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EUROPEAN URBAN AND REGIONAL STUDIES

CHANGING EAST–WEST DIVISION OF LABOUR IN THE EUROPEAN AUTOMOTIVE INDUSTRY

Ulrich Jürgens and Martin Krzywdzinski
Wissenschaftszentrum Berlin für Sozialforschung, Berlin, Germany

Abstract

The article deals with the impact of the emerging new division of labour between Western and Central and Eastern Europe (CEE) on work and employment, both in the Western and CEE countries. Major points of discussion will be the hypothesis of a 'hollowing-out' of the Western European auto industry, and the hypothesis of a 'regime flight'; that is, the claim that companies use CEE locations to escape the collectively regulated work models of Western Europe. The article draws from our own empirical research, including company case-studies in Western and Eastern auto plants, and on statistical analysis. The main conclusions are: in CEE countries, an upgrading process of production sites can be observed, which challenges the view of an emerging 'high end/low end' division of labour between the West and the East. While relocation has led to some losses of low-skill jobs in Western Europe, the overall effect of the expansion of the automotive industry to CEE on growth and employment in Western Europe was positive. The impact of low-cost component imports from CEE countries has increased the competitiveness of the German firms, which are by far the main investor in CEE countries. Our case-studies reveal no trend towards regime flight from Western European work models, but management threats of relocation have become commonplace and have led to a renegotiation of work models in Western European countries. In CEE countries, the work models of automobile companies more and more are oriented at a high-road path. This development is fostered by the companies' responses to the problems of migration and the increasing shortage of skilled labour.

KEY WORDS ★ automotive industry ★ Central and Eastern Europe ★ division of labour ★ relocation ★ work models

Introduction

The changing division of labour between high-wage and low-wage countries in Europe and in particular the relocation of production and employment to Central and Eastern European (CEE)[1] low-wage countries have provoked heated public debates and controversies in Western Europe, especially in Germany. Spectacular cases of relocation – like the plant closure and strike at Electrolux in Nuremberg – have raised the temperature. First political responses reflect the extent of relocation fears. In May 2006, the EU Council of Ministers agreed that the guidelines for the EU regional funds should exclude support for relocation; in autumn 2006, discussions within the German government about taxing companies for relocating production were reported by the press (Reiermann, 2006). Despite dramatic examples cited in the public debate, there is relatively little empirical evidence about shifts in the East–West division of labour in Europe or their impact on work and employment. This article provides results from case-studies in companies from the automotive industry, which is among the most employment-intensive sectors in Western Europe and the most important manufacturing investor in CEE.

This article deals with the changes taking place in the production networks of the European auto

industry, and how they affect work and employment. In the analysis of developments in Western Europe, the focus 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 CEE automotive industry. We address three issues which play a prominent role in the research discussion:

- How is the division of labour between Western and CEE evolving, and what consequences does it have for CEE's development prospects?
- Is the integration of CEE sites into the production networks of the auto industry displacing production and employment in Western Europe?
- What work models are developing in automotive plants in CEE? Some researchers have claimed that firms may seek to escape the high-road work models of Western Europe by pursuing low-cost strategies in CEE (regime flight); while others argue that work models are transferred from Western Europe to CEE countries.

The article draws from research conducted at automotive firms in Germany and Poland from 2005–07 in the context of two research projects on the development of employment relations and on relocation in Europe,[2] supplementary interviews being conducted in other CEE countries to address the issue of generalizing results. For the case-studies, key actors from the main categories in the automotive industry (assemblers, major suppliers, local suppliers) were selected. The case-studies investigated four foreign carmakers (Volkswagen, General Motors, Volvo, Toyota), two Polish bus producers (Solaris, Autosan), five large foreign component suppliers (Faurecia, Mahle, Lear, Delphi, Valeo) and three small Polish suppliers. The case-studies were based on interviews with management and/or union representatives, and were complemented by interviews with sector experts and representatives of industry associations. A total of 102 interviews were conducted, about two-thirds of them with management representatives and around one-third with union representatives. Apart from the case-study findings, we draw on foreign direct investment and external trade data as quantitative indicators of change in the division of labour between Western and Central Eastern Europe.

The second section of the article presents the concepts of high-road and low-road work models and the state of the debate about relocation in the European automotive industry and the evolution of work models in CEE. The third section examines the extent of relocation from Western to CEE using foreign trade data as indicators. While the third section relies on quantitative indicators, the fourth section uses a qualitative, case-study-based approach to examine the upgrading prospects of CEE locations. The fifth section deals with the evolution of work models in the CEE automotive industry and the opportunities for a high-road development. The article finishes with a summary and conclusions.

Research design and state of the debate

We focus on two questions: whether the integration of CEE into the production networks of the European automotive industry 'hollows out' the Western European motor vehicle sector; and what the consequences of this change are for work and employment. We are interested not only in quantitative effects on employment but also in the qualitative development of work models. The question is whether work models 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.

We draw on the high-road/low-road concept from Pyke and Sengenberger (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. (Pyke and Sengenberger, 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); that is, of the high road. The debate on

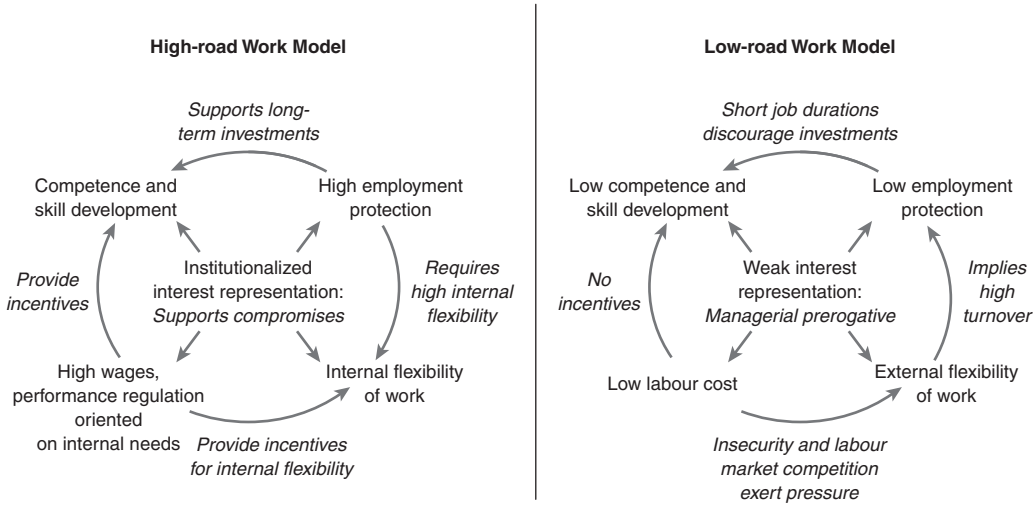

Figure 1 Complementary elements of high-road and low-road work models

'high performance workplaces' (HPW) in Anglo-American business studies also draws on the high-road concept (cf. Applebaum et al., 2000; Legge, 2005). HPWs represent 'human resource bundles' (MacDuffie, 1995); that is, combinations of various human resource management practices with mutually reinforcing impact, which are particularly well suited for companies that concentrate on quality competition. The central dimensions of HPW are involvement in problem solving and decision making, employee motivation and the development of employee skills.

Our concept of work model derives from the productive model and governance compromise approach developed by GERPISA (Boyer and Freyssenet, 2002). A productive model is characterized by a coherent link between product policy, organization of the production process in the value chain, and specific forms of labour relations. In analogy to the productive model concept, we define a work model as an ensemble of complementary employment practices (cf. also Katz and Darbishire, 2000: 10), which we assign to five main dimensions: employment security, flexibility, skill and competence development, performance regulation, and employee interest representation.

In our analysis of work models, we take up 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 et al., 2001). A high-road strategy needs a long-term skill development. An important incentive for long-term investment in skills 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. 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). 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.

In the scholarly discussion on the division of labour in the automotive industry between CEE and Western Europe, there have been changes since the end of the 1990s concerning the assessment of the extent of relocation. The predominant view in

the 1990s was succinctly described by Kurz and Wittke (1998). They identify two corporate strategies with respect to the division of labour between CEE and Western Europe. The first strategy focuses on a 'least-cost approach': CEE sites manufacture intermediate products with low vertical integration, whereas complex stages of production remain in Western Europe. The objective of investment in CEE under this strategy is solely to exploit low labour costs. In the case of this approach, at best very labour-intensive and low-mechanized processes risk relocation. The second strategy is oriented at 'complementary specialization'. In this case, complex production processes and capital-intensive plants are established in CEE as well as in Western Europe. The division of labour is based on different product specialization. Western firms use CEE to expand their product range downwards into the low-price segment. 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 characterizing CEE automotive sites as the 'low end of the European car complex' (cf. Lung, 2003).

After the turn of the century, studies by consultants started to paint extremely alarming scenarios of jobs and production sites being relocated from Western Europe to CEE. The debate in Germany was considerably stirred up by the provocative suggestion that Germany was well on the way to becoming a 'bazaar economy' (Sinn, 2005); that is, an economy occupied solely with the final processing of products, most components being made in low-wage countries. This proposition was discussed in the context of anxiety about the entire Western auto industry being 'hollowed out' (Sadler, 1999). The term 'hollowing out' refers not just to any relocation but to the loss of central competences in core areas, such as manufacturing. The pressure to relocate to low-wage countries is particularly strong among suppliers. The outsourcing trend has meant that the ratio of labour costs to total costs has fallen considerably for vehicle manufacturers whereas the cost of components has become a key competitive factor (Clementi et al., 2005). This often involves either a direct demand to suppliers for relocation to low-wage countries or indirect pressure through demands for price reductions (cf. Nunnenkamp and Spatz, 2002: 72ff). According to the surveys conducted by the Fraunhofer Institute for Systems Technology and Innovation Research (ISI), the proportion of German automotive component suppliers who had outsourced production abroad was between 25 percent and 38 percent from 1997–2001 (Kinkel and Lay, 2005). In a survey of 200 automotive suppliers in Germany (Ernst and Young, 2004), 50 percent of respondents declared that they were planning to relocate production to CEE and to China. Not only production was threatened with relocation. In a study by Mercer Management Consulting (2006), offshoring by engineering service providers to low-wage countries was predicted to rise from 5 percent of sales volume in 2005 to 15 percent in 2015.

The hypothesis of a 'hollowing-out' in Western Europe suggests that CEE, at least, has good opportunities for industrial development. Researchers differ in their assessment of the opportunities for catching-up with Western Europe, however. One of the contested issues relates to the upgrading of the product range, quality standards and competences of firms in CEE . In the 1990s, forecasts about the prospects of CEE countries in the international division of labour were still predominantly sceptical. Guerrieri (1998) noted that although CEE had gained a share of the world market, it had specialized primarily in labour-intensive low-tech industries. Lemoine and Freudenberg (1999) saw a clear specialization in down-market and middle-market products, 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 and Pavlinek, 2007).

Relocation to other low-wage countries like Ukraine or Russia constitutes a danger for development in CEE . Thus Groht (2005) points to cases from the electronics industry in CEE, where relocation to Asia has taken place, and argues that a similar threat exists in the automobile industry. The question of relocation has come onto the agenda owing mainly to rising labour costs in CEE. A study by the German–Polish Chamber of Industry and Commerce (PNIPH, 2006) recorded that 34 percent of German investors stated their dissatisfaction with labour costs in Poland. The study mentioned Ukraine and China as the new favourites for investment.

However, even successful industrial development does not necessarily mean that the workforce benefits. Due to the dominance of foreign companies in the CEE automotive industry, an important question is whether firms transfer work models from high-wage countries to CEE or whether they use the CEE countries to 'flee' the work models of their home countries. The importance of regime flight to CEE is disputed. Ellingstad (1997) sees regime flight as a general trend. Others (Bluhm, 2001; Meardi and Toth, 2006) stress individual cases of firms that have deliberately not transferred work models from their home countries, and which use CEE as an option for escaping the domestic regulatory framework. With regard to German investors, Dörrenbächer (2003), Fichter (2003) and Fichter et al. (2005) note a selective regime flight: although companies investing in CEE seek to transfer their production systems and some concomitant elements of work models (skills structures, work organization, working time organization), they have little interest in transferring the pattern of cooperative 'social-partnership' relations between management and labour to CEE countries.

One reason for the controversy about regime flight is the concept itself: a complete transfer of work models from one country to another is generally impossible owing to the institutions and actor constellations specific to each country, as became clear in the debate on hybridization (cf. Boyer et al., 1999). Not every deviation from the pattern pertaining in the country of origin at a company's foreign location is therefore to be considered regime flight. A deliberate wish to break with the home-country model must be apparent.

Relocation from Western Europe

Is the Western European automotive industry being hollowed out by outsourcing to CEE? In particular in Germany, the rapidly growing imports of components from CEE countries have provoked a heated debate about the danger and extent of outsourcing to CEE low-wage countries and the risk of 'hollowing out' automotive production. In the light of general data on employment in the German auto industry, this debate is surprising. Although German firms have been more assiduous than enterprises from other Western European countries in establishing themselves in the CEE countries, and although Germany is by far the most important destination for component exports from CEE countries, it was able to maintain the level of employment in the auto industry (VDA, 1990ff). Nunnenkamp and Spatz (2002) have shown that jobs with low skill requirements have been partially relocated. But even if this relocation is painful in each individual case, it does not modify the picture of a generally positive development of employment in the German car industry.

This picture is confirmed by data from the European Restructuring Monitor (ERM) on job losses through relocation. The ERM collects press reports on restructuring, its reasons, and its impact on employment. It thus primarily records only those cases of employment losses that have attracted public attention. There are strikingly great differences between Western European countries, especially when job losses due to relocation are considered in relation to the size of the automotive industry. The countries to suffer the biggest job losses through relocation, according to the ERM, are Portugal (24% of employment in the auto sector according to NACE 34 since 2002), Belgium (7%), and the United Kingdom (2%). France comes only in fourth place and Germany fifth (both below 1%).

In the following, external trade data are used as an indicator of the relocation of component manufacture, since the relocation of single stages in the production process makes itself felt from the point of view of the country of origin in a rise in intermediate input imports.[3] Figure 2 compares the value of component imports per vehicle produced in Germany and in other Western European countries. Indeed, in all the Western European countries, the value of component imports per vehicle increased. It is difficult though to interpret the absolute level of the imports. The average producer price of a passenger car produced in Germany was about €22,400 in 2005 (own calculation based on European Commission, 2006). Component imports per passenger car represented about 23 percent of the price of the car – if we abstract from the fact that these imports include also components for buses and trucks, components for the second market, and that these imports include also intermediate inputs which partially come from Germany itself. This import share is not dramatic. It indicates that the supplier sector in Germany has

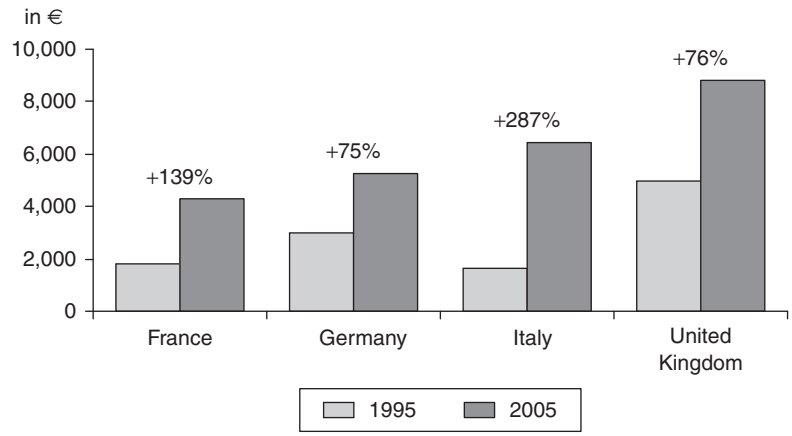

Figure 2 Value of component imports per vehicle produced in Western Europe
Source: Own calculations following Eurostat, DS-018995 and VDA, International Auto Statistics. Components under SITC (784, 71321-23, 71391-92, 77313).

managed to hold its own against component imports. A study by Prognos (2007) commissioned by the Federal Ministry of Economics and Technology and based on input–output accounts comes to the same conclusion.

What has taken place is not a broad relocation from Germany to low-wage countries but a dramatic shift in the regions of origin for component imports to Germany, as Figure 3 shows. The share of CEE in German automotive component imports rose from 9 percent to 37 percent between 1995 and 2005. Rather than displacing manufacturing in Germany, component imports from CEE countries seem to have supplanted imports from Western Europe and the Iberian peninsula. In the case of Spain and Portugal, the share in German imports was not only halved: their absolute value was reduced (cf. Nunnenkamp, 2005: 50). Germany is the only Western European country to have reoriented component imports so strongly towards CEE. Low-cost imports from countries outside Europe (e.g. China) remain negligible.

There are a number of reasons why relocation has thus far not had an adverse impact on the German automotive industry. The first of these is the improvement in the economic situation in Germany since mid-decade, which has reduced the pressure to relocate to low-wage countries. However, the economic situation can (and will) change. Second, Germany has been able to benefit from its well-established premium brands, which do not primarily face cost competition and which depend on the 'made in Germany' tag. However, even in the premium sector there are cases of production being shifted to low-wage countries (Audi, Porsche), and premium producers, too, exert strong pressure on their suppliers to lower prices and thus to relocate. Third, the head start of the German automobile industry in CEE has considerably boosted the price competitiveness of German firms in comparison to their Western European competitors. However, since the end of the 1990s, French, Japanese and Korean companies have increasingly begun to invest in CEE, which in the medium run will reduce the advantage enjoyed by German firms. Finally, the wave of concession bargaining in the German automotive industry and the consequent fall in labour costs have played an important role (Jürgens and Krzywdzinski, 2006; Ahlers et al., 2007).

It should be remembered that a decade-and-a-half is a very short period from the point of view of the international division of labour. The conditions that have limited relocation and its consequences for Germany will to some extent no longer pertain in the future. CEE has not yet attained the critical mass to compete with the core of the German, French and Italian automotive industries. As we will see in the next section, however, a basis of production structures and competence has been created that can prove the point of departure for future waves of relocation.

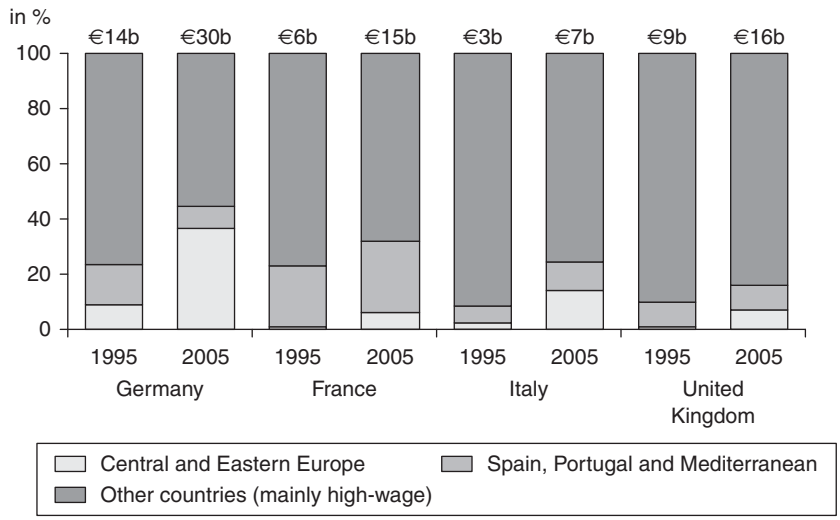

Figure 3 Sources of automobile component imports of Western European countries, 1995 and 2005
Source: Own calculations following Eurostat, DS-018995. Components under SITC (784, 71321-23, 71391-92, 77313).

Upgrading of CEE locations

What opportunities do changes in the East–West division of labour in the European automotive industry offer for high-road development and a catching-up process in the CEE countries? We first look at the upgrading process that CEE locations are experiencing, and second at the dangers of relocation of production from CEE to other low-wage countries.

Upgrading and its limits

The establishment of automotive firms in CEE began in the early 1990s and has continued unabated to this day. In the early 1990s, a number of takeovers of motor vehicle plants (VW in the Czech Republic, Slovakia and Poland; Fiat in Poland; Renault in Slovenia) attracted a first surge of suppliers. In the beginning, the new sites were to produce mainly for the Central Eastern and Eastern European markets. However, it soon became apparent that the hopes set in the expansion of the CEE motor vehicle market had been excessive. Cost motives became now more important when it came to investment in CEE. VW and Fiat modernized their plants, orienting production towards export to Western Europe. GM built a new site in Poland. In addition, VW, GM and Toyota began with the construction of component sites (especially for engines and transmissions). Good experience with labour skills, low labour costs and investment incentives in the CEE countries (special economic zones and tax relief) now attracted more and more cost motivated investment by suppliers. In the first half of the current decade, a new wave of establishment by motor vehicle manufacturers set in, involving primarily Korean and French producers. This development led to a renewed rise in supplier investment in CEE, which is likely to continue for some years.

Upgrading processes of CEE sites during the 1990s differed in each individual case but a certain pattern is apparent. Automobile producers first established the production of older models for the CEE market or limited themselves to semi knocked down and completely knocked down assembly. As our case-studies of VW, Volvo and GM in Poland (see Table 1) show, a process of upgrading set in from the second half of the 1990s, covering the following elements:

- The technological modernization of sites; that is, introducing the state of the art in the home country. In some plants like Skoda in the Czech Republic, modernization began as long ago as the

Table 1 Upgrading processes of Polish sites (VW, GM, Volvo)

VW Poznań	GM Gliwice	Volvo Wrocław
1993: VW establishes SKD assembly of passenger cars and commercial vehicles for the Polish and CEE market. ⇓ *Late 1990s*: Upgrading to CKD assembly. Certification of quality assurance systems. Plant exports to Western Europe. ⇓ *After 2000*: Modernization to a fully integrated plant. Allocation of a new product (city delivery van). Increasing own competences in process engineering and logistics. Changes of the production system (teamwork, continuous improvement).	*1998*: GM establishes a fully integrated, modern plant. The standards of the GM production system are introduced immediately. The plant produces an older car model for the CEE market. ⇓ *After 2000*: Expansion of the product range. Plant is assigned a small city car (niche model) and a compact car which are exported to Western Europe. ⇓ Plant shares with Western European sites the production of GM's 'bread and butter' compact car (Astra).	*1993*: Volvo establishes small truck production in cooperation with a Polish producer for the CEE market. ⇓ *End 1990s*: The plant changes to bus production and is chosen to become Volvo's high volume bus body factory. Investments in modernization, increasing competences in process engineering and logistics. Products now mainly exported to Western Europe. ⇓ *After 2000*: Production expands. Modernization of the production system (teamwork, continuous improvement). Volvo's IT services are centralized and relocated to Wrocław.

early 1990s, while in others like VW at Poznań it was only at the end of the decade.

- The adaptation to the company-wide standardized systems of production organization. Whereas OEMs like GM deployed the group-wide standardized production system in their sites from the outset, others – like VW, Fiat and Volvo – introduced elements of production organization such as 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). However, as we shall see, this competence remains very limited.
- An expansion of the product range produced. Although small cars still have the biggest share of CEE 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.
- An export orientation towards the West. Since the end of the 1990s, over 90 percent of the automotive output of CEE has been exported, especially to Western Europe.

But our case-studies also show that there are limits to the upgrading of OEM sites in CEE. In the first place, research and development, as well as vehicle design, were retained by headquarters at the home locations of the final producers. The 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 and Layan, 2007; Interview, 17.2.07). However, the brief period of development that vehicle manufacturers and major suppliers have had in CEE has also to be taken into account. Fuchs (2005), looking at the sites of two Western European automotive suppliers in Poland, argues that the question of establishing research and development in CEE 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 tool-making division. However, R&D functions remain limited to minor adjustment development activities both in the case examined by Fuchs and in our case-studies.

CEE locations were also assigned only very limited responsibilities in purchasing. In order to realize cost advantages, purchasing of components is controlled centrally from the companies' headquarters. The platform strategy, which plays an increasing role for all producers, adds to limit the possibilities for local purchasing. If supply relations are to be established with local suppliers in CEE countries, such decisions always have to be cleared with the headquarters and evidence produced that collaboration with the suppliers is useful for all sites of the platform concerned.

Relocation to other low-wage countries

An essential prerequisite for the long-term perspective of the auto industry in CEE is the development of strong locational ties of the new plants set up in this region. The question is whether the operations attracted by low labour costs and government investment incentives are not in danger of being relocated to even lower-wage countries. There are examples of investment flows being redirected from CEE countries further eastwards (to Ukraine and Russia) or south-eastwards (to Romania). Wiring harness manufacture is often most rapidly affected by relocation, since it requires a high proportion of manual work. Since 2005, the wiring harness manufacturer Leoni has started to relocate its production from Hungary to Romania due to the increase of labour costs in Hungary. Another example is the Polish seatmaker Inter Groclin, which operates as a contract manufacturer for firms like Lear, Faurecia, or Johnson Controls. In 2003, the firm opened a factory in Ukraine and announced that it would be expanding capacities only at this site. In early 2007, finally, the construction of a second factory in Ukraine was announced, as well as the gradual relocation of all production from Poland to Ukraine. Company headquarters and R&D are to remain in Poland.

However, these examples of relocation are the exception. In our interviews and case-studies, we have found *no strong trend* towards relocation from CEE to other low-wage countries. This finding is confirmed by statistical data on German automotive foreign direct investment (FDI). The CEE countries and Romania are the predominant recipients of investment by the German auto industry in low-wage countries, as Figure 4 shows. Russia and Ukraine, in contrast, have so far attracted relatively little German FDI and rising investment in China has not weakened engagement in CEE. Political uncertainty about developments in Ukraine and Russia, legal problems, and logistical difficulties with transport to and from these countries will continue in the medium term to strongly limit any possibility of integrating these countries into the production networks of the European automotive industry. Recent investment by auto firms in Russia mainly aims at gaining market access and does not decisively affect the division of labour between Western Europe and CEE.

Summary

In this section we have presented two key findings. First, a marked upgrading process is taking place in CEE locations with respect to products, functions and competence, although there are limits to this process. Research and product development competence, in particular, remains located at the Western European headquarters of the automobile producers. The upgrading process points to a strengthening of corporate locational ties in CEE. This is confirmed by the second finding: except for cases of particularly labour-intensive production processes, no relocation from CEE to other low-wage countries is in evidence. The two findings suggest there are good prospects for the development of high-road work models.

Flight from Western European work models?

At the outset, we distinguished between high-road and low-road work models. Against this background we now take a look at our case-studies. The question is whether firms transfer high-road work models to

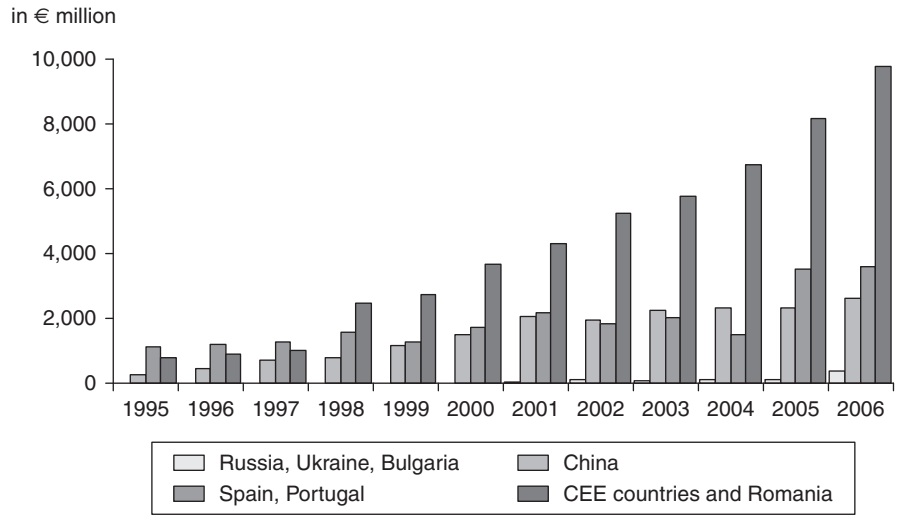

Figure 4 FDI stock of the German automobile industry in selected regions

Source: Bundesbank (1995ff).

CEE locations or whether they use them as an opportunity to escape from the standards and rules in Western Europe (regime flight). We will use the following indicators for high-road work models:

- Primacy of internal flexibility and high job security
- Investment attitude towards employee training
- Recognized employee representation in the company
- Wage development matching the productivity increases.

Job security and flexibility

In Germany and other Western European countries, job security is a key element of high-road work models. Have firms transferred this element to CEE? In our case-studies we noted that firms were very keen to bind skilled employees, and that employment security was accordingly written large. This interest has been intensified by the shortage of skilled labour in CEE that has been growing since 2005. Firms do not pursue a 'hire and fire' policy. However, work models at CEE locations differ from those in Western Europe in that job security is restricted to a smaller kernel of employees, so that there is a broader margin of precarious employment in firms.

This margin is due in the first place to a greater use of temporary employment than is usual in Western Europe. Thus in Poland, the automobile industry is the largest employer of temporary agency workers. Most of the foreign firms under study used agency labour, albeit in three different functions:

- *Probationary period.* At GM and the American component supplier Lear, it is the primary means of recruiting personnel. Employees start in the firm as temporary workers and are taken on after a probationary period of a year. During major surges in recruitment, temporary labour can constitute up to 30 percent of the workforce. In the period under study, however, the level was about 5 percent.
- *Temporary personnel recruitment for production ramp-ups.* The French supplier Faurecia uses agency labour mainly in production ramp-ups and in periods of peak capacity utilization. The proportion of temporary labour at the company's Polish sites fluctuates from 5–30 percent.
- *Permanent employment buffer to deal with uncertainties, product life cycles, etc.* The CEE sites of VW have a buffer of temporary agency workers

of at least 10–15 percent of the workforce, and it can reach 25 percent or 30 percent at peak periods. This is far higher than the figures usual in German VW sites.

In view of the labour shortage in CEE, the willingness of local labour to accept a large temporary labour buffer can be expected to decline. For this reason, company demands for greater accessibility to labour from other low-cost countries are becoming louder. No studies about working conditions of foreign workers in CEE are yet available but first experience shows that foreign temporary labour is often employed under working and pay conditions which are inferior to those of local labour. The working conditions of foreign temporary workers are becoming a more and more important topic for CEE trade unions.

Investment in employee skills

In socialist times, the CEE countries had developed a specific form of training in industry: vocational training schools were often attached to major enterprises and served their needs. However, in the course of the 'shock therapy' provoked by the economic crisis of the 1990s, most large state companies collapsed and sought to reduce costs by divesting themselves of vocational training facilities. By the mid-1990s, almost all vocational schools attached to enterprises had disappeared or had been hived off. At the same time, the collapse of state enterprises made a large number of skilled workers available for recruiting by foreign investors. Since the EU accession of the CEE countries, however, labour shortages have developed. The response of firms to this development is an important indicator for the future development of work models in the CEE automobile industry. We therefore consider it significant that certain companies have launched pilot projects to introduce in-house training in cooperation with vocational training schools, which points to a willingness to invest in employee skills as one element of high-road work models.

- Since 2005, the VW plant in Poznań, in collaboration with a local vocational school, has developed a vocational training scheme following the German approach for apprenticeship training; the VW engine plant in Polkowice provides similar training.
- The Polish bus manufacturer Solaris, inspired by the example of VW, has agreed on a cooperative scheme with a vocational training school from the Poznań area, and from 2007 is offering a three-year course in mechatronics.
- At Volvo Wrocław, company vocational training is still under discussion with vocational schools.
- The Polish plant in Krotoszyn, taken over by the German engine component maker Mahle in 1999, had not abolished in-house vocational training (metal working, casting) after the change of regime in 1989. In-house training continued after the takeover by Mahle.

At all its CEE sites, Volkswagen has launched dual vocational training projects. Furthermore, Bluhm (2007) reports that Bosch in the Czech Republic offers training in cooperation with a vocational school. In Poland, the two traditional car producers in Warsaw (FSO) and Tychy (Fiat) have retained their vocational schools. However, efforts to coordinate training throughout the sector, such as those undertaken by the German–Czech Chamber of Foreign Trade (Bluhm, 2007), have failed. In addition, the 'dual' vocational training in cooperation with vocational schools remains mainly limited to German and some CEE companies, whereas the American, French and Japanese companies rely on the hiring and plant-specific training of semi-skilled labour. It is possible that 'free riders' will poach the skilled workers from companies which invest in vocational training and gain a competitive advantage from having saved the cost of training. The weakness of labour and management associations, and accordingly of inter-company coordination mechanisms in CEE, could encourage such conduct.

Employee representation and industrial relations

The research literature presents a wide range of findings on the development of industrial relations and the status of workplace employee representation in the CEE countries. In their study of German

firms in CEE, Tholen et al. (2006) found that the recognition of employee representation (union and/or works council) and efforts to establish cooperative relations predominated. This contradicts the regime flight thesis. Bluhm (2007) stresses the difference between large and small companies. In particular, SMEs, she finds, tend to adopt a hostile attitude to unions. According to Marginson and Meardi (2006), investment motives, skill requirements, and bodies representing transnational workers' interests – such as the European Works Councils (EWCs) – are important factors influencing company attitudes to employee representation and industrial relations in CEE sites. Strong home-country and transnational interest bodies (EWCs), as well as high-skill requirements, promote the transfer of high-road models to CEE countries; while, contrary to expectations, the home country of the companies and the mode of entry (greenfield or brownfield) exhibit only a limited influence on work models (Marginson and Meardi, 2006).

Our case-studies show a relatively high level of variance in industrial relations in automotive companies. The spectrum can be described as follows:

- At Volkswagen, Volvo and the German supplier Mahle, we found industrial relations to be cooperative. Our interview partners at VW and Volvo described cooperation with employee representatives as an important element of the firms' work model, which they were transferring from the home country to CEE.
- In the cases of Fiat and GM in Poland, the first phase in relations between management and unions was conflictual. Fiat relied on the support of a management-friendly union and on a confrontational course vis-a-vis the other unions (cf. also Meardi and Toth, 2006). GM initially had a union avoidance attitude, by, among other things, establishing an advisory body elected by employees but with few rights. However, in the course of time both Fiat and GM came to recognize all unions and accept cooperative relations. In the Polish Toyota engine plants, a trade union was founded in 2006. Relations between management and union remain tense. However, the union wishes to obtain a cooperative rapport with the company, so that relations could normalize in the future.
- Whereas almost all OEM sites in the CEE countries are trade union organized, the situation is different at suppliers. In brownfield sites taken over in the course of privatization there are unions, whereas greenfield plants are almost never trade union organized. In our case-studies of components suppliers Lear (US) and Faurecia (F), a negative attitude of the management at the Polish sites towards trade unions became visible. Until 2006, for example, unions were present in none of the Polish Faurecia plants. After unions had been founded in one of the plants, conflicts arose when the plant management refused to negotiate with the union and dismissed union representatives.

On this point, the findings of our case-studies can be generalized as follows. In most cases, OEM sites are union organized and cooperative relations have tended to develop. An important role is played by the high skills demanded of the workforce and the existence of strong national and transnational employee representative bodies in Western Europe, which urge cooperative industrial relations at CEE sites. In supplier firms, unions are rare, and companies have frequently attempted to obviate or impede their establishment. Since 2005, however, the Polish Solidarność union has reported a number of new organizations being founded in greenfield component plants: at Wabco (US), ASK (IT), Keiper (DE), Faurecia (F), NSK Nakanishi, Sanden and Sumitomo (JAP), and at the two Toyota engine plants. The increasing labour shortage strengthens the position of employees within the companies and improves the conditions to establish union organizations.

Labour shortage – pressure to increase wages?

Until about 2005, wages in CEE were not on a high-road trajectory. Wages developed very slowly and did not keep up with the rapid development of productivity enabled by new and modern production facilities. Since 2005, there has clearly been a trend of catching up the wage levels and work standards of CEE production locations, but the differences between Central Eastern and Western Europe remain large. From the mid-1990s to 2006, the hourly labour costs in euros in CEE have doubled, but they still

reach only 8 percent (Romania) to 19 percent (Czech Republic) of the German level (VDA, 2007).

Labour force migration following the accession of CEE countries to the EU in 2004 and the continuing inflow of FDI are the main causes of wage increases in CEE . According to a study of the Polish statistical office (GUS, 2007), about 2m Poles have left Poland and work in Western Europe. This has provoked reactions among companies which are now confronted with difficulties in retaining their attractiveness as employers. In several of our case-studies, the companies had to deal with a high labour turnover of 15–20 percent per year which concerned in particular skilled workers. The companies try to bind workers by offering special benefits (like additional medical care or recreation facilities), by investing in qualifications and by increasing wages. This result of our case-studies reflects a general trend. In a company survey by KPMG (2007) on the consequences of labour migration from Poland, the companies stressed that greater efforts were needed in human resources development and improving pay to counteract migration and the resulting labour shortages. Remarkably, no fewer than 31 percent of companies were in favour of raising the minimum wage in order to contain emigration.

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 had protested publicly and threatened to strike. In all cases, the unions demanded wage increases of about 15–20 percent which is much higher than the inflation rate. Similar conflicts have taken place at Skoda in the Czech Republic and at Dacia in Romania.

Summary

How is the evolution of work models in the CEE automotive industry to be interpreted in the light of our question about the prospects for high-road development? Our case-studies point to an investment-oriented attitude towards employee training. However, employment 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 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 model relies on implementation of high quality and productivity standards and is interested in skilled labour, but at the same time it sticks to low wages and a broad margin of precarious employment. The potential complementarities of a high-road model are not exploited to the full. The reason lies in the high level of unemployment even among skilled workers in CEE countries prior to EU accession: companies could draw on sufficiently qualified and motivated workers without having to optimize 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 and of a very high fluctuation among skilled workers. The first response of firms has been to raise wages and invest more in personnel development. However, this development is threatened by the lack of coordinating institutions (e.g. training systems).

Conclusions

We can summarize the results of the analysis in three conclusions:

1. Over the last decade, the integration of CEE countries into the production networks of the European automotive industry has taken the form of the emergence of a Germany-centred East–West automotive complex. Only in the first phase of investment in the mid-1990s were the CEE production sites restricted to low-tech and labour-intensive products. The evolution of this German–CEE production network was characterized by an upgrading process in CEE with regard to product range, production capabilities and functional competences. The upgrading eroded the high-end/low-end division of labour between the West and the East which dominated in the 1990s – although there are clear limits of upgrading in CEE countries, in particular in the domain of R&D.

2. Like no other Western European automobile producing country, Germany has reoriented its component imports towards CEE. This reorientation was partially the consequence of relocation processes. While relocation led to losses of low-skill jobs, the overall effect on employment in Germany was positive. CEE component production has considerably increased the price competitiveness of German automobile firms. Central competences in manufacturing as well as in product development and purchasing remain at the German company headquarters. The relocation did not reach an extent which would justify speaking of a hollowing-out of the German or Western European automotive industry. But this positive result must be qualified in the context of a favourable development of the economic situation in Germany. The good economic position will not last for ever, and when growth is weak even limited relocation can be painful for the workforce. Second, the brief lapse of time that has passed since the integration of CEE into the production networks of the European automotive industry began needs to be taken into account. Western companies have established a basis in CEE that can set off a stronger wave of relocation should the economic setting deteriorate in Western Europe. Even if actual relocation has remained limited, management threats of relocation have become commonplace in Western Europe. In particular in Germany, automobile companies use the relocation 'option' to demand higher work and employment flexibility, longer working times and lower wages.
3. From the point of view of the CEE countries, we were interested in the prospects for the development of high-road work models. Our case-studies of foreign automobile companies in CEE reveal no trend towards regime flight from Western European work models. The upgrading process of CEE production sites and the increasing labour shortage support the emergence of high-road work models in CEE. During the 1990s, a limited high-road model emerged: the commitment to employment protection is restricted to a small core of employees, but the focus on a cooperative relationship with unions (in the case of automobile producers) and on a skilled workforce as well as the recent increase of the wage level represent elements of a high-road trajectory. Despite positive developments, the prospects of such high-road elements are, however, uncertain. Limits to the upgrading of the CEE sites, labour shortage and a brain drain caused by migration to the West can become obstacles to development.

Notes

[1] CEE includes Poland, the Czech Republic, Slovakia, Hungary and Slovenia.

[2] 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 CEE and the impact on work and employment in both areas. It was financed by the German Otto Brenner Foundation.

[3] However, not every increase in imports is due to relocation, so that this indicator needs to be handled with care (cf. Mattila and Strandell, 2006: 15).

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Correspondence to:

Ulrich Jürgens, Wissenschaftszentrum Berlin für Sozialforschung, Reichpietschufer 50, 10785 Berlin, Germany. [email: juergens@wzb.eu]