<i>y/y change</i>	<i>n.a.</i>	6.0%	6.0%	7.2%	4.8%
Food and tobacco	13,067	14,281	14,846	15,688	16,424
<i>y/y change</i>	<i>n.a.</i>	8.5%	4.0%	5.7%	4.7%
Textiles, wearing apparel, and leather	9,760	10,210	10,464	11,271	11,789
<i>y/y change</i>	<i>n.a.</i>	4.4%	2.5%	7.7%	4.6%
Wood, paper and publishing	13,994	14,872	15,714	16,734	17,476
<i>y/y change</i>	<i>n.a.</i>	5.9%	5.7%	6.5%	4.4%
Refined petroleum and chemicals	19,167	20,710	21,661	22,851	23,795
<i>y/y change</i>	<i>n.a.</i>	7.5%	4.6%	5.5%	4.1%
Nonmetallic products	14,682	15,678	16,650	17,481	18,075
<i>y/y change</i>	<i>n.a.</i>	6.4%	6.2%	5.0%	3.4%
Basic metals and metal products	14,938	15,609	16,412	17,746	18,390
<i>y/y change</i>	<i>n.a.</i>	4.3%	5.1%	8.1%	3.6%
Machinery and equipment	15,109	15,971	17,001	18,190	19,117
<i>y/y change</i>	<i>n.a.</i>	5.4%	6.5%	7.0%	5.1%
Recycling and other manufacturing	11,512	12,273	12,787	13,900	14,444
<i>y/y change</i>	<i>n.a.</i>	6.2%	4.2%	8.7%	3.9%
Electricity, gas and water supply	18,366	20,028	21,268	22,567	23,974
<i>y/y change</i>	<i>n.a.</i>	8.3%	6.2%	6.1%	6.2%
Industry total	14,477	15,401	16,308	17,460	18,279
<i>y/y change</i>	<i>n.a.</i>	6.0%	5.9%	7.1%	4.7%

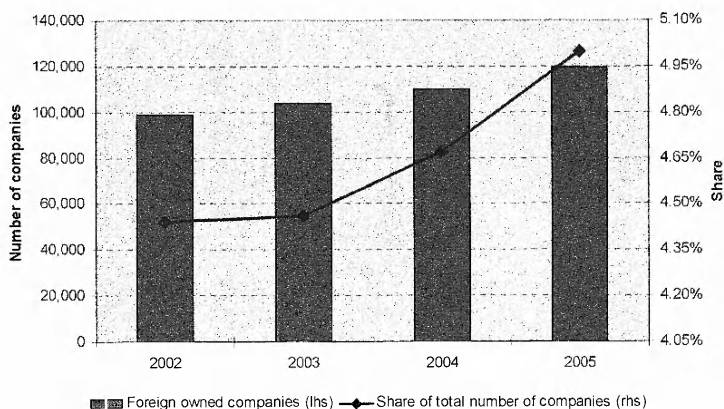
Source: Czech Statistical Office

6.1.7. Foreign owned companies

Number of foreign owned companies in Czech Republic is constantly growing and reached 119,322 at the end of 2005 and increased by almost 21% over the past 3 years from 98,662 at the end of 2002. Obviously the share of total number of companies in Czech Republic is marginal, however have upside trend, reaching 5% share in 2005. Foreign ownership is increasing especially in

mid-size and large-size companies with 20 and more employees, for example call centers of Lufthansa, Accenture, Acer but also other. Foreign ownership has accelerated after the accession of Czech Republic to EU from 5.23% y/y change in 2003 to 5.77% and 8.67% y/y change in 2004 and 2005 respectively. This might indicate the trend for further internationalization in upcoming years.

Figure 12: Number of foreign owned companies in Czech Republic

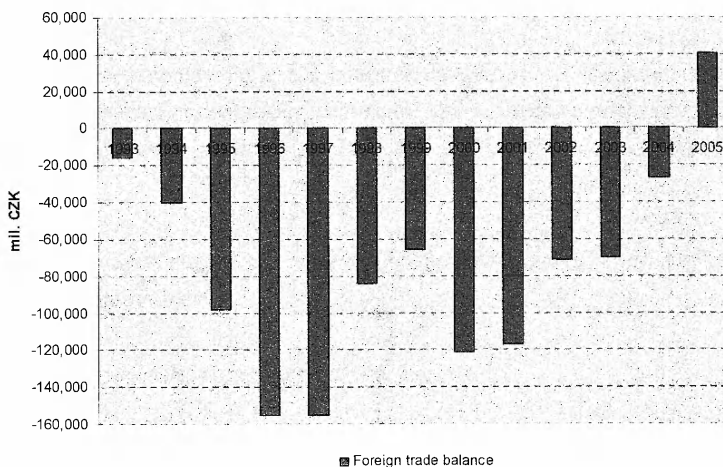


Source: Czech Statistical Office, author's calculations

6.1.7.1. The effects of foreign capital

Stellar performance of Czech Republic among V4 countries in attracting FDI mainly in late 90's and early 00's started to materialize. Negative foreign trade balance has been declining steadily since 2000 and in 2005 reached positive territory for the first time in history of Czech Republic, see figure 13. Shortly after first FDI started to play their role in production process, exports started to accelerate. They outperformed imports in percentage gains each year since 1997 and only year 2000 was an exception in this development.

Figure 13: Foreign trade balance during 1993 – 2005 period



Source: CNB

Although positive foreign trade balance is one possible aspect of FDI inflow there are also other. According to data from Czech Statistical Office (www.czso.cz), share of foreign owned companies with more than 100 employees on value added which was created in non-financial sector represents almost 40% and share of the same category on creation of fixed assets is about 35%. Besides foreign owned companies have higher productivity per employee than Czech owned companies and according to Král (Král, 2004) this difference is 150% of what is productivity per employee in latter. In addition foreign owned companies are more intensive in creating capital stock, i.e. in average 250% of that created by Czech owned companies. Foreign owned companies have also higher share of bought intermediate product, which may also indicate relocation of only certain stages of production process. As foreign companies can reach significantly higher productivity, while wage difference is limited, this favor relocation activities and offset cost and risk related with it. As the relocation phenomenon seems to step by step gain importance not only in manufacturing but also in services, however limited it is, CNB started to report category "Offshore financial centers" category for the first

time in 2005. In 2005 these FDI represented 1.21% of total FDI in Czech Republic and amounted to EUR 106.8 million.

More time is needed to get better comprehension of the phenomenon and its tendencies. Nonetheless, there are several reasons why companies from Western Europe relocate their production and services to Czech Republic. These are:

- A plentiful supply of relatively cheap, well-trained engineers and educated workers.
- Fast-growing and underserved local markets.
- Close proximity to rich Western European markets.
- Good infrastructure.
- Governmental investment stimulus.

7. Conclusion

From the theoretical point of view both firm internal and external factors have to be considered to understand and predict firm relocation as a spatial-economic phenomenon. Attention should also be paid to institutional factors like the various types of government policy.

International business and financial relocation as such is perceived from companies' point of view as positive and from political point of view as negative, at least in their home countries. However the real substance of relocation is intentionally vilified and not presented in the real light, partially because of unclear distinction between pure consequences of relocation and non-relocation. Basic motivations for companies' relocations are economic in notion. Globalization and technical headway reveals new ways of exploiting different factor endowment, factor prices and thus rationalize the production process. Back-end processing, call centers and accounting are among first functions that are being offshored thanks to improvements in international telecommunications capacity, and the concomitant step-change reduction in global telecommunications costs. Higher-value work has been added continuously, particularly in areas where there is an offshore abundance of what are otherwise scarce skills, e.g. software maintenance and development.

CEE region represents in this way potential relocation destination as wage levels are still a fraction of those in Western Europe, decent skill and language endowed labor force, cheaper material components, no time-zone difference and proximity resulting in low logistics costs. This mix makes CEE region favorable destination capable to compete with more favorite relocation targets as China or India. CEE region provides stable, predictable and economically healthy environment with minimal threat to companies' intellectual property rights, while this cannot be claimed by China.

Nonetheless the main target of this paper was to show if the international business and financial relocation is rightfully labeled as a job destructive with

significant effect on national market. Moreover, what are the most concerned sectors and which countries from CEE region that seems to benefit the most. Germany and France were chosen as examples.

German case showed that during 1997 – 2000 period no significant job exodus towards CEE region has been noticed. German multinationals have created 364,816 jobs in CEE and these newly created jobs have led to direct loss of 102,117 jobs in Germany. This job loss accounts only for 0.3 percent of total employment in Germany and is indeed a small number. It is necessary to stress that one job created in CEE country does not equal one job lost in Germany. This is mainly thanks to different productivity. Therefore, one job created in CEE is equivalent to a 0.57 job lost in Germany. In addition opening of a subsidiary in CEE creates new trading opportunities and intra firm exports to CEE create additional jobs in Germany. As the possibility to reduce labor costs when German multinational firms open an affiliate in CEE countries already in EU by up to 72 percent relative to their parent firms' cost in Germany, it is obvious that countries like Czech Republic, Slovakia or Hungary play more important role in relocation to CEE region than category of Other CEE countries.

Over the period 1995 – 2001, the impact of relocation seems to have remained limited in France however loud voices can be heard about severity of this phenomenon. On average 13,500 jobs have been relocated each year, i.e. 0.35% of the total number of jobs in French manufacturing, or 12% of "large downsizing". Job losses due to relocation towards low wage countries like CEE only represent half of all job losses due to the phenomenon. What is interesting point is that relocation is a little bit more frequent towards developed countries, especially towards countries bordering France and also to US. Relocation outsourcing concerns almost all industrial sectors, even if the impact varies greatly from one sector to another. The most pronounced sectors in connection to CEE region are manufacture of clothing and textile, electronics and the manufacture of domestic equipments.

Czech Republic with its geographical location, labor market conditions, investment incentives programs and emerged industrial clusters attracted majority of FDI among V4 countries. Some 70% of FDI to Czech Republic can be considered in connection to relocation phenomenon, as these were focused on greenfields & brownfields investments or other private mergers and acquisitions. Although services attract more FDI, manufacturing sector seems more appropriate to check for relocations. Non-domestic sales of "Food and tobacco" sector plummeted by 30% in 2005 and "Machinery and equipment" by 24.7% and 13.8% in 2004 and 2005 respectively. Recent improvements of non-domestic sales also contributed to historical first positive foreign trade balance. FDI and relocation development is reflected also in number of foreign owned companies in the whole economy, which is increasing steadily and reached decent 5% share.

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APPENDIX

A) FDI in Czech Republic – sector decomposition

In mil. EUR	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005 TOTAL
Nonman-ufacturing													
Agriculture, hunting, and forestry	2	1	6	0	6	7	6	9	32	-2	2	67	4
Mining and quarrying	12	18	18	6	0	15	234	83	41	29	27	108	42
Electricity, gas, and water supply	20	73	31	128	332	211	313	223	301	408	221	233	118
Construction	56	91	53	97	34	43	14	109	87	196	136	10	75
Trade, hotels and restaurants	34	30	114	226	110	745	1,378	595	796	267	579	596	461
Transport, storage and communications	3	8	1,044	147	1	313	185	276	921	4,669	-2,581	217	3,990
Financial, information and communications	120	117	53	26	284	497	1,412	1,012	1,757	1,574	790	615	1,047
Real estate and business activities	0	0	0	0	37	303	395	812	539	396	390	1,324	1,562
Education	0	0	0	0	0	0	0	1	1	0	1	0	0
Health and social work	0	0	0	0	6	19	3	18	2	29	-3	0	1
Other social and personal services	0	0	0	0	0	18	110	44	4	383	-18	-29	51
Total	247	339	1,319	629	791	2,172	4,049	3,182	4,451	7,949	-456	3,192	7,351
Manufacturing													
Food and tobacco	196	60	94	58	83	113	337	191	275	84	92	6	126
Textiles, wearing apparel, and leather	1	1	2	18	13	88	43	74	115	-37	-11	-9	42
Wood, paper and publishing	0	0	0	65	90	76	195	56	167	74	33	223	96
Refined petroleum and chemicals	16	37	70	267	45	53	370	323	122	271	78	215	399
Nonmetallic products	42	51	137	49	15	156	236	125	171	78	77	1	61
Basic metals and metal products	0	0	0	0	70	284	173	271	96	214	584	406	517
Machinery and equipment	57	247	360	54	14	300	424	1,140	900	348	1,463	-31	241
Recycling and other manufacturing	0	0	0	0	30	76	46	42	-2	31	2	3	4
Total	312	395	663	511	362	1,146	1,884	2,222	1,845	1,063	2,318	815	1,486
TOTAL	559	734	1,982	1,140	1,152	3,317	5,933	5,404	6,296	9,012	1,863	4,007	8,837

Source: Czech Statistical Office

Univerzita Karlova v Praze
Fakulta sociálních věd
Institut ekonomických studií

Bibliografická evidence vysokoškolských prací

<i>Název práce</i>	Mezinárodní delokalizace obchodních a finančních aktivit firem v návaznosti na region střední a východní Evropy
<i>Podnázev práce</i>	-
<i>Anglický překlad</i>	International business and financial relocation in connection to CEE region
<i>Typ práce</i>	diplomová práce
<i>Autor:</i>	Bc. Robert Keller
<i>Rok zpracování</i>	2006
<i>Vedoucí práce</i>	Prof. RNDr. Ing. František Turnovec, CSc.
<i>Počet stran</i>	85
<i>Ocenění-pochvala</i>	
<i>Specializace</i>	Finance, finanční trhy a bankovníctví
<i>Abstrakt česky</i>	Cieľom diplomovej práce je oboznámiť čitateľa s problematikou a rozsahom medzinárodnej delokalizácie obchodných a finančných aktivít spoločností do krajín s nižšími výrobnými nákladmi, tzv. nízkonákladové krajiny. Ide o ďalší stupeň v organizácii aktivít na globálnej báze s rôznorodými dopadmi na hostiteľskú i domovskú ekonomiku, predovšetkým v oblasti tvorby, resp. zániku pracovných miest. Práca mapuje vývoj tohto fenoménu v dvoch hlavných európskych ekonomikách, v Nemecku a Francúzsku vo vzťahu k spomínaným nízkonákladovým krajinám, v danom prípade štátom strednej a východnej Európy. Na druhej strane sa zameriava na Českú republiku, ktorá je hlavným cieľom priamych zahraničných investícií (PZI) na obyvateľa z krajín V4, a teda ako potenciálnu destináciu nelokalizovaných aktivít s dôrazom predovšetkým na sektorový rozbor jednak PZI, tak i tržieb z priameho vývozu.
<i>Abstract in English</i>	The focus of this master thesis is to introduce reader to the topic and range of international business and financial relocation to countries with lower cost of production, i.e. low-cost countries. It represents another step in globally organized activities with various effects on the host and home economy, especially in area of job creation or destruction. It focuses on the phenomenon progression in two main European economies, Germany and France in connection to mentioned low-cost countries, especially to