WORK MODELS UNDER STRAIN OF OFFSHORING
EAST-WEST COMPETITION IN THE EUROPEAN CAR INDUSTRY

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Revised version

1 Introduction

The changing division of labour between high-wage and low-wage countries in Europe and, in particular, the issue of relocation of production and employment to Central Eastern European (CEE) low-wage countries have provoked much public debate and controversy in Western Europe. But relocation does not only threaten Western European high-wage locations. Some observers are already talking about the “relocation caravan” moving on to the eastern neighbours of the new EU members Poland, the Czech Republic, Slovakia, and Hungary. The mobility of transnational companies seems to challenge employment and work standards in the West and the East.

From the Western European perspective, the changing division of labour between high-wage and low-wage countries in Europe poses two main questions. The first issue is the relocation of jobs, in particular in manufacturing. The second issue is the “regime competition” between different models of work regulation in Western and Central Eastern Europe. So-called “regime flight” (i.e., using low-wage locations as an exit option from the labour standards and collective bargaining regimes of Western European countries) by companies constitutes a threat because it could trigger competition to undercut labour standards and wages.

From the Central Eastern European perspective, the first main question related to the changing division of labour concerns the upgrading prospects for the region. Does the inflow of foreign capital promise to raise the level of competences of companies and employees in order to allow for a catching up of the living standard with Western Europe? Or do the CEE countries find themselves locked in a specialisation in low-skill and low-wage manufacturing with few prospects for a meaningful upgrading of skills, wages and work conditions, as some authors have suggested with reference to Mexican “maquiladoras”? The issue of industrial upgrading is linked with the development prospects of work
models in Central Eastern Europe. An important question is whether the work models in CEE countries follow a high road or a low road path.

In this paper, I analyse the development of work models in Western and Central Eastern Europe in a context of relocation and competition. In Western Europe, the focus is on Germany, the largest automobile producer in Europe and the largest automobile industry investor in Central Eastern Europe. The paper deals with three main questions:

1. Do German companies transfer their home country work models to Central Eastern Europe or do they seek to escape their home country model? The answer to this question serves to discuss the prospects for the “high road” development of work models in Central Eastern Europe.

2. How are work models in German automotive companies adapted in order to cope with the competition of low-wage countries? With regard to this issue, an important question will be whether this adaptation can reduce the pressure from the competition of low wage countries.

3. Does the competition of low-wage countries lead to a specialisation on human capital-intensive work in high-wage countries? This would imply the loss of low-skill manufacturing jobs in Germany.

The paper comes to the following answers to these three questions: Firstly, German firms transfer a “limited high road model” to Central Eastern Europe, which relies on skilled labour and cooperative industrial relations but at the same time sticks to low wages and a broad margin of precarious employment. Due to declining unemployment in CEE countries, however, the problems of this model are becoming apparent in form of labour conflicts and a very high fluctuation among skilled workers. Secondly, work models in the German automotive industry have been modified in order to cope with low-wage competitors. The main elements of the adaptation are wage reductions, working time extension and flexibilisation, and – in a few cases – also innovations in work organisation. The modifications will, however, be only a limited relief from competition with low-wage countries: The gap between wages in the West and the East remains big and Central Eastern European countries catch up in working time flexibility and systems of work organisation. Thirdly, there is a long-term trend of a declining share of blue collar workers in employment in the German car industry, which has accelerated considerably in the 1990s. Since 2001, not only the share of blue collar workers but also their absolute numbers have declined – a process which is partially linked to relocation. The losses of (low-skill) blue collar jobs have been compensated by growth of white collar employment, which is a sign of an increasing specialisation on human capital-intensive activities in general and on R&D and other activities related to innovation in particular.

This paper draws from research conducted together with Ulrich Jürgens at automotive firms in Germany and Poland in 2005-07 in the context of two research projects on the development of employment relations and on relocation in Europe, supplementary interviews being conducted in other Central Eastern European countries, as well as in Sweden. Parts of the paper are being published together with Ulrich Jürgens (Jürgens/Krzywdzinski 2008). The focus of the paper is on Germany, since it is by far the biggest motor vehicle producing country in Europe and, moreover, because German companies constitute by far the most important group of actors in the Central Eastern European automotive industry. In Central Eastern Europe, the data gathering concentrated on Poland, but supplementary interviews in other Central Eastern European countries addressed the issue of generalising results to the whole of Central Eastern Europe. For the case studies, key actors from the

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1 The project “European Socio-Economic Models of a Knowledge-Based Society” (ESEMK) examined the interaction of national institutions and company strategies in different countries and sectors (macro-micro interaction). In this project, we analysed the interaction between national and sectoral institutions of labour regulation and industry and company specific work models. The project was financed from the 6th Framework Programme of the European Commission. The project “Relocation and Work Models in the Automobile Industry” analysed relocation processes from Germany to Central Eastern Europe and the impact on work and employment in both areas. It was financed by the German Otto Brenner Foundation.
most important categories in the automotive industry (assemblers, major suppliers, local suppliers) were selected. The case studies investigated four foreign carmakers (VW, GM, Volvo, Toyota), two Polish bus producers (Solaris, Autosan), five large foreign component suppliers (Faurecia, Mahle, Lear, Delphi, Valeo), and three small Polish suppliers. In this paper, the analysis will focus on the case of Volkswagen as one of the flagships of the “German model”.

The following section provides a brief overview of the research debate: it presents the concept of work models and the distinction between high road and low road development; it discusses the literature on relocation and the East-West division of labour, on upgrading prospects in Central Eastern Europe, on the transfer of work models from Germany to Central Eastern Europe, and on the adaptation of work models in Germany. Section three examines the transfer of work models from Germany to Central Eastern Europe using the paradigmatic case of Volkswagen. The main focus is on the potential for developing high road work models in Central Eastern Europe. Section four looks at changes in work models in Germany resulting from interaction with low-wage locations in the East. Section five discusses the effects of relocation on blue collar manufacturing employment in the German automotive industry and the issue of specialisation on human capital intensive activities. The article comes to an end with concluding remarks.

2 State of the debate

In a first step of this section, the concept of work models and the distinction of high road and low road models will be developed. In a second step, I discuss the status of research on (a) the opportunities for industrial upgrading in the Central Eastern European car industry as a precondition for a high road development of work models, (b) on the actual evolution of work models in Central Eastern Europe, (c) on the Western European experience of relocation and relocation threats, and finally (d) on the adaptation of work models in the Western European automotive industry to the competition from low-wage countries.

2.1 High Road and Low Road Work Models

In developing the concept of work models, Jürgens and Krzywdzinski (2008) draw on the high road/low road concept from Sengenberger and Pyke (1992), who distinguish these two forms of development of industrial districts in global competition. „The ‘low road’ to restructuring […] consists of seeking competitiveness through low labour cost, and a deregulated labour market environment. […] The principal alternative to such ‘destructive competition’ is the ‘high road’ of constructive competition, based on efficiency enhancement and innovation; that is, through economic gains that make wage gains and improvements in social conditions feasible, as well as safeguarding workers’ rights and providing adequate standards of social protection” (Sengenberger/Pyke 1992: 12-13). Industrial sociologists identified the focus on quality production as a crucial element of a „virtuous circle of upmarket industrial restructuring“ (Streeck 1991: 54; Streeck/Sorge 1988), i.e. of the high road.

The debate on “high performance workplaces” (HPW) in Anglo-Saxon business studies also draws on the high road concept (cf. Applebaum et al. 2000; Legge 2005; Jacoby 2005). It is assumed that HPWs are particularly well suited for companies that concentrate on quality competition (Ramsay et al. 2000). In the HPW debate, “human resource bundles” (MacDuffie 1995), i.e., combinations of various human resource management practices with mutually reinforcing impact are examined (cf. Huselid 1995; Ramsay et al. 2000). The HPW discussion focuses on analysing the links between human resource bundles and company performance development (productivity and profitability). The central dimensions of HPW are involvement in problem-solving and decision-making, employee motivation, and the development of employee skills (Ramsay et al. 2000: 508).

The concept of work model used by Jürgens and Krzywdzinski (2008) derives from the productive model and governance compromise approach developed by GERPISA (Boyer/Freyssenet 2002).
productive model is characterised by a coherent link between product policy, organisation of the production process in the value chain and specific forms of labour relations. It is based on governance compromises between major actors in the company. In analogy to the productive model concept, a work model is defined as an ensemble of complementary employment practices (Jürgens/Krzywdzinski 2008; cf. Katz/Darbishire 2000: 10), which are assigned to five main dimensions: employment security, flexibility, skill and competence development, performance regulation, and interest representation (employee representation). In this context, complementarity means that these practices are mutually reinforcing in certain combinations.

Following Jürgens and Krzywdzinski (2008), I link the analysis of work models with the discussion on the differences between high and low road. High road and low road work models constitute differing complementary bundles of employment practices (cf. also Turner/Wever/Fichter 2001). A high road strategy needs a high level of employee skills and long-term skill and competence development. An important incentive for long-term investment in skill and competence development is a high level of job security. Employment security in turn presupposes a high level of internal flexibility (functional flexibility and working time flexibility). Figure 1 illustrates these links. Performance regulation must provide incentives both for internal flexibility and for long-term skill and competence development. A high level of employee involvement and the representation of their interests in management decision-making enhance the willingness for skill and competence development and flexibility. In short, a high road work model takes a long-term, investment-oriented attitude towards employee training.

In contrast, a low road strategy relies on low labour costs and the use of semi-skilled labour. Low wage levels are maintained not least by job insecurity and strong labour market competition between semi-skilled workers. The most important flexibility tool is adjustment of the number of employees (external flexibility through dismissals or temporary work). Figure 1 shows the links in this case, too. Low wages and low job security mean high conflict potential. In order to limit conflicts, management seeks to weaken or evade employee representation. Under these circumstances, long-term investment in employee skill and competence development is rational neither for the company nor for employees.
2.2 CEE Perspective: Opportunities for Industrial Upgrading in the Car Industry

Industrial upgrading is an important precondition for high road development of work models. Industrial upgrading is defined by Gereffi (2005: 171) as “the process by which economic actors – nations, firms, and workers – move from low-value to relatively high-value activities in global production networks”. White and Poynter (1984) differentiate between three forms of upgrading: (a) upgrading of the market scope, (b) upgrading of the product scope, and (c) upgrading of the value-adding scope, i.e. the acquisition of new manufacturing but also of development or marketing functions.

In the 1990s, shortly after the beginning of transformation, forecasts about industrial development in Central Eastern Europe were still predominantly sceptical. Guerrieri (1999) noted that although Central Eastern Europe had gained a share of the world market, it had specialised primarily in labour-intensive low-tech industries. Only Hungary had succeeded in gaining a market foothold in middle-tech industries. Lemoine and Freudenberg (1999) saw a clear specialisation in down-market and middle-market products in Central Eastern Europe, but they did note first signs of a change: “Between 1993 and 1996, the contribution to the trade balance improved for all Central European countries in up-market products, strongly contrasting with the situation of Balkan and Baltic states” (cf. Humphrey 1999; Janak/Pavlinek 2007).

The strategies of foreign companies have had a major impact on the insertion of Central Eastern Europe into the international division of labour and the resulting upgrading prospects. Kurz and Wittke (1998) identified two corporate strategies with respect to the division of labour between Central Eastern and Western Europe. The first strategy focuses on a “least-cost approach”, resulting in a division between high-tech in the West and low-tech in the East. Central Eastern European sites manufacture intermediate products with low vertical integration, whereas complex stages of production remain in Western Europe. The objective of investment in Central Eastern Europe under this strategy is solely to exploit low labour costs. The second strategy is oriented at “complementary specialisation”. In this case, complex production processes and capital-intensive plants are established in Central Eastern Europe as well as in Western Europe. The division of labour between East and West is based
not on a separation of different process stages but on different product specialisation. Western firms used Central Eastern Europe to expand their product range downwards into the low-price segment. Quality standards, production techniques, and workforce qualification standards are transferred from West to East. Kurz and Wittke cite VW’s takeover of Skoda and Fiat’s engagement in Poland as examples of this approach. Ruigrok and van Tulder (1998) argue in a similar vein in characterising Central Eastern European automotive sites as the “low end of the European car complex” (cf. also Sturgeon 1999; Lung 2003).

Case studies conducted by Jürgens and Krzywdzinski (2008) at automotive OEMs (VW, GM; Volvo) in Poland show a process of re-orientation and upgrading, which set in from the second half of the 1990s. It covers the following elements:

- The technological modernisation of sites, i.e., introducing the state of the art in the home country. At some plants like Skoda in the Czech Republic, modernisation began as long ago as the early 1990s, while in others like VW Poznań only at the end of the decade.

- The adaptation to the company-wide standardised systems of production organisation. Whereas OEMs like GM deployed the group-wide standardised production system in their sites from the outset, others, like VW, Fiat, and Volvo introduced elements of production organisation like teamwork or continuous improvement only at a later date.

- The broadening of CEE site competence regarding, in particular, functions of process engineering, logistics, and, to some extent, purchasing (cf. Fuchs 2005; Winter 2005). However, as we will see, this competence remains very limited.

- An expansion of the product range produced. Although small cars still have the biggest share of Central Eastern European automotive production, compact and even premium vehicles (Porsche Cayenne, VW Touareg, Audi Q7, Audi TT) are becoming more important. Moreover, the production of high value added aggregates like engines (VW, GM, Toyota) have been located in CEE countries. The production capabilities developed in the CEE countries can therefore no longer be classified only as the “low end of the European car complex” (van Tulder/Ruigrok 1998) or as “complementary specialisation” (Kurz/Wittke 1998).

- An export orientation towards the West. Since the end of the 1990s, over 90% of the automotive output of Central Eastern Europe has been exported, especially to Western Europe.

At the same time, Jürgens and Krzywdzinski (2008) point to limits to the upgrading of OEM sites in Central Eastern Europe. In the first place, research and development, as well as vehicle design are retained by headquarters at the home locations of the final producers. There are only two exceptions: Skoda in the Czech Republic, which constitutes an independent brand within the VW group and has its own R&D centre with a staff of about 1,200, and Dacia in Romania (Hirt 2007: 8). The concentration of research and development at the home locations of the vehicle manufacturers and the need for interaction between assemblers and suppliers also limit the possibilities for automotive component suppliers to outsource research and development to low-wage countries (Frigant 2007). However, the brief period of development that vehicle manufacturers and major suppliers have had in Central Eastern Europe has also to be taken into account. Fuchs (2005), looking at the production sites of two Western European automotive suppliers in Poland, argues that the question of establishing research and development in Central Eastern Europe has to be seen in the context of an evolutionary process. The plants she investigated began as simple production sites, which after a certain time assumed independent responsibility for monitoring the production process, and finally developed a small R&D department and a toolmaking division. However, R&D functions remain limited to minor adjustment development activities both in the case examined by Fuchs and in most case studies conducted by Jürgens and Krzywdzinski (2008).
2.3 CEE Perspective: High Road or Low Road Work Models?

Successful industrial development does not automatically lead to better work conditions and wages. Due to the dominance of foreign companies in the Central Eastern European automotive industry, the research debate about work models at company level has concentrated on the question of whether foreign firms transfer work models from high-wage countries to Central Eastern Europe or whether they use the CEE countries to “flee” from their home countries’ work models.

There is no consensus in the debate and the controversy roots in the concept of regime flight itself: a complete transfer of work models from one country to another is generally impossible due to institutions and actor constellations specific to each country, as became clear in the debate on hybridisation (cf. Boyer et al. 1998). Not every deviation from the pattern pertaining in the country of origin at a company's foreign location is therefore to be considered as regime flight. A deliberate wish to break with the home-country model must be apparent. There is often room for debate whether a deviation from a home country model represents an adaptation or a regime flight.

German companies represent the largest group of foreign companies in the Central Eastern European automotive industry and have been subject of studies most frequently. The importance of regime flight to Central Eastern Europe is disputed. Tholen et al. (2006) argue with regard to employee interest representation in German companies in Central Eastern Europe that German companies try to establish “social partnership” relations with trade union representatives according to the “German model”. By contrast, Dörrenbächer (2003), Fichter (2003) and Fichter et al. (2005) emphasise that in their case studies of German companies there were no efforts visible to transfer the German model of “social partnership”-industrial relations to Central Eastern Europe. Bluhm (2007) points to differences between large capital groups and small and medium companies (SMEs). In German capital groups, powerful works councils enforce the transfer of “social partnership” industrial relations to foreign sites whereas German SMEs are characterised by weak works councils which have no influence on work models at foreign sites. With regard to skill and competence development, Fichter et al. (2005) find that German companies in Central Eastern Europe show an investment approach towards the qualifications of the employees and sometimes even establish cooperation with local vocational training schools. In case studies conducted by Bluhm (2007), by contrast, most German companies in CEE countries withdraw from in-plant vocational training. With regard to employment protection and the preferred flexibility forms, Fichter et al. (2005) and Bluhm (2007) agree that German companies transfer their practices to Central Eastern Europe. Employment security for core employees is balanced by internal flexibility in form of working time and functional flexibility. Bohle and Greskovits (2005) argue, however, that there are fundamental differences between industries. In the car and machinery industry, companies offer employment security whereas in the electronics industry precarious employment (temporary work) and high labour turnover prevail.

Bluhm (2003) and Meardi and Toth (2006) point to individual cases of firms that have deliberately not transferred work models from their home countries, and which use Central Eastern Europe as an option for escaping the domestic regulatory framework. Only few authors (Ellingstad 1997), however, see regime flight as a general trend. In the current debate in Germany some authors argue that the modification of work models in Germany in form of longer and more flexible working times as well as a decentralisation of the collective bargaining system has rendered regime flight superfluous (cf. Bluhm 2000; Bluhm 2007: 280; Fichter 2005).

2.4 Western Perspective: Relocation and Relocation Threats

From the Western European perspective on the evolving East-West division of labour in Europe, relocation of production and jobs is one of the most important issues. The extent and the consequences of relocation in the German automotive industry are disputed. A survey among German automotive suppliers about their foreign activities in the first half of the 1990s revealed that only 34% of the companies had foreign production sites (Walker 1999). 38% of the suppliers with foreign
production sites (i.e. 13% of the sample) had relocated labour-intensive production in order to profit from low wages. 62% of the suppliers with foreign production sites (i.e. 21% of the sample) had expanded abroad in order to gain access to new markets. Later surveys show a higher amount of companies relocating production. According to the Fraunhofer Institute for Systems and Innovation Research (ISI), between 25% and 38% of German automotive companies had relocated production abroad in the years 1997-2001 (Kinkel/Lay 2005: 71). A survey of Ernst & Young (2004) found out that in 2003 38% of the automotive suppliers had already production sites in Central Eastern Europe and China. 90% (!) of the companies with production sites in CEE countries and China planned further relocation of production to these regions. In addition, 25% of the companies without sites in Central Eastern Europe and China considered relocation of production to these regions. Other studies, however, draw a much less dramatic picture of relocation. In a survey among 207 managers from the German automotive industry (PriceWaterhouseCoopers 2007) only 7% of the respondents stated that relocation is a means to reduce costs. For only 3% of the respondents, employment reduction in Germany was an instrument to reduce costs.

There is a lack of reliable data on employment effects of relocation processes. The European Restructuring Monitor (ERM) reports only very modest job losses due to relocation in the Western European automotive industry. The ERM collects press reports on restructuring, its reasons, and its impact on employment. It thus primarily records cases of outsourcing that have attracted public attention. They are likely to include only a proportion of all cases of relocation, so that the figures should be treated with caution. The ERM database reports 20,000 jobs lost in the Western European automotive industry between 2002 and 2007, i.e. 1% of the employment according to NACE 34 in five years and 0.2% of the employment per year. The countries suffering the biggest job losses through relocation, according to the ERM, are Portugal (5,700 jobs), Belgium (3,700), and the United Kingdom (3,500). France comes only in fourth place (2,600) and Germany fifth (1,700). The German Statistical Office (2008) estimates that 137,000 jobs were lost in the German manufacturing sector in the years 2001-2006 due to relocation, i.e. 27,400 per year (Statistisches Bundesamt 2008). Industry-level results of the study have not yet been published but if we assume that the German automotive industry is affected by relocation proportionately to its employment size, we can expect about 3,000 jobs lost in this industry per year. This is not much. It has to be taken into consideration, however, that low-skill jobs suffer disproportionately from relocation. According to the German Statistical Office (Statistisches Bundesamt 2008), 69% of the jobs relocated in the manufacturing sector were low-skill jobs, while only 46% of new jobs created by growth in the manufacturing sector were low-skill jobs. Similarly, Nunnenkamp and Spatz (2002) have argued that relocation has caused loss of low-skill jobs in the German automotive industry.

Whereas actual relocation to Central Eastern Europe has hitherto been limited though painful in each individual case affected, management threats of relocation have taken on considerable dimensions, with consequences for employment relations and work models. In fact, the number of cases where management threatened with relocation is much higher than actual relocations. The Institute for Economic and Social Research of the Hans Böckler Foundation (WSI) found out that in the years 2003-2005 relocation threats were made by 44% of the large German companies (with more than 1,000 employees); however, only 20% of the large German companies actually relocated jobs (Ahlers et al. 2007). The study also shows that the impact of relocation – the threat as well as the real act – differs according to whether relocation takes the form of offshoring (relocation abroad) or outsourcing (domestic relocation), and it turns out that domestic relocation in fact had more negative impact on working conditions than relocations abroad.

2.5 Western Perspective: Adaptation of Work Models

In view of the spread of relocation threats in the German and Western European automotive industry, the issue of a “race to the bottom” in working conditions is an important point of debate. In the case of Germany, most scholars agree that the “German model” of industrial relations and their institutions has been modified but not abandoned as a response to globalisation and relocation threats. Hassel
(2007: 272) concludes her analysis of the German collective bargaining and vocational training system with the following words: “Despite vehement public debates about the German industrial model, reform steps were taken in the traditional incremental manner that keeps existing institutions intact and adapts their functioning to a new environment.” Bluhm (2000: 16) argues about the repercussions of the globalisation of German firms on their home locations: “German firms hesitate to utilize the low cost option in proximity aggressively in their internal labor policy at home. Rather, they tend to avoid confrontations with their employees on production shifts. The necessity of collaboration between both sides of the border, the relative strength of workers in the domestic high-quality production system and the constraints of the industrial relations system provide explanations for this rather moderate behaviour.” The most important change has been the opening of the industry-level collective bargaining framework to company and plant level bargaining by the introduction of so called “hardship” and “opening” clauses (cf. Hassel 2007; Bispinck 2004). The opening clauses have provided the basis for concession bargaining in the form of so called “company-level employment protection agreements” concluded between management, works councils and union representatives. Local level agreements have developed to almost a second level of bargaining in addition to industry-wide wage agreements in the German automotive industry in recent years (cf. Jürgens/Krzywdzinski 2006; Bispinck 2004). Nevertheless, the company and plant level bargaining did not displace industry-level agreements. The change has taken the form of a “controlled decentralisation” (Bispinck 2004) in which the industry-level bargaining actors (trade unions and employers’ associations) determine the degree of freedom for local agreements and have to approve the compromises reached in local bargaining.

The continuity of industrial relations and their institutions does not mean that no changes have taken place at the company level. Relocation threats have been one of the factors which have led to a wave of concession bargaining in the German automobile industry. In the “employment protection agreements”, works councils and the metalworking union have made concessions concerning pay, working time, working time flexibility, and the use of temporary labour; in turn they have gained long-term employment and investment guarantees (cf. Jürgens/Krzywdzinski 2006 for employment protection agreements in the German car industry between 1993 and 2006). The Institute for Social and Economic Research (WSI) of the German Federation of Trade Unions has conducted a survey among works councils about the consequences of relocation and relocation threats. Sites where management raised the issue of relocation and even more where relocation actually took place reduced employment more than sites without relocation threats (see table 1). Works councils often agreed to concessions in order to prevent relocation: At company sites where relocation was an issue, 28% of works councils agreed to wage concessions and 31% agreed to working time extension.
Table 1. – Consequences of relocation threats and actual relocations in Germany (survey among works council members), in % of works councils

<table>
<thead>
<tr>
<th>At sites…</th>
<th>…with relocation threats but no relocation</th>
<th>… with actual relocation within Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Employment losses took place</td>
<td>40%</td>
<td>61%</td>
</tr>
<tr>
<td>• Working conditions have worsened</td>
<td>No data</td>
<td>46%</td>
</tr>
<tr>
<td>• Salaries and wage concessions</td>
<td>No data</td>
<td>28%</td>
</tr>
<tr>
<td>• Working time extension</td>
<td>No data</td>
<td>31%</td>
</tr>
</tbody>
</table>

Source: Ahlers et al. 2007.

The responses to relocation are not restricted to wage concessions and longer working times. The flexibilisation of work models and in particular the flexibilisation of working times has remained an important strategy of works councils and companies in the German car industry (Jürgens/Krzywdzinski 2006). The case of the BMW plant in Eastern German Leipzig is an interesting example of how flexible working times can improve the competitiveness of high-wage locations (cf. Pries 2006). The plant in Leipzig started production in 2005 and employed about 5,500 persons in 2007. BMW decided to locate its new plant in Leipzig despite a competing offer from the Czech city of Kolin. There were several reasons for the decision: a public subsidy amounting to about 30% of the investment, good infrastructure, proximity to BMW’s Bavarian plants, and availability of qualified workforce in Eastern Germany whereas there are labour shortages in the Czech Republic. An important factor was also the fact that Eastern Germany constitutes a low-wage region within Germany. There is a 20% difference in hourly wages in the metalworking sector between Western and Eastern Germany.

But according to Pries (2006), the managers and the works council of the Leipzig plant emphasise another factor which supported the decision to build the new plant in Leipzig: very high working time flexibility. BMW and its German works council agreed to extend the maximum plant operation time in Leipzig to 140 hours per week – 40 hours more than in Western German BMW plants. As a part of this agreement, the works councils admitted regular early shifts on Saturday and up to 30 late shifts on Saturday per year. Up to 200 working hours can be accumulated on working time accounts. The agreement on plant operation time, on Saturday work, and on working time accounts allows the Leipzig plant to vary its operation time from 60 to 140 hours per week without additional labour costs. This results in a flexible break-even point in Leipzig whereas the Czech competitor Kolin offered lower labour costs but a fixed break-even point due to a rigid working time regulation. “In the case of BMW Leipzig, work and working time flexibility, as well as a culture of ‘cooperative conflict partnership’, played a decisive role in counterbalancing the disadvantages in direct labour costs. Focusing on innovation competition and on ‘soft factors’ of competition could be a sustainable alternative to a business model based exclusively on cost competition” (Pries 2006: 11).
2.6 Summary

In examining work models in Western and Central Eastern Europe, I am interested in whether they are converging in the sense of high road development, or whether the shift in the East-West division of labour has led to competitive underbidding with regard to working conditions.

From the Central Eastern European perspective on the East-West division of labour, it is important which opportunities exist for industrial development, which is a precondition for a high road development of work models. The literature shows that the evolution of the East-West division of labour in the European car industry is characterised by an upgrading process in Central Eastern Europe with regard to product range, production capabilities and functional competences. This upgrading eroded the high end/low end constellation which dominated in the 1990s – although there are clear limits of upgrading in CEE countries in particular in the domain of R&D. Successful industrial development, however, does not always imply an upgrading of work models. The literature draws a differentiated picture of the development of work models in Central Eastern Europe. Regime flight, in the sense of “fleeing” from Western European high road models in favour of the low road in Central Eastern Europe, is not a general trend in the car industry. The absence of consensus in the research debate with regard to the transfer of work models to Central Eastern Europe suggests, however, that a variety of company approaches exists.

From the Western European perspective, employment losses due to relocation seem to be limited but there is a lack of reliable data. In any case, relocation threats are much more wide spread than actual relocations. In the case of Germany, the main institutions of labour regulation have shown a surprising stability despite all debates about their sustainability in times of globalisation. Beneath the level of institutions, however, relocation threats have enforced considerable modifications of work models in form of lower wages as well as longer and more flexible working times.

In the following section, the development of work models in Western and Central Eastern Europe will be examined in more detail. I start with the question whether German firms transfer high road work models to Central Eastern Europe and turn then to the adaptation of work models in Germany.

3 Evolution of Work Models in the East: The Case of German Companies in Central Eastern Europe

In this section, case studies of German companies are analysed against the background of the distinction made at the outset between high road and low road work models. The question is whether firms transfer high road work models to CEE locations or whether they use them as an opportunity to escape from Western European standards and rules (regime flight). The focus will be on the case of Volkswagen, one of the flagships of the “German model”. Due to the paradigmatic role of Volkswagen, this case study is particularly telling for the question of regime flight.

Given the very different institutional settings in Germany and in Central Eastern Europe (cf. Jürgens/Krzywdzinski 2007; Kohl/Platzer 2003), the definition of regime flight and regime transfer is difficult. Several elements of the “German model” like the industry-level collective bargaining system or the works council legislation cannot be transferred by companies from Germany to other countries. Due to different national institutional settings, regime transfer cannot only mean that companies transfer their practices one-to-one. In cases in which institutional differences prevent a direct transfer it is nevertheless possible to speak of regime transfer when companies retain the main ideas behind their home country models abroad and look for functional equivalents. Not every deviation from the pattern pertaining in the country of origin at a company's foreign location is therefore to be considered as regime flight. A deliberate wish to break with the home-country model must be apparent.

The Volkswagen Group has a large number of sites in Poland, Czech Republic, Slovakia, and Hungary. The following analysis is based on interviews collected at the Volkswagen Commercial Vehicles manufacturing plants in Poznań/Poland and Hanover/Germany and supplemented by
interviews at other VW sites. Volkswagen has been producing commercial vehicles since 1950, when the transporter T1 was created on the basis of the Beetle. Since 1956, the transporter has been produced in the parent plant in Hanover, which remained Volkswagen’s only commercial vehicle plant in Europe until 1993. The situation changed in 1993 when VW initiated cooperation with the Polish manufacturer Tarpan in Poznań (Poland), taking over the site entirely in 1996. Work started with SKD assembly of transporters produced in Hanover and Skoda passenger vehicles from the Czech Republic to avoid customs barriers. Production was solely for the Central Eastern European market. In the second half of the 1990s, there was a shift to CKD assembly, and, due to the lack of sales opportunities in Eastern Europe, exports to Western Europe began. As assembly activities expanded and output was increasingly destined for export to the West, quality assurance was improved and certified. In the early 2000s, finally, it was decided to expand the Poznań plant into a fully integrated facility and to establish a new product there (the city delivery van “Caddy”). The modernisation of the plant was accompanied by strong expansion of the workforce. It grew from a good 2,000 in the second half of the 1990s to just under 7,000 in 2005. Location of a specific product in Poznań also expanded the competence profile of the site: the plant assumed responsibility for production ramp-up (prototype construction, pre-series production), certain competencies in process engineering, and, to a limited extent, in logistics and purchasing.

To explore whether Volkswagen transferred its German work model to Poland, five dimensions will be analysed: interest representation, qualification and skill development, employment protection, flexibility, and work organisation.

Interest representation: Both the management and the trade union at the Polish VW plant emphasise how important cooperative industrial relations and the culture of a “cooperative conflict resolution” are as central elements of the “Volkswagen model”. Both actors agree that this model is transferred from Germany to Poland and other CEE countries (interview 7.7.05). Conflicts are solved by bargaining and there has been no strike since VW took over the plant. There are limits of regime transfer, however. Even if the management stresses that informing and consulting the trade union goes beyond the standards provided for in the Polish law, the Polish trade union has no codetermination rights comparable to German VW standards. The organisational resources of the union representation at the Polish VW plant are much weaker than those of works councils at German VW plants of comparable size. So called “location symposia” (Standortsymposien), i.e. meetings between VW’s executive board, the plant management, and the works council in order to discuss the situation and the development of particular plants, which regularly take place in Germany, are not practiced at Polish or other Central Eastern European locations of VW. The management of the Polish VW plant argues that the site does not have enough autonomy and that the local trade union does not have enough competence in order to justify a “location symposium” (interview 8.7.05). VW represents thus a case of “restricted” regime transfer. There is no consensus in the research debate whether this case can be regarded as representative. Company case studies conducted by Tholen et al. (2006) show a similar pattern: German companies transfer the main idea of “social partnership” industrial relations to Central Eastern Europe without showing the interest to provide the trade unions in Central Eastern Europe with the same or with a comparable level of rights as in Germany. Bluhm (2007) argues that CEE subsidiaries of large German companies follow the pattern of “social partnership” relations. Subsidiaries of German SMEs though are most often characterised by anti-union attitudes of the management. Bluhm (2007) sees the varying influence of works councils in large companies and in SMEs as the main factor behind this difference: Only in large German companies are works councils strong enough to enforce the transfer of the “social partnership” approach abroad. Case studies conducted by Dörrenbächer (2003), Fichter (2003) and Fichter et al. (2005), by contrast, show that German companies in Central Eastern Europe exhibit little interest in cooperative industrial relations and “social partnership”.
Qualification and skill development: The management of the Polish VW plant stresses the importance of a qualified work force and the company’s efforts to increase the qualifications of its employees. As VW took over the plant in the early 1990s, it could rely on a core of experienced employees from the former Polish car company Tarpan and recruit skilled workers from state-owned manufacturing companies which had to reduce employment. Due to this initial situation, about 70% of the production workers at the Polish VW plant have a vocational school degree and 30% have diploma from humanistic or technical high schools. As the expansion of the plant and the decrease of unemployment in Poland in the first half of the current decade resulted in difficulties to recruit skilled workers, Volkswagen started a pilot project of an apprenticeship training for mechatronics in cooperation with a Polish vocational training school in 2005 (Interview 8.7.05). The curriculum copies the German apprenticeship training for mechatronics. This practice represents a “restricted regime transfer”: The Polish VW plant copies the vocational training as an element of the German model, but this practice is limited to one urgently needed occupation and a small number of apprentices. Several studies confirm that German companies in Central Eastern Europe show an investment orientation towards qualifications of employees (Fichter et al. 2005; Bluhm 2007). All Volkswagen sites in Central Eastern Europe (as well as the Volkswagen brand Skoda) offer dual vocational training for occupations particularly in demand. In Poland, the German supplier Mahle also practices a dual system of vocational training (Jürgens/Krzywdzinski 2007), and Bluhm (2007: 264f) reports that Bosch has a similar system in the Czech Republic. However, efforts to coordinate training throughout the sector or the country, such as those undertaken by the German-Czech Chamber of Foreign Trade (interview 21.2.06; Bluhm, 2007), have failed. It is possible that “free riders” will poach the skilled workers, gain a competitive advantage from having saved the cost of training, and undermine the existing vocational training efforts. The weakness of labour and management associations and accordingly of inter-company coordination mechanisms in Central Eastern Europe could encourage such conduct. Hence it remains to be seen whether the investment orientation towards qualification will be retained by the companies despite the lack of a coordinating institutional setting.

Employment protection and flexibility: Due to the focus on skilled workers, VW’s Central Eastern European sites are interested to bind employees and to have a stable workforce. The central role of employment protection, which is characteristic for the “VW model” in Germany is, however, explicitly not transferred abroad (Interview 8.7.05). Job security is restricted to a smaller kernel of employees, so that there is a broader margin of precarious employment. This margin is due in the first place to a greater use of temporary employment than is usual in Germany. The CEE sites of Volkswagen use to have a buffer of temporary agency workers of about 10-20% of the workforce, compared to an average of 2% at German VW sites. At the Polish VW site, temporary agency work has been used as the primary means of recruiting personnel. Although a part of the temporary workers finally got permanent contracts, the plant management regards a share of 10-15% of temporary agency workers in total employment as a necessary flexibility buffer (Interview 15.1.07). Jürgens and Krzywdzinski (2007) found this practice of a high share of temporary agency workers in almost all of their case studies of foreign automotive companies in Poland. Besides agency work, fixed-term contracts represent a further practice limiting employment security. In particular in Poland, many companies in the metal sector use fixed-term contracts lasting several years (Jürgens/Krzywdzinski 2007). According to Bluhm (2007: 262), the strong segmentation between a limited core of secure employment and a large margin of precarious work places is a characteristic of work models of German companies in Central Eastern Europe. In some cases, managers justify the high share of temporary agency workers and fixed-term contracts by the rigid working time regulation in Central Eastern Europe (Interview 4.5.05). Many German companies have been very interested to transfer the German practice of working time accounts to Central Eastern Europe (Interview 11.5.06; 13.2.06; 6.9.06; cf. Fichter et al. 2005). Until the end of the 1990s, this transfer was not possible because the labour law in all CEE countries did not allow working time accounts.
Meanwhile, all Central Eastern European countries with the exception of Poland have flexibilised their labour law and allowed working time accounts. The introduction of working time accounts, however, did not reduce the use of temporary agency work.

✓ Work organisation: During the 1990s, the VW management did not transfer the work organisation implemented in German plants to Poland (Interview 7.7.05). In Germany, Volkswagen had started to develop team work concepts in the early 1990s and had expanded them during the decade. In the Polish plant, the management gave priority to a fast start of production, implemented a tayloristic form of work organisation, and set the introduction of team work aside. Until 2006, no team work, no rotation of tasks, and no inclusion of line workers in continuous improvement activities were practiced in the Poznań plant. Since 2006, however, the plant started first to introduce continuous improvement activities at the shop floor, and later also to implement team work (Interview 15.1.07). The case of Volkswagen in Poland represents a “delayed” transfer. VW Poznań started to implement team work and continuous improvement processes as soon as it thought the production process to be stable and the employees to be experienced enough. This cautious approach to transferring work organisation is, however, an exception. In case studies in companies which had a standardised productions system like GM, Toyota or Faurecia (Jürgens/Krzywdzinski 2007), the companies transferred the work organisation from the beginning of operation of their Central Eastern European sites (Interviews 30.8.05; 14.2.06; 6.9.06).

To summarise, the Volkswagen case study shows a limited transfer. The company transfers main principles of its work model in Germany to the Central Eastern European low wage countries: an investment orientation towards qualifications of the employees, the interest in cooperative industrial relations and in a stable core work force. The transfer of main principles, however, does not imply the transfer of all practices, even if some practices in Germany (like the mechatronics vocational training) are copied at the CEE plants. The investment orientation towards qualifications does not include efforts to create functional equivalents to German coordinating institutions (business associations and cooperation with the state) in Central Eastern Europe; there are cooperative relations with the trade union representatives in CEE plants but the unionists lack the rights and resources of their German homologues and are not involved in decision making processes; the company attaches importance to a stable core work force but this core is much smaller than in Germany and is accompanied by a broad margin of precarious employment. Volkswagen transfers a “German model light” to Central Eastern Europe.

Overall, this can be interpreted as a “limited high road model”: the model relies on skilled labour and reaches the quality and productivity standards of the company’s country of origin, but at the same time it sticks to low wages and a broad margin of precarious employment. The potential complementarities of high road models are not exploited to the full. The reason is the high level of unemployment even among skilled workers in Central Eastern European countries prior to EU accession: companies could draw on sufficiently qualified and motivated workers without having to optimise their internal work models to generate skills and motivation among the workforce.

In view of declining unemployment since the EU accession of the Central Eastern European countries, the problems of the limited high road model are now becoming apparent in the form of labour conflicts in a number of companies and in the form of very high fluctuation among skilled workers. According to a study of the Polish statistical office (GUS 2007), about 2 million Poles have left Poland and work in Western Europe. In several case studies conducted together with Ulrich Jürgens, the companies had to deal with a high labour turnover of 15-20% per year which concerned in particular skilled workers (interviews 14.2.06, 30.5.07). An expression of the pressure to increase wages and to improve work conditions is the wave of protests and strike threats which has hit the Polish automobile industry in 2006 and 2007. In the cases of MAN, VW, Toyota and GM, it was the first time that unions protested publicly and threatened to strike. In all cases, the unions demanded wage
increases of about 15-20% which is much higher than the inflation rate. Similar conflicts have taken place at Skoda in the Czech Republic and at Dacia in Romania.

As a KPMG (2007) company survey in Poland shows, the first response of firms to labour migration has been to raise wages and invest more in human resources development. The companies stressed that greater efforts were needed in human resources development and improving pay to counteract emigration and the resulting labour shortages. Remarkably, no fewer than 31% of companies were in favour of raising the minimum wage in order to increase wage levels and contain emigration. This points towards a strengthening of high road development. However, this development is threatened by the lack of coordinating institutions (training system) and by competition with other low-wage countries. Even if there has so far been hardly any relocation to other low-wage countries, such movement could increase as wages rise in Central Eastern Europe and countries like Ukraine gain in political and economic stability.

4 Adaptation of Work Models in the West: Opportunities and Limits

Three main changes of work models in Germany can be interpreted as responses to competition from and relocation to Central Eastern Europe and other low wage regions: (a) wage and working time concessions, (b) higher flexibility in particular with regard to working time, and (c) innovative forms of work organisation. So called “employment protection agreements” between management and works councils have been the main form to negotiate the changes. With the exception of BMW, all carmakers in Germany, as well as some 100 component suppliers have concluded such agreements until 2006/07. While employment protection agreements exist also in other countries, they are much more sophisticated and wide-ranging in Germany. This section briefly presents the changes and discusses the question of whether they are suited to relieve pressure from relocation threats.

4.5 Wage and Working Time Concessions

Wage and working time concessions play an important role in the “employment protection agreements” in the German automotive industry. Their form and extent differ from company to company. In this section, the concessions agreed on at Volkswagen during the last years will be briefly described. The question is how they change the pay difference between Germany and Central Eastern Europe.

At Volkswagen in Germany, wage and working time concessions have been introduced first in form of special collective agreements for parts of the enterprise (cf. Figure 2). At the beginning of the current decade, Volkswagen created Auto5000 GmbH (cf. Schumann et al. 2006) to produce a new car model whose employees receive monthly wages 5% lower than the core employees. The extension of working time to 35 hours per week compared to 28.8 hours for the core employees (until 2007) meant that the hourly wages were in fact 21% lower compared to what the core group of VW employees received. In 2002, Volkswagen created AutoVision, a VW-owned temporary work agency which deploys agency workers at several VW sites. They receive lower wages than VW employees and work the 35-hours week. This leads to a factual difference of 26% in hourly wages compared to the VW core staff until 2007. Since 2004, wage and working time concessions reached the main VW collective agreement. In 2004, special clauses regarding pay and working time for newly hired employees with entry date 2005 were introduced. The monthly wages of this group are on average 8% lower and the working time is at 35 hours a week. Due to the longer working time, the hourly wages for this group of employees were 24% lower compared to the core group until 2007. In 2007, finally, the new collective agreement for Volkswagen increased the working time for core employees from 28.8 to 33 hours without additional pay, what means a reduction of hourly wage costs of 13%.

The development of the pay level at Central Eastern European sites of Volkswagen can be illustrated using the case of the Polish production site in Poznań. The wages at other sites of VW in
Central Eastern Europe are similar, in some cases like Skoda slightly higher. The monthly wage for skilled workers at VW Poznań increased from 325 € in 1994 to 741 € in 2006. With regard to the hourly wage costs of Volkswagen’s core staff in Germany in 1994 and 2006, there has been an increase of only 8%, mainly due to the working time extension. During the same period, the hourly wage costs in € at VW’s Polish production site in Poznań increased by 128%. The difference between Germany and Poland, however, remains significant. The hourly wage costs of VW in Poland amounted to 11% of the German level in 1994 and to 23% in 2006. It is to expect that a considerable incentive to shift production from Germany to Central Eastern Europe will persist still for a long time.

Figure 2. – Wages and working times at Volkswagen in Germany and in Poland, 1994-2006

Source: Own presentation. Wages for skilled workers (Facharbeiter).

In the German case, VW wage scale 8.

4.6 Working Time Flexibility

From the point of view of the companies, higher working time flexibility has two forms: Firstly, the introduction of three-shift systems and of weekend work in order to increase plant operation time and reduce fix costs per unit produced; secondly, the introduction of working time accounts in order to eliminate additional costs of overtime work.

The introduction of three-shift systems in the European automotive industry took place in the 1990s (Lehndorff 2001). Since the end of the 1990s, Saturday and Sunday shifts have become an important topic of bargaining and conflicts. High wage countries like Germany and France have been in the front line of the extension of plant operation times, but Central Eastern European countries are not lagging behind. In the study of operation times of European car plants conducted by Lehndorff (2001), the Skoda plant at Mlada Boleslav (Czech Republic) belonged to the sites of the VW Group with the longest operation times. In the Polish car plants studied by Jürgens and Krzywydżinski (2007), the rule was three-shift work on five days per week and additional Saturday shifts if required. The following figures 3 and 4 show the share of employees on the manufacturing sector in different
European countries working regularly on Saturdays and Sundays. They are based on data from the European Working Conditions Survey conducted by the European Foundation for the Improvement of Working and Living Conditions in 2005. Employees in Central Eastern, Southern Eastern European countries and Turkey work more often on Saturdays and Sundays than in Western Europe. It can be expected, therefore, that there is no systematic advantage of Western European plants compared to Central Eastern Europe with regard to plant operation times.

Figure 3. – Employees in the manufacturing sector (NACE C-F) regularly working on Saturday, 2005

Figure 4: Employees in the manufacturing sector (NACE C-F) regularly working on Sunday, 2005

Working time accounts are an important instrument to make working times more flexible. With the introduction of working time accounts, the actual weekly working time can vary and the deviation from the standard working time is accumulated on accounts, which have to be cleared within a given period of time, often a year or two. Within this period, working time accounts allow the companies to adapt
the working time to the cyclical variation of the production output without additional costs in form of overtime premiums.

Working time accounts exist in nearly all companies in the German automotive industry. They have been introduced in the first wave of employment protection agreements in 1993-1996 and have been expanded since then. In employment pacts in the years 2004-2006, companies have reached a further extension in the accounts’ capacity and clearing period (cf. Jürgens/Krzywdzinski 2006: 42). At Volkswagen, for instance, working time accounts can take up ±400 hours for an unlimited period.

Central Eastern European plants, however, catch up in working time flexibility compared to their Western competitors. In the 1990s, working time accounts were not yet possible in Central Eastern Europe due to rigid labour legislation. Since the end of 1990s, Hungary, Slovakia, and the Czech Republic have reformed their working time regulation and introduced the possibility of annualised working time accounts. Poland is the only country in Central Eastern Europe where working time accounts are still not allowed (state 2008), but German companies lobby hard to reach a change in labour legislation. Step by step working time flexibility loses the character of an exclusive advantage of Western European high wage countries even if the development of working time accounts is yet more advanced in the West than in the East.

4.7 Innovative Work Organisation

Innovative work organisation (cf. Schumann 2003) can contribute to increasing the competitiveness of production sites in high-wage countries. In the German debate about production and work organisation systems, innovative work organisation has been characterised by job enlargement and enrichment (inclusion of indirect maintenance and planning tasks in direct production work) and by self organisation in the sense of team work in which teams decide themselves about the division of tasks and in which the extent of hierarchical control by supervisors is strongly reduced. In the Anglo-American debate, a related approach can be found in the “high performance workplaces” debate (Applebaum et al. 2000), which emphasises skill development and autonomy (cf. Ramsay et al. 2000).

One of the most known projects of innovative work organisation in Germany is Auto5000 at Volkswagen. The project started in 2002 and was explicitly seen as a response to relocation pressure from low-wage countries and as an experiment to explore how high-wage locations can retain competitiveness without giving up wage and work standards (cf. Klobes 2005). Volkswagen built a new plant in Wolfsburg and recruited 3,500 formerly unemployed persons (originally it was planned to recruit 5,000 unemployed) for the production of a new vehicle model. The competitive advantage of Auto5000 relied on two pillars: First, it concluded an own collective agreement with lower wages and longer working times than provided by VW’s main collective agreement (see section 5.1). Second, it introduced a new form of work organisation which includes “holistic job contents” and “enhanced discretion” (Auto5000 Collective Agreement), flat hierarchies, close communication between direct production workers and indirect employees (maintenance, industrial engineering, quality assurance, logistics, distribution), and an interconnection of work, qualification, and continuous improvement activities (Schumann et al. 2006). According to Schumann et al. (2006), about one third of the cost advantages of Auto5000 in comparison to “conventional” production at VW result from the innovative work organisation, and about two thirds from lower wages and longer working times.

Schumann et al. (2006) argue that Auto5000 demonstrates a particular strength of German high-wage manufacturing: the creative cooperation of agents with functional know-how (management, engineers, technicians, skilled workers), and the ability to adapt remuneration and performance regulation in a consensual way which takes into consideration the different interests involved. But can innovative projects like Auto5000 (for some other examples see Kuhlmann et al. 2004) be interpreted as a general argument that Western European high-wage countries enjoy a comparative advantage in introducing innovative forms of work organisation? In the wake of the “Toyota” and “lean production” debate, many transnational car companies and suppliers have standardised their production systems and
taken on elements of the “Toyota production system”. They have gathered experience in transferring and adapting best practice solutions to different institutional settings and also in implementing their production systems at low-wage locations. Innovative forms of work organisation are less and less a localised and immobile advantage of high-wage countries. Companies like GM and Faurecia implement successfully their standardised systems of work organisation in Central Eastern Europe (cf. Jürgens/Krzywdzinski 2007).

There are no comparative studies about the implementation of systems of work organisation in Western and Central Eastern Europe. One can use, however, the European Working Conditions Survey conducted by the European Foundation for the Improvement of Living and Working Conditions in 2005 as a first indicator for differences between Western and Central Eastern Europe. The Eurofound survey uses the concepts of “basic functional flexibility” and of “advanced functional flexibility” to analyse country differences in work organisation. “Basic functional flexibility” is defined as a form of work organisation which is characterised by team work and by the rotation of tasks between employees. “Advanced functional flexibility” is defined as team work in which the employees decide autonomously about the division of tasks (autonomous teams) and in which employees rotate tasks with different skill requirements. For the following discussion only data for the manufacturing sector (NACE C-F) were used. This choice avoids the problem of mixing data from such different sectors as manufacturing, public, and private services. Unfortunately, however, this reduces the number of respondents to about 200-300 per country and limits the possibility to generalise the results. Within these limits, it is possible to treat the data not as a proof but as a first hint. The figures 5 and 6 present the results.

The Eurofound data do not show systematic differences between Western European and Central Eastern European countries. In the case of “basic functional flexibility” (figure 5), Slovenia leads the field with a very high spread of team work and rotation of tasks. Poland, Slovakia, Romania, and the Czech Republic are in the middle of the range of European countries, together with Germany and Sweden. Among the CEE countries, only Hungary belongs to the “Southern cluster” of countries with a low spread of team work and rotation of tasks.
In the case of the “advanced functional flexibility” according to the definition of Eurofound, once again there are no differences between Western and Central Eastern Europe (figure 6). Poland, Slovakia, Romania, Slovenia, and the Czech Republic are located in the middle of the range, near to Germany, the United Kingdom, and Belgium. Germany and even more the Scandinavian countries show, however, a higher share of employees working in autonomous teams than Central Eastern Europe.

Source: Eurofound, Fourth European Working Conditions Survey.
In sum, case studies of foreign companies in Central Eastern Europe showing the transfer of systems of work organisation as well as survey data showing a similar spread of team work and rotation of tasks in Western and Central Eastern Europe suggest that one should not take for granted that “intelligent” and innovative forms of work organisation are a specific competitive advantage of high-wage countries. Transnational companies implement “best practice” systems of work organisation also in low-wage countries. It is surely exaggerated to see Central Eastern Europe as “experimental ground” for innovations in work and productive organisation (Havas 2000; Voss 2006). Even if some Central Eastern European production sites may have this function, it is surely not the general rule. But the systems of work organisation developed and well proven in high-wage locations can be expected to be also implemented in low-wage countries.

5 Relocation and Skills: Changing Employment Structure in High Wage Countries

Economic theory expects that high-wage countries specialise on economic activities with particularly high skill requirements in which they do not have to compete with low-wage countries, which have an abundant work force but a lower skill level. Relocation is one of the mechanisms which lead to specialisation: Activities with low skill requirements are more easily relocated than those requiring high skills. In the following, this specialisation thesis will be examined in the case of the German automotive
industry. In a given industry, there are of course companies with very different business strategies. Some will focus on high-quality, high-skill and high-wage production, others will pursue cost-oriented strategies, even in high-wage countries. A specialisation trend in high-skill activities should be visible in the industry’s workforce composition. The increase in the number of highly skilled employees would indicate an increasing specialisation on complex high-quality products and/or on human capital-intensive parts of the value chain.

Table 2 shows the development of the employment of skilled and unskilled workers and employees in the German automotive industry between 1996 and 2001. With regard to the automotive industry as a whole, the shares of skilled and unskilled blue collar workers remain stable; in absolute numbers both occupational groups have grown by 15-16% between 1996 and 2001. There is a clear difference between car producers and suppliers, however. At supplier companies, the employment of skilled workers has increased whereas the number of unskilled workers has considerably declined. This can be attributed to relocation of low-skill jobs. Supplier firms are confronted with high pressure to lower costs, which often leads to relocation of activities to low-wage countries (cf. Clementi et al. 2005, Nunnenkamp/Spatz 2002: 72ff, Jürgens/Krzywdzinski 2008). In the case of car producers, by contrast, the number of skilled workers has slightly declined while the employment of unskilled workers has grown. Jürgens and Meissner (2005: 67) interpret this development as the result of a reversal of the trend of work organisation in the German car industry in the 1990s, which included a return to short-cycle line production and the narrowing of job contents (cf. Springer 1999; Jürgens 2004).

<table>
<thead>
<tr>
<th></th>
<th>Manufacture of vehicles and engines</th>
<th>Manufacture of parts and components</th>
<th>Selected upstream sectors</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unskilled workers</td>
<td>+26%</td>
<td>-12%</td>
<td>+13%</td>
<td>+15%</td>
</tr>
<tr>
<td>Skilled workers</td>
<td>-2%</td>
<td>+64%</td>
<td>+20%</td>
<td>+16%</td>
</tr>
<tr>
<td>Unskilled employees</td>
<td>-88%</td>
<td>-56%</td>
<td>-48%</td>
<td>-55%</td>
</tr>
<tr>
<td>Skilled employees</td>
<td>+94%</td>
<td>+8%</td>
<td>+36%</td>
<td>+34%</td>
</tr>
</tbody>
</table>

Source: Jürgens/Meissner 2005: 227.

The main feature of the development at both car producers and suppliers is the increasing share of highly skilled white collar employees in total employment. This increase is a consequence of the intensification of innovation activities of German car companies during the 1990s. While the R&D personnel in the German manufacturing sector without the automotive industry remained stable between 1995 and 2002, the R&D personnel in the automotive industry increased in this period by nearly 50% to reach 77,000 employees (Jürgens/Meissner 2005: 22). The share of expenses related to innovation reached 7.8% of the German automotive industry’s turnover in 2002 and was twice as high as the average of the German manufacturing sector.

The long-term specialisation on human capital-intensive activities is confirmed by the development of the blue collar workers’ share in Germany’s automotive industry’s total employment. As figure 7 shows, the share of blue collar workers employed in the Germany automotive industry decreased from 79% in 1980 to 69% in 2004, according to data from social insurance. Data from the micro census conducted by the German Statistical Office show an even lower share of blue collar workers: It decreased to 57% in 2006.
In the case of car makers, Nunnenkamp and Spatz (2002: 77) attribute this decrease to relocation of production abroad but this interpretation is not completely convincing as there have been only few cases of direct relocation of production by German car assemblers. Rather, outsourcing to suppliers and intensification of R&D activities could be two factors behind the decrease. The absolute number of workers in the manufacturing of cars and car bodies in Germany reached its maximum of 404,000 persons in 1991; it declined during the crisis of the German car industry in the first half of the 1990s to 321,000 in 1996; it recovered to 351,000 until 2001, but declined continuously since then. In the case of production of parts and components, the share of blue collar workers in total employment declined similarly. In absolute numbers, the employment of blue collar workers in the production of parts and components increased after the recession in the first half of the 1990s steadily to 231,000 in 2004 and declined since then.

Figure 7. – Share of blue collar workers in the total employment in the German automotive industry (blue collar and white collar), 1980-2006

In the case of the German automotive industry as a whole, 626,000 blue collar workers were employed in 1990. During the economic crisis of the first half of the 1990s, the employment of blue collar workers hit rock bottom in 1994 with 510,000 persons. It increased then to 570,000 in 2001 and started to decrease steadily until 2006. Between 2001 and 2006, then thousands of blue collar jobs were lost in the German automotive industry. A large part of these losses was compensated by the increase in the number of white collar employees. In 1990, the German automotive industry employed 184,000 white collars. Their number reached 220,000 in 2001 and increased by further 100,000 until 2006. The stability of the employment in the German automotive industry during the first half of the current decade conceals a fundamental change of the employment structure: a loss of blue collar jobs and a gain of white collar jobs.

What is important is that the loss of blue collar jobs in the German automotive industry since 2002 coincides for the first time with increasing sales and profits in the industry. Until 2002, the changes in blue collar employment in the German automotive industry followed the changes in sales, as figure 8 shows. The German automotive industry had already experienced a loss of blue collar jobs in the first half of the 1990s, but this happened in the context of a deep drop in sales. The job losses in the current
decade, by contrast, occur in a situation of increasing sales and production. Relocation to low-wage countries and increasing low-cost imports could be the reason for this development.

To summarise, three results can be emphasised: First, low-skill manufacturing jobs are particularly hit by relocation abroad, in particular in the case of suppliers. Second, there is a long-term trend of a declining share of manufacturing jobs in the employment of the German automotive industry, which concerns all manufacturing jobs and which has accelerated considerably since the end of the 1990s. Third, since 2001 it is not only the share of blue collar workers in total employment of the German automotive industry but also their absolute number which decreases steadily despite growth in sales and production.

6 Conclusions

This paper dealt with the development of work models in Western and Central Eastern European automotive industry in a context marked by relocation threats and competition between high-wage and low-wage countries. A central question was whether work models in the European car industry converge in the direction of a high road model or whether the East-West competition leads to a “race to the bottom” via “regime flight” strategies of companies.

From the Central Eastern European perspective, the upgrading of locations and industry structure provides a basis for high road development even if it cannot be taken for granted that companies implement high road work models. The focus was on German companies, as the largest actor group in the CEE automotive industry. The case studies cited in this paper do not reveal a “regime flight” attitude among German companies. German firms show an investment orientation towards employee training and engage in pilot cooperation projects with local vocational schools. On the other hand, job security is provided only for a restricted core workforce, and a broad margin of temporary workers is
employed. For a considerable time, pay rose much more slowly than productivity. Assemblers rely on cooperative relations with union employee representatives, but in many greenfield supplier plants there is no employee representation and there are repeated reports of an anti-union stance on the part of management. Overall, this can be interpreted as a limited high road model. The potential complementarities of a high road model are not fully exploited. The reason is the high level of unemployment even among skilled workers in Central Eastern European countries prior to EU accession: companies could draw on sufficiently qualified and motivated workers without having to optimise their internal work models to generate skills and motivation among the workforce. In view of declining unemployment, the problems of the limited high road model are now becoming apparent in the form of labour conflicts in a number of companies and in the form of very high fluctuation among skilled workers. First responses of firms point towards a strengthening of high road development. However, this development is threatened by the lack of coordinating institutions and by competition with other low-wage countries.

From the Western European perspective, the paper examined how work models are adapted to cope with the competition of low-wage countries. An important question linked to this issue concerns the extent to which these adaptations can compensate for the labour cost disadvantage of high-wage locations. Several studies have revealed changes of work models in the German car industry, among which wage and working time concessions are the most important. In addition, there are some projects to develop new forms of “intelligent” or “innovative” work organisation which generate productivity and quality improvements and compensate for labour cost disadvantages – the most prominent example in Germany is Auto5000 (Schumann et al. 2006). Wage and working time concessions as well as improvements in work organisation can relieve high-wage locations from a part of the cost pressure resulting from competition of low-wage countries. This relief will remain limited, however. Despite wage increases and currency appreciation in Central Eastern Europe, the wage gap between West and East remains big. In addition, Central Eastern European countries have flexibilised their working time regulation, which allows companies to introduce the same instruments of working time flexibility as in the West. With regard to work organisation, case studies and surveys (Eurofound 2007) show that transnational companies standardise their work organisation and transfer “best practices” also to low-wage countries. Innovative forms of work organisation are (no longer?) a specific competitive advantage of high-wage countries.

Relocation to Central Eastern Europe has been a mixed blessing for the German car industry. In short term, it has contributed to increase competitiveness of German firms and to protect or even expand employment in Germany. These short-term effects of relocation have been called “mixed calculation”. In the long-term, however, negative effects on blue collar employment in the German car industry become visible. Of course, relocation is not the only factor affecting blue collar employment. There is a long-term trend of a decreasing share of blue collar workers in the German automotive industry caused by rationalisation of production processes and the increasing importance of development and design activities. Relocation has accelerated this trend considerably since the 1990s. Low-skill jobs at suppliers are particularly hit by relocation, but a general decrease in the share of blue collar jobs in the employment in the German car industry can be observed. Since 2001, not only the share but also the absolute number of blue collar workers has started to decline – despite increasing sales and production in the German car industry.
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