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Changing industrial production systems and regional development in the New Europe

Ray Hudson
Department of Geography
and
International Centre for Regional Regeneration and Development
Studies
University of Durham,
Durham DH1 3LE,
United Kingdom

Ray.Hudson@Durham.ac.uk

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Introduction

Recently there has been growing evidence of the re-location of production from western to eastern Europe, across a range of sectors and for a variety of reasons. This raises important questions as to how best to conceptualise the processes re-shaping economic geographies within Europe. It also raises pressing practical and political issues and about their implications for territorial inequalities and uneven development in Europe. For two decades there was some evidence of slow convergence in regional economic performance (Canaleta *et al*, 2002); but in last decade or so this would seem to have been reversed as processes of European Union (EU) enlargement and deepening integration have accelerated. These gaps will further widen with the future as the eastward expansion of the EU (CEC, 2001). The evolving geographies of Europe's economies have altered in response to this new map of opportunities and threats.

The argument I advance here is that these changing geographies are a product of the inter-play of (*inter-alia*) corporate, state and trades union strategies, as companies pursue profitability, trades unions and workers seek new employment and/or protect existing jobs, and states attempt to balance the pursuit of accumulation in their territory with the claims of equity and socio-spatial justice. Geographies of economies are seen as contingent outcomes of the co-evolution of the asymmetric power relationships between these individual and collective actors and institutions. Conceptually, this represents an attempt to combine aspects of political economy and institutional approaches to facilitate understanding of the evolution of economies and their geographies, and recognise the variety of ways in which agency and action and the structural determinants of capitalist economies co-evolve in particular ways¹. However, the context in which these processes of co-evolution occur is important – one of political-economic processes of Europeanisation and globalisation – for these are both a partial product of the strategies of companies, states and trades unions and in turn help set the parameters which shape these processes.

The on-going evolution of the EU is of particular relevance here. The expansion of the EU and, even more so, the collapse of state socialism, have been critical in re-defining the spaces open to companies in Europe. The enlargements into southern Europe in the 1980s, the incorporation of the GDR following German re-unification, and the expansions of the 1990s to take in Austria, Finland and Sweden have all dramatically enlarged the extent of the EU's territory. The forthcoming incorporation of states in CEE as they meet the economic and political criteria taken as indicative of their transition to capitalist economies and liberal democratic polities will further expand the EU. In practice pre-accession trade and aid arrangements are already closely inter-twining the economies of the applicants (especially the Czech Republic, Hungary and Poland, the most likely initial entrants) with those of the EU. The Single European Market programme and the creation of the Euro currency represent the latest stages in an on-going process of deepening economic –

¹ For a fuller elaboration of this position, see Hudson, 2001.

and increasingly political –integration. Together these processes of deepening and widening constitute the formative moments in this process of re-drawing the map of Europe. This re-definition of the European space is in turn one moment in broader global processes, as new forms of capitalist uneven development emerge and evolve.

The production, appropriation and realisation of surplus-value and associated value flows and the governance and regulatory processes that make them possible are fundamental to understanding the (re)configuration of economic activity and the meaning of regional development. As Hadjimichalis (1987) emphasises, transfers of value are inherently geographical. Consequently, these changes offer new opportunities to both companies and regions, but they also pose potential threats to both. In particular, companies may fail if they are unable to come to terms with the new competitive terrain while regions may be endangered if they are unable to secure and hold down a place in circuits of value creation, circulation and appropriation. Consequently, it is necessary to understand the bases of the co-evolution and (in)compatibility of corporate and regional development interests

Conceptualising changing geographies of economies in the EU: the social construction of production systems

Corporate competitive strategies encompass a variety of practices and approaches, which can usefully be summarised in terms of ‘weak’ and ‘strong’ competition. ‘Weak’ competition revolves around securing competitive advantage within a given technical-organisation paradigm of production by seeking cheaper sources of inputs to production than are available to competitors – for example of raw material or labour. ‘Strong’ (or Schumpeterian) competition involves seeking to gain advantage by re-defining production paradigms via a variety of innovations (product, process, organisational, with these often inter-linked). In addition, in both forms of competition, firms may collaborate via a variety of ‘networking’ strategies, involving sub-contracting and out-sourcing of a production of components and services. Strategic alliances, acquisitions and mergers represent other longer-term options, which may be used in pursuit of either ‘weak’ or ‘strong’ competition. But the key point is that these are analytic distinctions. Firms pursue these analytically distinct strategies simultaneously.

Moreover, firms characteristically co-operate in various way with other firms. Recognition that production involves inter-firm co-operation highlights the necessity to conceptualise production as a system organised across as well as within firm boundaries². A production system may be defined as a distinctive form of organisation of production with corresponding technical (intra-firm) and social (inter-firm and sector) divisions of labour and modes of regulation, each with their own geographies, thereby emphasising the ways in

² Production systems therefore involve conceptualising the economy as constituted through complex and recursive flows rather than in terms of linear flows - for example, in terms of production filières, commodity chains or value chains.

which production is embedded in particular socio-spatial settings (Dicken *et al.* 1995). To variable extents, the strategies that individual firms can pursue are constrained by sectoral governance arrangements. Within these constraints, firms have different degrees of power and influence, with important implications for geographies of production and the economic success of firms. Some forms of networked relationships involve relatively egalitarian 'horizontal' inter-firm relations – most notably in the arch-typical industrial districts of central and north east Italy. More generally, however, there are complex, variable and asymmetric geometries of power and influence that link firms into production systems. While some 'lead' firms exercise considerable power and influence and have a choice of 'strong' or 'weak' competitive strategies, others in subordinate positions are typically constrained to pursue strategies of 'weak' competition. Moreover, depending upon the character of the product, the location of 'lead' firms within the structure of the production system can differ markedly³. The locations of these firms, and decisions as to the location of different stages of production within and between firms (that is, the spatial distribution of the technical and social divisions of labour), has important ramifications for geographies of value production, transfer and appropriation and for the developmental possibilities and trajectories of different places.

As well as companies, workers and trades unions seek to influence the location of economic activities (Herod, 2001). Although in a structurally weak position relative to capital, unions can nonetheless, in specific circumstances, influence corporate (dis)investment strategies and geographies of production. However, trades unions occupy ambiguous position in seeking to influence economic geographies. While uniting fractions of the working class, trades unions at the same time divide that class – for example, by industry, occupation, gender and territory (Hudson, 2001, 217-54). Because of this, trades unions have become involved in inter-territorial competitions for employment and investment, sometimes in collaboration with companies whose interests are tied to particular places (Beynon and Hudson, 1993; Hudson, 2000, 201-26). In some circumstances social and environmental groups constituted in civil society also seek to influence the geography of production systems, usually by developing countervailing sources of power to contest corporate decisions.

To variable extents, the strategies of individual firms, trades unions and other social groups are constrained by modes of supra-national and national state regulation. There are three main ways in which states become involved with

³ Perhaps the best known stylised recognition of this is Gereffi's (1994) distinction between 'buyer-driven' and 'producer driven' commodity chains – with the former characterising consumer goods sectors (such as clothing) requiring relatively simple, typically labour-intensive, manufacturing processes in which the dominant actors are major retailing chains, the latter characterising more complex consumer goods (such as cars), capital goods (for instance, aircraft), or basic manufactured materials (such as steel), which require capital-intensive and technically sophisticated high-volume manufacturing and in which the 'lead' firms are core manufacturing companies that produce the final product. While this dichotomisation is too simplistic, not allowing for more complex power geometries of governance, it nonetheless is useful in drawing attention to differences between firms and industries.

regulation of the economy⁴. Firstly, they define the rules and laws that define acceptable conduct in market transactions. Secondly, they seek directly to influence the actions of others in markets– for example, via financial incentives that attempt to influence the location of private sector investments and decisions as to currency exchange rates. Thirdly, they may replace the private sector as a provider of goods and services and the market as the allocative mechanism (for example, by taking industries into public ownership).

State policies can be thought of as organised ‘horizontally’ by spatial scale and ‘vertically’ by substantive domain. For example, vertically, there are divisions in terms of policies for labour and product markets, competition, merger and acquisition, research, technology and development, and trade. Horizontally, there are important distinctions between the supra-national EU, national states and sub-national units, linked in various ways in pursuit of economic development at different scales. It is, however, important to recognise that the national retains a key role in this new multi-scalar architecture⁵, not least in shaping the scope and extent of local and regional economic development strategies and modes of governance (Ache and Wood, 2000). The growing emphasis upon governance is symptomatic of the increasing involvement of a range of social actors from within civil society in the formulation and implementation of local and regional economic development policies. In the EU there is “a discernible move towards stressing the institutional agency of territories in enhancing their own regional economic development prospects and enhancing cohesion” within complex multi-level and multi-scalar systems of government and governance, as new scales and scalar architectures of governance and regulation are created and change⁶. However, “the region is [not] automatically endowed with the agency to modify network positions and play the games of ‘scale politics’” (Lagendijk *et al*, 2000, 1 and 14). Moreover, there are marked differences in the capacities and capabilities of regions to exercise such agency⁷.

⁴ For a fuller discussion, see Hudson, 2001, 76-91

⁵ Clearly in certain spheres, especially related to monetary policy and movements of capital, the regulatory capacities of national states have been markedly reduced – though even in these cases (not least, the Euro), this is often a result of political decisions by national states. More generally, however, national states remain significant sites of regulatory power within Europe and the “hollowing out” metaphor denotes one aspect of a broader set of changes of state re-organisation. These encompass changes in the forms and modalities of national state involvement in more complex multi-scalar architectures of governance and regulation within Europe, rather than some simplistic diminution in national government’s regulatory role (for example, see Jessop, 1997).

⁶ The growing emphasis upon regional action reflects political processes of decentralisation to regions to enhance their powers as political subjects and claims that the economic performance of firms depends upon external resources, in particular on their close interaction with other firms, facilitated and enhanced by spatial proximity and co-location: Hudson, 2001, 268-81.

⁷ Nonetheless, the combined effects of these intellectual and political developments has been focus attention upon the cultural and social resources of regions, and processes such as learning, that are claimed to underpin collective behaviour and economic success at the regional level as part of cultural and institutional turns in economic geography (for example, Morgan, 1995; Storper, 1995; Hudson, 2000, 92-108).

In summary, geographies of production systems, and the ways in which they change, are seen to be a result of the interaction of corporate, trades union and state policies, linked within complex webs of power relations. While structurally loaded in the favour of capital (especially multinationals) and states (especially powerful national states), it by no means follows that the determinants of a given decision as to the how, what and where of production within Europe (or indeed beyond it) simply follow from this as these are contested processes. The ways in which the causal powers of structural relations unfold is a contingent matter (Massey, 1995: 303-4). In the next section I explore this proposition in the context of the changing political-economic space of Europe, especially linked to the ways in which the successive expansions of the EU have created both threats and opportunities for companies and places.

Changing economic geographies in the new Europe: some industrial examples

Clothing: the interaction of the search for cheaper labour, product market changes and changing regulatory régimes

Labour costs form some 60% of total production costs in clothing (Scheffer, 1994). Consequently the clothing industry is particularly sensitive to labour cost variations, an emblematic example of an industry in which “weak” competitive strategies based on cost cutting remain pivotal and in which a ‘spatial fix’ (Harvey, 1982, 390-393), the geographical relocation of production to enhance or preserve the viability of a particular socio-technical model of production, has repeatedly been used as a production strategy.

The survival of clothing production in areas of Europe (above all, those in north west Europe) with high labour costs requires corporate strategies of ‘strong’ competition, based on dimensions such as high product quality and design⁸. But such niche production is necessarily limited in terms of market extent and high volume production remains important and very sensitive to labour cost differences. The initial corporate response to increasing costs and labour shortages in north west Europe was to locate clothing production in peripheral, typically de-industrialised, regions, often with no history of the clothing industry and with large masses of women looking for work - for example the Ruhr and north east England (Hudson, 2000, 71).

The next phase of “spatial fixes” involved seeking out lower costs locations in other parts of Europe, both those within the EU but more particularly those outside the EU but tied into it economically via various trade and aid schemes⁹. In the 970s and 1980s clothing was a ‘classic’ industry in terms of shaping the (then) ‘new’ international division of labour (Fröbel *et al*, 1980).

⁸ Home-working in such areas may allow labour costs to be held down (especially when the workers are women from ethnic minorities, both legal and illegal migrants) but production organised in this way will generally be on a relatively small scale.

⁹ Note that this extended south of the Mediterranean to the countries of the Maghreb (see Joekes, 1982).

There was a significant shift in clothing production from northern to parts of southern Europe, with a resultant growth in export-oriented inward investment, output and employment there, especially given the prospect of entry to the EU and pre-accession aid (Hudson and Lewis, 1985). For example, in Portugal large factories were established in the metropolitan areas of Lisbon and Oporto, owned by USA, European and Japanese companies, producing ready-to-wear garments largely for export and sale to European middle class consumers. With the entry of Greece, Portugal and Spain to the EU in the 1980s, there were enhanced levels of inward investment, with substantial support via EU regional policy funding (Thiel *et al*, 2000).

More significantly, this spatial shift provided opportunities for clothing producers in southern Europe to access markets in north west Europe, resulting in more complex geographies of clothing production and trade. This creation of new forms of inter-firm relations was, however, dominated by major western European clothing retailers. One indication of this is that two thirds of total EU clothing imports are directed to retailers, either as a result of their own actions or those of their own or contracted agents. As Scheffer (1994, 11) puts it, “trade in clothing and textiles appears more to be master-minded by agents in the importing countries”. Thus key decisions about design, marketing and quality were taken by major retailers and/or sub-contracting clothing manufacturers in northern Europe, as part of an emerging qualitative spatial division of labour within the clothing production system in Europe.

Furthermore, such retail firms re-organised the clothing market as part of their competitive strategies. On the one hand, they have increasingly segmented the market socially and spatially; on the other hand, they have shortened product life cycles and blurred the established pattern of spring /summer and autumn/winter collections. Together, these changes have had significant impacts on the geography of clothing production and trade, increasing pressures for smaller batch and flexible production. They have further shifted power to the major retailers and “as a result, the interface between the production and commercialisation of clothing has become the pivotal point in the *filière* since from there both upstream and downstream activities can be controlled effectively” (Thiel *et al*, 2000, 111).

In the 1990s, however, new possibilities for ‘spatial fixes’ began to open up following the political changes of 1989, which led to even lower costs labour locations becoming available in CEE. Labour costs per standard minute in CEE were 70% of those in the UK and 33% of those in Germany (Dicken, 1998)¹⁰. These differentials constituted a strong attraction to companies based elsewhere in Europe. Echoing the earlier shift to sourcing from southern Europe, major retail chains increasingly switched orders to CEE via a variety of contracting arrangements (Dunford *et al*, 2001), while clothing production companies looked to locate there, to lower production costs. As a consequence, there has been significant restructuring of the clothing industry

¹⁰ In absolute terms, less than those in the under 0.25 DM per standard minute in CEE, compared to at least 0.35 DM per standard minute in the UK and 0.75 DM in Germany

in other European countries. Clothing producers and retailers have concentrated upon higher value added design, marketing, planning and control activity while outsourcing parts of the production process to CEE (Pavlínek, 1998; Begg and Pickles, 2000). This led to further plant closures and employment decline in both north western and also parts of southern Europe.

As well as the closure of mass production factories and branch plants, this also involved the 'hollowing out' of formerly coherent industrial districts producing high-value fashion clothing, such as Herning-Ikast in Jutland (Denmark). Companies decentralised the most labour intensive and physically demanding stages of production to low labour cost areas in Poland, while maintaining R&D, marketing and control functions in Jutland (Dunford and Hudson, 1996). As a result, between 1984 and 1994 clothing employment fell, often dramatically, in all of the then 12 EU Member States with the exception of Portugal, where there was a modest 6.5% increase.

More recently, cost pressures on EU producers have further intensified, leading to further reductions in clothing production and employment. This has sharply affected 'peripheral' regions in north west Europe, such as north east England and Northern Ireland, ironically because of close links previously built up between companies with production capacity there (such as Baird and Dewhirst) and Marks and Spencer (M&S), the UK market leader¹¹. For a considerable period of time, M&S resisted the general tendency to supply from abroad, instead seeking to contain costs by pressuring its UK suppliers while maintaining quality and its reputation for clothing 'made in Britain'. It did not significantly shift to purchasing abroad until the early 1990s, seeking to preserve quality via using 'preferred' suppliers as a quality control mechanism (Crewe and Davenport, 1992). By the latter part of the 1990s intense competitive pressure in the retail clothing sector resulted in M&S desperately searching for cheaper non-UK suppliers, in eastern and southern Europe and beyond, and cutting back on the volume of orders to its remaining UK suppliers (see Marks and Spencer, 1999). Largely as a result of this change, there was a severe and rapid fall in clothing employment to 6,000 in north east England (compared to previous levels of over 20,000)¹².

In addition, however, the changing international configuration of production and trade also impacted upon clothing output and employment in southern Europe, as places that had experienced rapid growth in the 1980s were confronted with equally sharp decline in the 1990s. For example, by the early 1990s employment and output were declining in Portugal, particularly because German retailers switched orders to CEE. Exports from Portugal to

¹¹ One consequence of this is that for a time in the 1990s, in terms of employment, clothing – a predominantly female-employing sector – became the largest manufacturing sector in north east England. Many of the women subsequently losing their jobs were the sole or main household wage earner (Hudson, 2000, 88).

¹² Other clothing retailers, such as Hennes and Moritz have also sought to source globally, in search of low cost garments at the lower end of the quality spectrum. It is worth noting that Asia remains the main source of textile imports to the EU (WTO, 1999), with lower labour costs than eastern Europe, but eastern Europe offers significant advantages in terms of time and distance to western European markets.

Germany fell sharply and clothing employment in Portugal declined by almost 25% between 1991 and 1995 (Thiel *et al*, 2000)¹³.

The geography of clothing production in southern Europe has also been re-organised in other ways, with decline in much more established areas of clothing production. Former industrial districts have been or are being 'hollowed out', with the geographies of their production structures increasingly re-organised, retaining design, marketing and HQ functions while routine production is re-located to lower cost locations in southern and, increasingly, eastern Europe. As early as the beginning of the 1980s, the larger or leading clothing firms in Italian districts such as Carpi and Prato had initiated a far-reaching process of de-localisation of selected labour-intensive and unskilled stages of production. Conversely, they increasingly concentrated upon high quality products and those stages of production requiring skilled labour and, more importantly, upon design, marketing and brand development activities that were less sensitive to labour costs, as well as key HQ strategic functions¹⁴. Similar processes of the "hollowing out" of production to surrounding localities with abundant cheap labour could be observed in the 1980s in and around the town of Kastoria in northern Greece, perhaps the one authentic industrial district in Greece, based around the production of expensive clothing from imported fur (Hadjimichalis, 1998)¹⁵. The 'hollowing out' of industrial districts is not necessarily a simple process, however, nor one confined to re-locating production within the national territory, as the - in some ways canonical - example of Benetton illustrates. Benetton emerged as a major clothing company as a result of a complex combination of marketing, organisational and process innovations. This encompassed creating a new global product image, a refined just-in-time production system incorporating both out-sourcing and a critical process innovation¹⁶, and a risk-minimising strategy of franchised outlets in more than one hundred countries while retaining key control, design and marketing functions at its base in Treviso in northern Italy (Crewe and Lowe, 1996). The boundaries of clothing industrial districts have therefore become more permeable because of the emergence of powerful 'lead' firms or *gruppi*, either as a result of organic growth or, more often, as a result of acquisition and merger activity among local firms, and the entry of externally-owned firms, especially larger firms that come to play dominant roles and shape local growth and development (Coró and Grandinetti, 1999; Whitford, 2001). The net result is to create more complex structures of ownership and more hierarchical relationships between firms, establish relationships with suppliers and sub-contractors beyond the boundaries of the district, and fracture the former territorially bounded

¹³ It is worth noting that this aggregate decline conceals both intra-sectoral and inter-regional variation in the patterns of change in the Portuguese clothing industry.

¹⁴ Hadjimichalis and Papamichos (1990) argue that such de-localisation tendencies also reflected growing resistance by women, children and marginalized workers to 'super-exploitation' in industrial districts, in strong contrast to the dominant image of these districts as characterised by egalitarian, progressive industrial relations.

¹⁵ These observations are based upon fieldwork in and around Kastoria between 1984 and 1992.

¹⁶ In 1972 Benetton introduced in-house dyeing at the final stage of production, crucially allowing piece (rather than batch) dyeing and so the dyeing of individual items to order.

coherence and integrity of the clothing production system within the (former) industrial district.

At the same time as long-established industrial districts were being hollowed out and re-organised, new clothing clusters were emerging elsewhere. In CEE new clusters were evolving, incorporating new forms of inter-firm relations, linked into local “lead” production firms and in turn into export markets in western Europe (Dunford *et al*, 2001). Similar processes were evident in parts of southern Europe, but focussing less on large-scale production for mass markets and more upon specialised niche production. For example, in Portugal the rural areas to the north of Oporto, such as the Ave Valley, clusters of clothing producers increasingly focussed upon small batch production and products, for which the main modality of competition is quality rather than price (Thiel *et al*, 2000).

As indicated above, changing the geography of clothing production and trade in Europe crucially depended upon political changes, and changes in state policies and regulatory régimes. Some of these related to international trade in general such as the Multifibre Arrangement (MFA), introduced in 1974 under the aegis of GATT (Farrands, 1982), and the WTO. Others were specifically European in their origins and effects, notably pre-EU accession trade and aid policies in southern Europe, which effectively economically integrated Greece, Portugal and Spain into the EU prior to their political membership (Hudson and Lewis, 1985). Post-1989 there were parallel processes in CEE. Most significantly, until the mid-1990s the changing international division of labour in clothing within Europe was governed and shaped by an outward processing trade (OPT) régime. In this, western retailers and producers controlled the design, retailing and overall management of production, co-ordinated the shipping of textile materials for out-processing and organised the return of the finished commodity to the west European market. EU producers could export fabrics and re-import garments, with minimal trade tariffs and customs duty charged only on the value added in the production of the particular item of clothing (Scheffer, 1994). OPT arrangements enabled western European companies to overcome import quotas applicable under the MFA and helped underpin their competitiveness in global markets. Having powerfully influenced the clothing trade between northern and southern Europe in the 1970s and 1980s, such OPT arrangements subsequently significantly affected clothing trade patterns between the EU and countries in CEE (Graziani, 1998). CEE clothing exports to western Europe increased by 20 per cent annually between 1990 and 1998, and by 1998 represented 5% of world clothing exports. Furthermore, EU countries imported 18 % of their total non-EU clothing imports from CEE countries¹⁷ (WTO, 1999). As Lemoine (1997: 4) has argued, “OPT was the engine of Central and East European manufacturing exports in the early nineties”. Although there has recently been a move away from OPT regulated trade, as tariff barriers to clothing trade are removed as part of WTO agreements to promote free trade, OPT-type relations nevertheless seem to

¹⁷ This placed CEE second only after Asia as a source of clothing imports.

continue despite these changes¹⁸. This reflects lock-in within networks linking low-cost producers in CEE and buyers in the EU, who are attempting to appropriate a greater share of surplus-value than would be possible if production was located in high cost locations

In summary, the combined result of these varied processes is that particular core economic sites and regions in western Europe (headquarters of the major clothing retailers and buyers) control the “geographical transfer of value” (Hadjimichalis, 1987) in this production system. Producers in different European regions have varying ability to capture and appropriate value from continent-wide production and contracting networks. Many peripheral regions in higher cost countries have seen their position in the production system challenged by emergent and distanced contract networks organised on a continent-wide basis. Conversely, these same contractual arrangements have offered opportunities for new production structures, sometimes on a regionalised basis, to be constructed in parts of the eastern and southern peripheries. Clearly there is no simple or deterministic correlation between the changing scalar geography of clothing production and changes in organisational form and in relations between companies in the clothing production system. Such relations remain contingent and context-specific.

Automobile production: the interaction between a search of labour markets to allow the introduction of new production concepts and practices, market penetration via inward investment, and changing regulatory regimes

In recent years there has been a considerable internationalisation of EU automobile production into, first, peripheral regions of northern Europe and southern Europe, and secondly, into CEE (Sadler and Swain, 1994; Hudson and Schamp, 1995; Pavlínek, 1998). This partly reflects substantial differences in labour costs. Of greater significance, however, are the possibilities radically to re-organise working practices, with consequent effects on productivity levels, both in areas with no prior history of automobile production and in former automobile production areas, above all in CEE, in which there is little, if any, resistance to such changes. Production is increasingly ‘Europeanised’, with “an intricate network of ... flows which reflect both the sourcing and marketing strategies of the major automobile producers, national and transnational” (Dicken *et al*, 1995, 4).

The automobile production system is seen, by some, to be organised within European-wide networks, which encompass a three-fold hierarchy of regions, qualitatively differentiated in terms of their role in the production system. R&D and high level and knowledge-intensive competencies are increasingly concentrated in the core, centred on Germany,¹⁹ as routine production,

¹⁸ This is indicated in evidence from interviews with clothing firms in CEE (Dunford *et al.*, 2001).

¹⁹ For example, GM established a major R&D centre at Russelsheim, with responsibility for all GM R&D outside the USA, employing 7,000; BMW employs more than 6,000 at its R&D

especially of lower value models is increasingly dispersed to the eastern and southern peripheries. This emergent hierarchy “is based upon the cumulative competencies of the actors, the density of networks of relationships and proximity to the seats of power where strategic decisions are taken on matters economic, financial, scientific, technological and political, distributing other activities over space ...” (Bordenave and Lung, 1996, 320). However, creating such a regionally hierarchical Europeanised automobile production system is complicated in at least two ways. First, there is still evidence of ‘national champions’ dominating in national markets (Bordenave and Lung, 1993; Hudson and Schamp, 1995). Secondly, supply chains are being extended beyond Europe (Sadler, 1999).

The proximate cause of these changes was the crisis of Fordist mass production in Western Europe and the collapse of the state socialist mass production model in Eastern Europe. While the latter was a consequence of geo-political change, the former resulted from the maturing internal contradictions of Fordist production, allied to growing competition from Japanese producers using just-in-time (JIT) and lean production methods. However, in the 1980s, Japanese producers seeking to increase their share of the EU market via exports were confronted by two problems. First, a strongly appreciating yen made exports from Japan increasingly difficult. Secondly, political resistance to growing imports, reflected in voluntary export control arrangements, limited the share of the EU market that Japanese companies could acquire via importing. To increase this share, and to secure a long-term position in the EU market, Japanese automobile companies were compelled to establish production facilities within the EU, either by foreign direct investment (FDI) in green-field sites or via acquisition, merger or joint ventures. In turn, however, Japanese companies establishing production faced the problem of introducing their own ‘Japanese’ high volume flexible production (HVFP) methods in very different cultural and political settings in Europe.

These HVFP methods are predicated upon particular ways of organising the labour process, originally quite novel in a European context, with demanding requirements in terms of recruitment, working practices, and modes of labour representation. These were difficult to introduce in regions with a history of automobile production and a strong trades union culture committed to defending existing working practices and wage arrangements. Consequently, Japanese companies sought production sites with particular types of labour market and state regulatory régime and were initially attracted to the UK by national government policies, fixed capital investment subsidised via regional policy, plus regional labour markets characterised by high levels of unemployment and an abundance of ‘green labour’. Following the initial investment in north east England by Nissan, with assembly beginning at its Sunderland plant in 1986 (Garrahan and Stewart, 1992), there were major

centre at Munich, whilst both Ford in Cologne and Mercedes in Sindelfingen, near Stuttgart, employ more than 4,000 in their respective R&D centres (Hudson and Schamp, 1995). Renault established its main R&D centre at Guyancourt in St. Quentin, near Paris, while there is also evidence of further concentration of R&D associated with other companies in France and Italy (Conti and Enrietti, 1995; Savary, 1995).

investments by Honda at Swindon (following its strategic alliance with British Leyland/Rover, begun in 1979) and Toyota in Derbyshire, at Burnaston (see Hudson, 1995a); Nissan subsequently invested in Spain whilst other Japanese companies invested elsewhere in Europe (see below).

As the automobile production space was re-defined as European, competition for major inward investment projects, both between and within national states, intensified. This occurred in a context of unequal power relationships between large, externally owned corporations, national states, regional development agencies, trades unions and local communities. National states seek to attract and encourage inward investment but within the constraints of an EU framework to regulate intra-EU international competition for investment while they also define and administer the rules through which regions within their country compete between themselves and with regions elsewhere. There was intense competition between places for these investments. For example, some 40 local authorities in the UK alone bid to secure the Nissan investment (Hudson, 1995b). Consequently, Nissan was able to extract a high price, both financially in terms of grant aid and also in securing local co-operation to ensure that a variety of “hard” and “soft” infrastructure requirements were met. This intense competition can on occasion create problems. For example, there is still uncertainty as to the inducements offered to Nissan by, amongst others, the now defunct Tyne and Wear Metropolitan County Council²⁰.

Establishing new automobile plants in locations previously devoid of such production certainly offered (and still offers) advantages to companies. However, it also posed challenges in terms of embedding factories in places, both for the companies and for political actors seeking to capture such prized inward investment projects. In part, this was and is a relatively straightforward process in so far as it relates to providing investment grants and loans and ‘hard’ infrastructure and even in securing desired working practices and modes of labour representation within the factory. For example, the strong tradition of industrial union organisation in north east England posed little in the way of a problem to Nissan, and in some respects the company used it to its own advantage. It devised sophisticated, complex and exhaustive recruitment procedures designed, *inter alia*, to exclude trades union activists or people with experience of union organisation (Garrahan and Stewart, 1992)²¹. Within the region, trades unions competed vigorously for the right to be the sole union at the new plant (Hudson, 1995a, 79-85). The ‘winner’ of the contest was the AEEU. Its single union deal was seen as so ineffective by workers that managers had to persuade workers to join the union in an attempt to maintain an image of partnership in a region where such imagery was important²². Elsewhere Honda secured a no-union deal rather than a one

²⁰ There was also controversy surrounding the actions of Derbyshire County council in attracting Toyota.

²¹ Indeed, Nissan was actively courted by the Thatcher government as a way of showing companies in the UK how to re-shape labour relations and work practices.

²² However, strong and active union organisation unexpectedly emerged amongst women employed by some component suppliers located adjacent to the Nissan plant. This emphasises the importance of acknowledging the potential for the actions of organised labour to shape geographies of economies and influence trajectories of local economic development (see Herod, 2001; Hudson, 2001).

union arrangement at its Swindon plant. In general, companies had little difficulty in securing their preferred form of labour representation in their factories.

It was more problematic to secure provision of appropriate 'soft' infrastructure and training provision on in the surrounding regions beyond the factory gates²³. For example, Nissan's requirements for suitably qualified labour-power were initially met via a direct relationship with Sunderland City Training and Enterprise Council (TEC), with national government and EU funding. As Nissan expanded the labour force in the early 1990s, however, it became increasingly concerned as to the efficacy of these arrangements. It decided that a more broadly-based and quasi-autonomous organisation, externally-funded, was required to underwrite the labour-power requirements of the automobile industry in the region's component suppliers as well as Nissan itself, thereby minimising labour poaching between firms. The end product of this was the creation of the Automotive Sector Strategic Alliance (ASSA), established in 1997²⁴. ASSA seeks "to support the growth and competitiveness of the [auto] sector through the development of a skilled labour force, helping create job security" (cited in Pike *et al*, 2000, 79). In particular, it aims to "cascade" a "training culture" down the tiers of the supply chain from Nissan and both encourage and support SMEs collectively to invest in training. As ASSA became more established as an institution of regional labour market governance and regulation, Nissan was able to step back, confident that the new organisation would ensure that many of its training requirements were met, without it seeming to favour Nissan or without Nissan seeming to lobby for special treatment. At the same time, however, both Nissan's by-now well-established presence and ASSA's existence became deployed in marketing the region, seeking to create an image of the north east as an automotive region, and attract future investment, in particular, more design-oriented and knowledge-intensive projects (Hudson, 2000, 75).

The increasing presence of Japanese producers posed a growing challenge to established automobile producers in western Europe, both 'national champions' (such as Fiat and Renault) and USA-based multinationals with a long history of production in Europe (notably Ford and GM). Their response was to seek out peripheral locations within Europe in which to establish new factories that emulated those of the Japanese producers, such as that at Melfi. Melfi was established by FIAT on a 'green-field' site in the Mezzogiorno to allow a completely new (to Italy) form of work organisation to be introduced, underpinned by substantial financial support from the Italian state (Conti and Enrietti, 1995). While Melfi was established to produce high volume cars at the lower end of the market (notably the Punto), such peripheral plants often

²³ In Pecks' (1996) terms in the *workplace* rather than the *work place*.

²⁴ ASSA's membership comprises Nissan and over 40 suppliers within the north east, with Board member representation from Nissan, local authorities, TECs, further and higher educational organisations, the Northern Development company (subsequently absorbed into the new Regional Development Agency, ONE North East in 1999), and Sunderland Business Link.

had another role. Often they were to produce relatively low volumes of existing or new products, such as off-road vehicles and 'people carriers' (Ferrao and Vale, 1995), as companies experimented with new products and new ways of producing in plants that were not central to their on-going production strategies. In part this was because attempts to introduce new HVFP methods into their existing plants initially encountered strong resistance from workers and trades unions. In due course, however, as lessons were learned from experimental plants in peripheral locations and workers began to accept that there seemed little choice but to accept radical changes in working practices if capacity and some jobs were to be preserved in existing plants, 'lean' production methods became introduced into major plants in core locations: early examples included BMW at Regensburg, VW at Embden and Citroen/PSA at Rennes (Hudson and Schamp, 1995).

The opening up of CEE offered new spaces in which to re-locate high-volume production of low value models, produce new products in relatively small volumes, and experiment with new ways of producing and working ('experimenting-with-the-future' approaches: Grabher, 1997, 127-9) in regions characterised by high unemployment and the widespread availability of labour of varied types. A series of inward investments in automobile assembly plants followed, both new 'green field' factories (mainly in Hungary, the former GDR and Poland) and joint ventures or acquisitions of existing automobile producers. Examples of the former include VW at Mosel, and GM Opel at Eisenhach, both in the former GDR, GM Opel in Gliwice in south west Poland, while planned new factories include BMW and Porsche at Liepzig in the former GDR, and a joint venture by Peugeot and Toyota in a new factory at Kolin in the Czech Republic. Examples of 'brown field' investments via acquisition include Fiat's acquisition of FSM, which became Fiat Poland SA, Daewoo-FSO in Poland, VW's acquisition of Skoda (in the face of competition from Renault), Suzuki's Hungarian joint venture at Estergom (Swain, 1996; 1998), Daewoo's acquisition of Ukrainian Avtozaz and Renault's purchase of Dacia in Rumania²⁵.

Such investments were both path-dependent and path-forming: Nielsen *et al.*, (1995). In all cases companies were able to exercise great selectivity in recruitment, with rigorous practices reminiscent of those used by Japanese companies in the UK, and hire workers for a fraction of western Europe wages. By introducing new ways of working and control of the labour process via the activities of foremen and more assertive managerial practices, removing the autonomy that shop floor workers had enjoyed during the state socialist era (Burawoy and Krotov, 1993), 'the frontier of control' (Beynon, 1973) has been re-defined in automobile assembly and component factories in CEE. In cases in which the equipment and means of production were

²⁵ An indication of the extent to which inward investment rapidly came to dominate automobile production in much of CEE is that foreign-owned companies and joint ventures (including components production) accounted for 85% of automobile production in Hungary, 82% in Poland and 67% in the Czech Republic (Zemplerová, (1998, 337). The major inward investing companies in 1999, in rank order, were VW, Fiat, Daewoo and Renault – the subsequent bankruptcy of Daewoo was a sharp reminder of the dangers involved for host territories in CEE.

relatively modern (as with VW's acquisition of Skoda) great increases in productivity were initially gained without major capital investment. In some cases, typically those associated with 'brown field' acquisition of existing automobile plants, companies recruited workers endowed with engineering skills and/or experience of working in the automobile industry but amenable to the introduction of new working practices. In other cases of new 'green field' plants, companies recruited 'green' labour with no previous experience of working in the automobile industry (as at Magyar Suzuki: see Swain, 1998).

National governments in CEE have actively sought to attract FDI in the automobile industry, further ratcheting up the level of territorial competition for such investments. Fixed capital investment costs have been subsidised by generous national state and/or EU financial support via regional policy grants and loans, and often in locations with attractive exchange rates in terms of exports to the west (Hudson and Schamp, 1995; Pavlínek and Smith, 1998; Smith and Ferenčíková, 1998)²⁶. Often new industrial areas were prepared specifically to attract such investment, further reducing production costs there for inward investors via tax allowances: for example the Polish government established special economic zones (SEZs - although such incentives are illegal under the terms of the EU accession agreements). Such subsidisation by national governments and/or the EU reduces the risks to companies and lowers sunk cost barriers to exit, for whatever reason. Within a broad EU regulatory framework, local and national states and organised labour have been active agents in 'capturing' mobile investments, with the aim of (re-)situating local economies within a Europeanised production system. Such actions, however, help define and enhance the territorial competition involved in regional and local development in contemporary Europe, as the attempt to 'ground' investments in any one local economy necessarily involves pitting it in competition with other regions across Europe. Such territorial competition is further complicated by the use of national state aids to keep production facilities in EU Member States in the face of relocation pressures to lower cost regions in, *inter alia*, CEE.²⁷

²⁶ In the longer term eastern Europe offered the promise of market expansion but in the short – term the attractions of producing there – notably low cost labour – militated against any significant market growth based on rising levels of material consumption there.

²⁷ Examples include the UK government's subsidies to Nissan and Rover, the Italian government's subsidy of Euros 40 million to FIAT for developing a new model at Melfi, and the Free State of Saxony's subsidy of Euros 100 million to VW for the Mosel and Chemnitz (former Trabant) works. Eastern Germany is a particularly sensitive location. Article 92(2)(c) of the EC Treaty authorises "aid granted to the economy of certain areas of the Federal Republic of Germany affected by the division of Germany, in so far as such aid is required in order to compensate for the economic disadvantages caused by that division" Justification of aid requires a cost-benefit analysis in which the site is compared with another location in the EU but increasingly national governments use CEE as the comparator. The political sensitivities associated with such national government aid, and tensions between the EU and national levels, were recently emphasised by German Chancellor Gerhard Schröder. Speaking at the opening of VW's new Dresden factory, he attacked EU attempts to limit national states' capabilities to offer selective assistance to secure such investments to depressed regions, such as those of eastern Germany, stressing that this was central to the national states economic responsibilities (Simonian, 2001).

These plants in CEE have in turn helped re-define 'best practices' and productivity norms in automobile plants in western Europe. As the fin de siècle approached, the principles of 'lean' production were incorporated in varying degrees, albeit in hybridised forms as these were adapted to local circumstances, into all major automobile assembly plants in Europe, with the effects cascading down supply chains to become incorporated into first tier suppliers and other companies located further down supply chains. Furthermore, as well as leading to new links between plants within companies across Europe in emergent Europeanised production systems (themselves often part of global systems), the new HVFP methods required new forms of relations between firms. Increasingly major assembly companies sought to focus upon design, R&D, marketing and final assembly, and out-source component production, increasingly seeking links with first tier component suppliers that would provide modules and sub-assemblies rather than individual components. This, coupled with an emphasis on JIT delivery, and engineering in quality from the outset, re-defined the anatomy of the component sector within Europe.

The increasingly stringent requirements of assembly companies helped trigger a surge in acquisitions and mergers and product and portfolio swaps within the components sector, as first tier suppliers either emerged, merged or consolidated their positions around particular sections of the product market (Dicken *et al*, 1995, 17; Sadler and Amin, 1995). These changes in the corporate anatomy of the supply chain and the switch towards JIT production also led to changes in production geographies. Sometimes JIT involved production in one place and a re-regionalisation of production. For example, supplier parks were established adjacent to Nissan's Sunderland factory, to the Ford/VW joint venture to produce people carriers at Setubal in Portugal (Ferrao and Vale, 1995) and to the SEAT factory at Matorell, near Barcelona. Such examples lend support to claims about a transition from former 'global outpost' forms of branch plant investment to embedded performance plants (Hudson, 1995b)²⁸.

Often, however, such spatial clustering was simply a necessary response to inadequate transport infrastructures and logistics systems. Referring to the supplier park established adjacent to the Fiat plant at Melfi, Mehl (cited in Hudson and Schamp, 1995, 227) notes²⁹, with a degree of irony, that "the

²⁸ Equally, well-grounded fears about dis-articulated branch plant economies and of dependency, external control, and profit repatriation remain. Commenting, unusually) publicly, in the aftermath of the collapse of Daewoo in 2000 and its subsequent impacts on the indebted Daewoo-FSO car plant near Warsaw, Marek Belka, Poland's Finance Minister and Deputy Prime Minister, stressed: "We know that this debt comes from the fact that the company raised the prices of its supplies and lowered the prices of goods sold abroad or to the Daewoo chain". More generally he added: "if we see a company that's increasing its production and sales ... while regularly reporting losses, it will have to reckon with an audit" (cited in Reed, 2001). This suggests that the continuing existence of processes of transfer of value both between locations within Europe and from Europe to other places within the overall automobile value chain.

²⁹ Subsequently there have been considerable improvements in road transport links in particular, facilitating both extended commuting to the factory and facilitating component delivery from other parts of Italy, but the clustering of suppliers around the assembly plant remains (Interviews at Melfi with Fiat managers, July 2001).

aspired close spatial relationship with suppliers can be seen as a tribute to particular Italian circumstances: strikes in the transport sector, bad road and rail linkages [that] make more difficult the production-synchronous delivery from larger distances". In other circumstances, co-location of suppliers and assemblers without the provision of a specific supplier park, represents a type of 'pseudo-JIT' to cope with the problems of poor transport and communications infrastructure rather than synchronous production (Hudson, 2000, 156-8). Suppliers establish warehouses from which the assembly plants can be supplied 'JIT' from buffer stocks. Examples of this type of pseudo-JIT via co-location include the GM and VW assembly plants at Eisenach and Mosel, respectively (Schamp, 1995).

More generally, there has been investment in CEE by western European component producers in response to assemblers locating there. For example, following VW's acquisition of Skoda, several suppliers (including ITT, Bosch, T&N, Rockwell-Golde, VDO and Lucas) followed it there via a series of acquisitions and joint ventures. These moves reflected two considerations (Hudson and Schamp, 1995). First, to secure access to the market for Skoda's component supplies; secondly, the attractions of the combination of low wages, skilled labour and relatively high productivity, allied to favourable exchange rates. More generally, automobile producers established in core locations in Europe, but shifting some production to peripheral locations, prefer maintaining links with and sourcing from existing suppliers via the latter establishing new, typically 'green field', component plants (Hudson and Schamp, 1995). In addition, the need to meet 'local content' criteria in applicant countries in CEE has sometimes led to the incorporation of indigenous component production via joint ventures with foreign assembly companies. For example, Daewoo established 15 Polish-South Korean joint ventures in component production in Poland to ensure that it met the minimum target of 60% 'local' (EU) content (Havas, 2000, 252).

Echoing the impacts of earlier rounds of Japanese investment on the supply chain in northern Europe, inward investments in the component sector in CEE have helped transform the complex web of supply networks there. However, the power of companies such as VW and GM-Opel has led to the emergence of sharp asymmetries of power within reconstituted supply chains. Some domestic component producers have been integrated into newly established supply networks, For example, many Czech firms have become 'first tier' suppliers for the new investments by VW³⁰. More commonly, however, local producers incorporated into these networks generally manufacture less complex and lower value components, with 'high tech' and high value components imported (for example, Magyar Suzuki imports such components from Japan). Furthermore, as in parts of western Europe, such as Spain, many other 'local' producers have been excluded because of component investment from the EU. Consequently, many well-established plants have been excluded from these supply networks, with important implications for their sustainability and for regional development, as the degree to which the

³⁰ There are marked similarities between VW's component supply policies and those Japanese assemblers in western Europe, which prefer to source from into existing but appropriately-restructured supply chains (Hudson, 1995a, 73-6).

newly-(re)constructed automobile production systems are 'embedded' in these regions varies sharply³¹. In eastern as in western Europe, there is a range from export-oriented branch plants that are clearly 'global outposts' to regional production systems that involve closer links between assemblers and their suppliers in more 'embedded' sophisticated 'enclave' economies (Hudson, 2002). In the latter cases, however, exclusion from or inclusion in these supply networks is determined by the requirements of multi-national auto producers, driven by corporate interests rather than those of regional development.

Equally, however, production systems were often constructed on a pan-European basis (not least because EU 'local content' rules relate to the EU rather than any specific region in it), offering different possibilities for inward investment as a source of regional development. For example, Bosch's alternator plant at Miskin, near Cardiff, is one of only two plants that supply the entire global market with particular types of alternator (Sadler and Amin, 1995, 48-50), VW supplies its assembly plant in Bratislava in Slovakia with components from suppliers in Germany via train on a daily basis, while metal stamped parts are delivered from Opel's plant in Zaragoza to that in Eisenach by train (Schamp, 1995). Subject to appropriate logistics arrangements, therefore, "deadline proximity" (Ferrao and Vale, 1995) and producing JIT does not necessarily require co-located production.

There is, however, a further twist in the tale (and tail) to processes of Europeanisation. Despite over-capacity and problems of profitability, there has been great resistance to acquisitions and mergers between European producers – automobiles has often been a sector of 'national champions' with considerable resistance to cross-EU border merger and acquisition (Hudson and Schamp, 1995). The failure of the strategic alliance and proposed merger between Renault and Volvo in the early 1990s exemplified the difficulties of cross-national mergers in the EU (Malmberg, 1995, 186-8; Savary, 1995, 163-7). However, in the 1990s Japanese producers became increasingly crisis-prone because of stagnating domestic demand and slowing growth of exports. This led to strategic alliances and other links between Japanese and non-Japanese producers – and the increasing dominance of the pursuit of shareholder value rather than stakeholder interests, expressed in internal labour market of companies in the notion of 'jobs for life'. One such link up of particular significance in Europe was the strategic alliance forged in 1999 between Renault and Nissan. Renault took a major stake (38.6%, later increased to 44.4%) in the share capital of Nissan, as part of a still-evolving strategic alliance intended to solve Nissan's deeply rooted profitability crisis (Burt, 2001). Although in principle a strategic alliance, in practice Renault became the dominant partner.

This link-up led to competition between the companies for investment to produce the new generation of Nissan Micra. Despite claims that the former was by some distance the most productive - in terms of vehicles per worker –

³¹ In referring to 'embeddedness' here, I am aware that this relates only to the character of linkages in the supply chain and that this is at best one dimension of the more complex processes of 'embedding'.

plant in Europe (Hudson, 2000, 147), it is located outside the Euro-zone. This led, early in 2001, to a growing belief that Nissan was giving serious consideration to shifting future production of the Micra to a Renault plant in France (probably Flins, on the outskirts of Paris). This would have led to significant job loss both in the factory and in component supply plants in the north east and elsewhere in the UK. There were both economic (in terms of costs) and political (in terms of demonstrating that the Renault-Nissan relationship created jobs in France) attractions for Nissan in switching production to one of Renault's existing factories in France.

In the end, Micra production remained at Sunderland, but on terms that were very favourable to Nissan. It acquired a £40 million grant from the UK government, agreement by UK suppliers to price in Euros (thereby shifting the risks of currency fluctuation to them) and, most significantly, agreement to 24 hour three shift working in the Sunderland plant, dramatically reducing the turnover time of fixed capital invested there. Simply the threat of re-configuring the geography of corporate production in the wake of the new strategic alliance secured enhanced surplus-value production at Sunderland. At the same time, Nissan made clear that it would enhance component sourcing from the Euro-zone, further intensifying the pressure on component suppliers producing in the UK. In short, as a result of the perceived possibility of shifting Micra production from Sunderland, Nissan able to extract significant concessions from its work-force and suppliers in the UK, with significant effects on the geography of the value chain. Thus the new corporate anatomy of automobile production in Europe led to in-situ changes at Sunderland and also to changes in the supply chain – and in turn again re-defined auto production productivity norms within Europe, with important implications for the geography of the automobile production system and for regional development in Europe.

Steel: the interaction of merger and acquisition, EU expansion and changing regulatory regimes in re-defining anatomy of production

Even more so than automobiles, steel has been an industry of 'national champions' in western Europe. Paradoxically, it can also be seen as an industry of great symbolic significance in the context of the EU. The 1951 Treaty of Paris was specifically concerned to establish a cross-national regulatory regime for the coal and steel industries via the creation of the European Coal and Steel Community³². While there was early pan-European regulation, however, this gave no encouragement to cross-national mergers. There were several reasons for this. Firstly, steel was seen as central to national armaments and defence industries. Secondly, in many national states, steel was a public sector/nationalised industry. Thirdly, steel was a key input to a range of other manufacturing industries. While there was increasing acquisition and merger activity within national boundaries in Europe, especially from the late 1970s, often involving selective product and portfolio

³² The life of the Treaty of Paris was 50 years, so that it expires as the EU is on the verge of expanding into CEE, with the restructuring of the Polish steel industry in particular presenting a major challenge.

swaps³³, there was very little evidence of cross-border mergers. The most publicised cross-border merger –between Hoesch and Hooghoven.to form Estel - collapsed in 1982 – but was notable for its rarity (Hudson, 1994)³⁴.

For some three decades, steel has been an industry characterised by global over-capacity³⁵, with periodic trade disputes, especially involving the USA, often with the EU. In this context, steel companies within western Europe explored various ways of combating corporate crises of profitability, including diversification out of steel (for example, into electronics, automobiles or financial services), product diversification and up-grading product quality. In many areas of bulk steel production, however, the response to crisis was to cut capacity and jobs to increase levels of capacity utilisation and thereby reduce unit production costs. The scale of job losses has been very severe. Between 1975 and 1995 employment in iron and steel in the EU fell by 65% from 991,000 to 326,00³⁶. Given the historical geography of the industry, these job losses were highly concentrated in particular regions and cities and towns within them. This led to a series of often fiercely contested plant closures and job losses (for example, see Hudson, 2000, 201-26. Many of these steel producers were publicly-owned, which further politicised the processes of cutting capacity and jobs, especially as these cuts were increasingly part of rationalisation processes designed to enable state-owned steel companies to be privatised. For by the 1990s there were intensifying pressures on state finances, and privatisation was seen as one way of helping contain them. However, privatisation, the disciplines of the market and the need to demonstrate share-holder value in turn further increased financial pressures on steel producers in the EU.

While one initial response was further acquisition and mergers within national boundaries – notably in Italy following the privatisation of Finsider and the subsequent merger and rationalisation activities of Ilva and Falck in the early 1990s (Hudson, 1994) and in Germany as first Krupp and Hoesch merged and then Krupp/Hoesch merged with Thyssen in 1999 to form the (then) third largest steel company globally. Such mergers were a prelude to further rounds of capacity and job cuts and portfolio rationalisation, but also to the newly-merged companies seeking to expand beyond their home national territories. For example, ThyssenKrupp concentrated all iron and steel production and most of its hot strip production at Duisburg, with consequent cuts in employment and capacity in Dortmund (historically the centre of Hoesch's operations). In addition, however, ThyssenKrupp embarked upon a

³³ For examples include the so-called Phoenix mergers in the UK in the 1980s and the merger and rationalisation activities involving Ilva and Falck in Italy in the early 1990s (Hudson, 1994).

³⁴ Often merger proposals faced strong political opposition. For example, in 1990 Arbed (Luxembourg) and Cockerill (Belgium) were forced to abandon plans to merge their flat products division in the face of strong political opposition in both countries.

³⁵ In 1980 global over-capacity was estimated at 2000 million tonnes and by 2000 still stood at 85 million tonnes: Ekkehard Schulz, Executive /board Chairman, ThyssenKrupp (cited in Betts, 2002).

³⁶ In two of the current eastern European applicant states, Hungary and Poland, it fell , from 222,000 to 106,000. The data were collected by the International Labour Organisation: see Bolger, 1997).

round of acquisition and divestment activities. Between 1999 and 2001 it acquired business with annual sales of 3.7 billion Euro and disposed of assets with annual sales of 2.5 billion Euro as it sought to re-position its portfolio of activities within and beyond steel and within and beyond Germany. For example, its automotive division acquired several companies to reinforce its position in the manufacture of vehicle bodies, engine development and electrical and electronic assembly activities whilst it increasingly focussed its activities within iron and steel on the production of both carbon and stainless steel flat products for automobiles and “white goods” markets, including a major investment in “the world’s most advanced stainless steel mill “ in China, which began production in 2001 with an annual capacity of 270,000 tonnes (Betts, 2002).

As well as pressures to internationalise beyond Europe, there were also increasing pressures for cross-border mergers within Europe to create companies that could better cope with international competition, further rationalise production and take advantage of the emerging single European market. One of the more prominent of these was the merger between British Steel and Hooghoven to form Corus. This was a prelude to post-merger rationalisation. Following earlier significant job cuts announced in 2000, in 2001 Corus announced plans for a major rationalisation of production in the UK. These involved further big reductions in employment and capacity, especially concentrated at Llanwern in south Wales and Teesside in north east England. This was a direct response to changes in the volume and composition of demand for steel in the UK, coupled with the appreciation of sterling against the Euro, making export to other EU markets unprofitable. It seems likely that in future Corus will seek to reduce its dependence on steel (for example, expanding aluminium production) and, within steel, move into eastern Europe and continue to extend its operations beyond Europe³⁷, with further reductions in capacity and employment in the UK. This is especially so given the merger between Usinor (France), Arbed (Luxembourg) and Aceralia (Spain) which will create Acelor, the third biggest steel producer globally, which has re-defined the corporate anatomy of steel production in Europe³⁸.

Pressures to re-define the corporate anatomy and geographies of steel production in Europe had been enhanced by events in 1989 and the subsequent attempts to rationalise technically very inefficient steel production in CEE, especially as Poland became a serious candidate for EU entry. Despite marked reductions in employment – from 156,00 in 1975, to 140,000 in 1989 and to 92,000 in 1996 (Bolger, 1997) – labour productivity in steel production in Poland lagged behind that in western Europe. From within CEE, acquisition by western steel companies is seen as the route to transform the industry. Following sporadic but inconclusive discussions with western

³⁷ For example, in January 2002 it announced a, alliance with Sumitomo to supply sheet steel to the automobile sector (Hijino and Marsh, 2001)

³⁸ Automobile producers in the EU lobbied – unsuccessfully – against Acelor, on the grounds that it would be in a position to raise sheet steel prices. These concerns were dismissed by the EU Commission on the grounds that there was substantial over-capacity in steel and that the major automobile companies possessed considerable purchasing power (Guerrera, 2001).

companies since the early 1990s, the Polish government became increasingly anxious to secure privatisation via this route, especially of the major plants of HiL at Nova Huta, near Kracow and Huta Katowice, as these account for some 66% of total production capacity. For example, as Stenning (2000, 108) puts it, referring to HTS, the company that operates the HiL plant: "In May 1997, HTS was converted to a state-run joint stock company since when it has been actively seeking foreign investment". In an attempt to secure privatisation via acquisition by western European companies by 2001 (Wagstyl, 1998), capacity and employment were drastically further reduced, while at the same time undertaking fixed capital investment to modernise capacity and improve productivity. For example, the HiL plant employed 32,000 in 1989 but by 1999 this had been cut to 12,000, while investing over £200 million modernising the plant between 1995 and 1998. In January 2000 plans for a further 8,000 redundancies were announced.

Even so, as yet, attempts to persuade western steel companies to acquire the Polish plants have failed. While an Austro-Dutch consortium of Voest Alpine and Hooghoven agreed to acquire HTS in 1998, it subsequently (in 1999) stalled negotiations because of concerns over the future viability of the company. The merger between British Steel and Hooghoven further complicated the situation and the future of the HiL plant and HTS remains unclear. There is, however, some evidence of inward investment into CEE. For example, in 2000 US Steel, the largest USA steel producer, announced it was acquiring VSZ in Slovakia, the highest quality steel producer in CEE. This was described as "the most significant foreign investment in Slovakia since Volkswagen in 1992 " and as US Steel's "first significant steel making investment for 13 years" (Anderson and Bowe, 2000). This is indicative of a emerging tendency towards more globalised steel companies and of the linkages between strategies of Europeanisation and globalisation in steel but within an European steel production system further reduced in scale³⁹.

Conclusions

In this paper, I sketched out a framework for understanding the geographies of economic and regional change in an increasingly integrated Europe. This focuses upon production systems in three different industries, constituted via the co-evolution of corporate strategies, the policies and regulatory frameworks of the EU and national states, and local and regional economic development and regeneration strategies. This has shaped the ways in which their geographies of have been re-worked in and beyond the boundaries of the evolving new Europe, especially as a consequence of the continuing evolution of the EU. I have sought to explore how such organisations and institutions have sought to both shape and use spatial differentiation within

³⁹ Documents submitted to the EU by the Polish Government in 1998 envisage total employment in steel in Poland falling further from 82,000 to 49,000 following EU entry, with these cuts concentrated on HiL and Huta Katowice (Stenning, 2000). At an OECD meeting in December 2001, the EU offered to make capacity cuts of 13-16 mt by 2010, from a proposed global capacity reduction of 97mt. It is unclear as to whether this refers to the existing EU of 15 so that any cuts in CEE applicants would be additional to these or whether it assumes Polish entry (Marsh and Alden, 2001).

Europe in pursuit of their various interests. Geographies of production systems are seen as an outcome of the co-evolution of the relationships between these individual and collective actors and institutions.

The changing economic geographies discussed above can be interpreted both as evidence of the declining importance of the regional scale and of the growing importance of that scale. The re-scaling of the European economy would seem to be a complex process, not amenable to easy generalisation. While there is evidence of a tendency towards the creation of a Europeanised systems of automobile, clothing and steel production, linking diverse locations within the continent, there are important differences in their geographies. Even so, as there is increasing qualitative differentiation in the technical and social divisions of labour within and across these systems, there is a general tendency for more sophisticated and higher-value added activities to locate in 'core' regions, with routine production dispersed to eastern and southern peripheries..

In this context, regional development organisations of varied stripe are seeking to shape these evolving production systems to favour or protect interest in 'their' territory. Some regions can certainly exert a powerful influence, as can some national states within Europe, in securing high value-added and knowledge-intensive activities for 'their' territories. Others are in a much weaker and more vulnerable position, however. In terms of FDI, they accept what they can attract, which typically may not be their preferred choice. In addition, many peripheral regions in north west Europe that were a time the location of such routine activities increasingly are being squeezed from two directions. They are unable to compete with the eastern and southern peripheries on cost, and unable to compete for higher-value added activities and functions with 'core' regions.

Regions are important political subjects in the intensifying inter-territorial competition within and beyond Europe. Whether this will help narrow or will reinforce regional inequalities in economic performance and well-being remains an open question, however. While there is evidence of past convergence in regional economic performance in the EU between the 1960s and 1990s, this has largely been a result of convergence in broad sectoral (primary/secondary/tertiary) structures, with no evidence of intra-sectoral convergence (Canaleta *et al*, 2002). While the eastward expansion of the EU will re-create opportunities for further inter-sectoral convergence (CEC, 2001), this will only be temporary as the broad structures of CEE economies converge with those of the existing members of the Union. Furthermore, it is already clear that evolving intra-sectoral and intra-industry spatial divisions of labour are magnifying the qualitative differences between regions in relation to economic performance and their positions within production systems. Such differences will increase as the combined effects of EU deepening and enlargement create greater opportunities for companies and for some regions successfully to "play the games of 'scale politics'" while many more lose out in this competition.

The conclusion to be drawn from the simultaneous co-evolution of diverse

tendencies in the spatial organisation of production systems, therefore, is that the increasingly integrated New Europe will continue to be characterised by new forms of combined and uneven development. As such, dramatic changes in economic organisation and specialisation and renewed divergence in the map of regional economic performance and well-being can be expected. Because of – rather than despite - processes of Europeanisation and globalisation of production systems, and multi-scalar inter-territorial competition, there will continue to be great diversity in national and regional economic organisation and performance in Europe. Understanding this diversity is a central task for analysts of the changing nature of the geographies of production systems and of regional economies in a still enlarging Europe.

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