Upgrading, Changing Competitive Pressures and Diverse Practices in the East European Apparel Industry

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Abstract

Following a period in the 1990s of rapid integration into the production and trade networks of the European Union (and to a lesser extent of the United States), clothing manufacturers in East and Central Europe have had to quickly adjust to the changing costs of production with EU accession, the rise of Chinese exports, and the January 1, 2005 final phase-out of quantitative quotas into major markets. This paper focuses on the changing competitive pressures on clothing producers in the region and on the diversity of adjustments currently being made in response to these changes. In particular, the paper details the wide range of adjustment strategies being adopted by firms in Slovakia and Bulgaria, and shows how inter-regional price competition, downgrading, and geographical shifts in patterns of sourcing and production are articulated with imperatives to regionalized production for major markets, stabilization of supply networks, industrial upgrading, and the expansion of localized sourcing and domestic marketing strategies.

Introduction

Following a period of decline in the early 1990s, East and Central European (ECE) textile and apparel production and trade grew rapidly (Figure 1). Textiles and apparel now account for between 10% and 25% of manufacturing employment in many of these countries and in 2004 in apparel alone represented between 2% (Czech Republic) and 20% (Romania) of total national merchandise exports in the ECE6 (Bulgaria, the Czech Republic, Hungary, Poland, Romania, and Slovakia) (WTO, 2005). However, in the late 1990s increases in imports from China and the final phase-out of quotas established under the Multi-Fibre Arrangement (MFA) (January 1, 2005) increased uncertainty in the industry. Contracts have been lost, contract prices have declined, and apparel exports (as a proportion of total exports) have fallen in all ECE accession and signatory countries except Bulgaria and Romania.1

This paper focuses on this meteoric renewal and retraction in an industry described in the early 1990s as dying or moribund, and considers the extent to which the particular forms of re-insertion of the industry into international supply chains have been important to the
ways in which the industry is now adjusting to competitive pressures arising from further liberalisation and expansion of trade in the industry. It describes the diversity of organizational forms and production networks emerging among apparel producers in response to changing patterns of competition and governance in global contracting, and focuses particularly on firm level strategies of industrial upgrading. Our aim is to demonstrate how legacies of state socialist industrialization, de-industrialization after 1989, and the subsequent re-insertion of the industry into export assembly production has shaped the particular forms of industrial resurgence, produced diverse strategies for managing opportunity and risk, and shaped the geographies of production and trade in the region. Continued price competition and new contracting arrangements continue to challenge managers to respond in urgent and creative ways. These responses are producing a complexity of industrial organization that others are also beginning to find elsewhere (Bair and Gereffi 2002), raising important conceptual issues concerning trajectories of change in global industries that resonate with recent work on value chains and global production networks (Coe et al 2004, Henderson et al 2002, Smith et al 2002). We conclude with an assessment of the role of historically and regionally specific conditions in understanding the opportunities and constraints facing apparel manufacturers in ECE, particularly in the context of increasing cost competition, supply chain consolidation, and the rise of new production centres in China and India attendant on MFA quota phase-out.

Figure 1 about here

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1 Lithuania, Latvia, Estonia, Poland, Hungary, Czech Republic, Slovakia, Slovenia, Romania, and Bulgaria.
The paper makes five main arguments. First, state policy (specially European Union (EU) trade policies and customs agreements since the 1980s) have played a vital role in encouraging European manufacturers and retail buyers to expand their production networks into ECE. Second, this expansion of European production networks and internationalization of ECE manufactures have been built on prior histories of contracting between state socialist enterprises and trade organizations in ECE and their western buyers. Third, the threats of increased competition and downgrading have produced (at least for now) a diversity of strategies and forms in the industry which cause us to think seriously about what we understand by industrial upgrading. Fourth, in this current phase of industrial restructuring long overlooked domestic markets seem to be playing a more important role. Fifth, the experiences of ECE raise questions about models of regional change in the industry based too narrowly on wage costs and wage differentials. While these remain important and in some EU accession regions are becoming even more important, there are particularities about the apparel industry in ECE that illustrate the broader logics that are shaping the current geographies of sourcing and production.

The paper is based on research involving six regional case studies in Bulgaria and Slovakia (Figure 2). The Bulgarian and Slovak cases were chosen to reflect different stages of involvement in export production, the importance of the apparel sector to national and regional economies in the two countries, different forms of market integration and product specificity, and distinct impacts of EU accession policies (see Begg, Pickles and Roukova (1999/2000), Pickles (2002), and Smith (2003) for further details). In each country three regional case studies were selected, focusing on the most important apparel producing areas: the two capital city regions of Sofia and Bratislava, two older producing regions (Plovdiv,
Bulgaria and Trenčín, Slovakia), and two more economically marginal regions (Kurdjali/Haskovo in southern Bulgaria and Prešov, East Slovakia) (Figure 2). The research involved a survey of 311 apparel firms conducted in 2002 and 2003, and over one hundred in-depth semi-structured interviews with key informants, managers, trade union organisations and workers conducted in 2002, 2003, and 2004. Managers in several firms were interviewed in each of the three years to allow us to assess firm specific changes. Firms were selected to reflect the broader population of apparel companies in each region. In Slovakia a larger number of small firms (1-10 employees) were included, reflecting the preponderance of such firms in the Bratislava region (Table 1). In each region, we attempted to include all of the key former state-owned enterprises in the survey and these are reflected in the number of larger firms (251 or more employees) in both Bulgaria and Slovakia. The firms surveyed also vary in their degree of dependence on export markets (Table 2) and on outward processing production arrangements (Table 3).

Figure 2 about here

Tables 1, 2 and 3 about here

**From full-package production to global assembly platforms**

Over the past twenty years, apparel producers in ECE have been increasingly integrated into western export markets and European production networks. From the mid-1980s, producers in ECE, particularly in Poland, Hungary, and the former Czechoslovakia and Yugoslavia began producing under contract for manufacturing and retail companies in the EU (Fröbel et al 1980) and to a lesser extent in the USA. In the mid-1990s, as competitive pressures increased, a second tier of producers including Bulgaria, Romania, and
the Baltic States began to emerge, with Romanian export production becoming the primary location for outward processing operations in the region (Figure 1). Of particular importance to the emergence of outward processing has been the already highly capitalised nature of the industry prior to the emergence of outward processing, a feature that marks an important difference with many other assembly platforms for export markets.

Post-war nationalisation led to an expansion of the scale and scope of production, industrial stock was re-capitalized, and services and training for the industry were expanded (Smith 1998). Under the national planning framework this involved the vertical integration of clothing production within large national and other Soviet bloc textile combinats, through which textile inputs, cloth and trim were all sourced and output was distributed. Production was organized in a hierarchical structure of enterprises, in which core and branch plants were articulated with smaller workshops geared to creating female employment in rural areas and small town (Begg and Pickles 1998, Smith 2003). There were important national differences. In Slovakia, industry was centred on large, urban-based, state-owned enterprises with networks of medium to large branch plants in surrounding towns and villages, providing employment opportunities for women. In Bulgaria, large urban-based plants were also apparent but they were connected to an extensive geography of small village workshops. In both cases the industry was linked to a wider set of social goals involving the creation of employment opportunities for women, particularly in areas where male employment was being developed in other industries.

Unlike the clothing industry in Western Europe and the USA, apparel production in ECE was relatively untouched by the emergence of fast moving fashion markets. This meant that the turnover of styles, the need to develop new designs, and the consequent shortening of
the time between conception and sale that became hallmarks especially in the women’s wear fashion segment of western markets, were not experienced to anything like the same extent in the full-package, integrated production complexes of ECE, despite soviet efforts to introduce such changes (Zakharova 2005). It also meant that home tailoring became a widespread practice, further adding to the pool of relatively skilled workers available to the industry.

In the 1980s, state policy in Western Europe (especially EU trade policies and customs agreements) played a vital role in encouraging European manufacturers and retail buyers to expand their production networks into ECE. Full-bundle (later cut-and-make (CM) and cut-make-trim (CMT)) production was encouraged under special preferential customs agreements know as outward processing trade (OPT), and was used especially in those product categories such as men’s and women’s suits, trousers, jackets, and shirts for which ECE producers had well established capacities (Table 4). Designed explicitly as a time-limited mechanism to help EU-based textile manufacturers to adjust to trade liberalization and increasing competition, OPT encouraged the export, assembly, and re-export of imported fabric and trim with only minimal customs costs (Fröbel et al 1980, Pellegrin 1997, 2001a, 2001b, Begg, Pickles and Smith 2003, Smith 2003). OPT arrangements were also useful from the perspective of state socialist planners, serving as a useful mechanism for ‘opening’ to Western Europe and a means of bringing new ideas for design, production process, technology, and capital into the industry.

With the collapse of Soviet-bloc and domestic markets for ECE textiles and clothing in the early 1990s, OPT full bundle assembly production emerged as the dominant form of production within a struggling state-owned and increasingly privatized industry (Begg and Pickles 1998). While the 1990s saw industry-wide collapse, some apparel enterprises were
able to sustain minimal levels of state underwriting, contracting, and production, and in some state and former-state firms managers were able to struggle along in generally unfavourable circumstances. In other cases, new small private locally-owned enterprises were able to emerge based on ad-hoc contracting or new buyer-relationships. What at first appeared to have been a form of defensive restructuring in a regional branch plant economy now appeared more complex, as ownership and organisational forms diversified and work regimes were transformed.

While most countries in ECE experienced these same processes of reform and restructuring, each did so in distinctive ways, depending on the specific form and timing of the fiscal crises of the state, the policies and pace adopted for the withdrawal by the state of enterprise investment and wage budgets, and the specific adjustment paths and privatisation processes attendant on the rapid loss of markets. Each of these circumstances had its own effects as firms restructured to new labour market conditions, ownership patterns, and cost structures in highly competitive international contracting environments.

In Poland and Hungary, for example, production for EU markets had emerged in the 1980s, providing an initial cushion against market losses in the 1990s. In Slovakia too the structure of firm size meant that large, former state-owned apparel producers with long-standing experiences and contacts in European networks were able to manage the transition, maintain production, and deepen their relationships with subcontractors across the country. Especially in lower-cost regions in the east (such as Prešov), they emerged as network organizers of sectoral decline and, as a result, were able to protect many key assets. In Bulgaria, the weaker position of state enterprises in international contracting combined with an already highly spatially distributed workshop structure of production resulted in asset
stripping and plant closure on a much larger scale. Larger apparel enterprises experienced particularly difficult adjustments and became, for a while, highly contested assets, variously run-down, under-valued, and transferred among owners, with the consequence that their subsidiary enterprises experienced intense uncertainty in wage bills, contracts, and inputs. Many workshop affiliates, long used to variable work-orders and seasonal down-time (especially at tobacco planting and harvest), were closed and their assets stripped.

Table 4 about here

Restructuring post-socialist apparel production networks

Bair and Gereffi (2003: 147) have defined the upgrading of firm activity in terms of stages involving ‘a series of role shifts involved in moving from export-oriented assembly to more integrated forms of manufacturing and marketing associated with the original equipment manufacturing (OEM [or full package production]) and original brand manufacturing (OBM) export roles, respectively’. Most typically, upgrading occurs as a shift from export assembly to OEM or full-package production (Bair and Gereffi 2003, see also Bair and Gereffi, 2002, and Yoruk 2001). That is, possible trajectories of upgrading in the apparel industry often involve, although do not have to be reduced to, a move from assembly or full-bundle activity, to original equipment manufacture, which may involve CM or CMT (cut-make-trim), to own design manufacture (ODM), to own brand production. In the following discussion we highlight some of these similar trajectories, but we also identify a variety of other possibilities not reducible to export production or upgrading as conventionally conceived.
To elaborate this wider context of uneven restructuring we use a heuristic device (Figure 3 and 4). These are ideal-typical models of the polyvalent adjustments being made by firms in Slovakia and Bulgaria in response to trade liberalization, increasing competitive pressure, industry reorganization, and changing local conditions. In this model the groups of firms are arrayed along two axes in terms of their mix of domestic and export market activities, and their position in a supply chain. In particular, we highlight four main forms that this diversity of production relations takes: (i) negotiating assembly production, (ii) diversification and own product development, (iii) low value domestic producers, and (iv) the emergence of full package, ‘network organizers’.

Figures 3 and 4 about here

_Negotiating assembly production_

In Slovakia, the engagement with export production for non-Soviet markets began in the early 1980s when German buyers and contractors began to make use of the OPT arrangements (Fröbel _et al_ 1980). Production was largely full-bundle, later CM, in nature and was based in a few specific locations where large state owned enterprises operated. The two main production locations were Trenčín and Prešov (Figure 2). In Trenčín, Ozeta and Makyta were the main enterprises, with the former producing men’s clothing and the latter women’s clothing. The location of Makyta in the town of Púchov was part of a deliberate policy of establishing social industries for women’s employment in a town that had been designated under central planning as the site for a rubber products enterprise employing a largely male workforce. In Prešov, the main producers were OZKN and its network of branch plants
across east Slovakia and the Vzorodev co-operative (Smith 2003). This structure of large state-owned enterprises (SOEs) and their branch plants has been an important factor in shaping the nature of restructuring in the industry after the collapse of state socialism. These factories have continued to dominate the local industry in both regions. They also became the basis for the establishment of a host of new private firms that were either created through the privatisation of the branch plant network of enterprises such as OZKN or through the establishment by former managers in the main SOEs of new, independent factories (Smith 2003). The particular skill and product profiles of production under state socialism have also affected the form that post-1989 OPT and other export production has taken, with a focus more on higher value tailored garments, suits, and trousers, than on lower value knitwear such as T-shirts (Begg, Pickles and Smith, 2003).

In Bulgaria, by contrast, while higher value tailoring also exists, assembly firms have tended to shift into other product areas, particularly in knit-wear, women’s shirts and T-shirts. This kind of production has been connected to the particular role of Greek and Turkish buyers operating in the region. These producers have made extensive use of the small and medium sized enterprises that were formerly part of the state-owned subsidiary networks of workshops established in the 1970s and 1980s (Begg and Pickles 1998, Pickles and Begg 2000, Pickles 2002). This extended economy of workshops and small factories provided only limited barriers to entry. It offered low cost factory-space and equipment in places with existing labour pools of seamstresses, technical workers, and managers, and its location in border areas offered important advantages in the timing and flexibility of inputs, deliveries, and access – directly and through Turkey and Greece – to important export markets in the EU and USA.
Typically, firms that rely on OPT assembly or CM activity using bundled inputs are in the most precarious position as cost pressures increase (Figures 3 and 4). About half of firms surveyed in both Slovakia and Bulgaria reported using bundled inputs, with many of these sourcing few or no inputs (trim) themselves; 67% of Bulgarian firms reported relying entirely on 100% bundled inputs compared to 47% of Slovak firms. In western Slovakia, producers relying on bundled assembly, CM, and CMT production have seen orders moving to lower cost locations in East Slovakia or in parts of the former Soviet Union, most commonly to Ukraine. But, because their production processes rely on relatively simple activities, the possibilities for adding value in production are limited: firms tend to sew garments from patterns and designs provided by buyers and contractors; cloth may be received already pre-cut by the contractor; contract prices yield tight margins, strict conditionalities, and heavy penalties for failure to meet delivery standards and deadlines; and access to capital is difficult. These kinds of firm typically experience intense price pressure in contracting, difficulties in obtaining contracts and meeting demands (such as larger orders, shorter delivery schedules, higher levels of quality and provision of a wider range of functions including quality control, logistics, and garment finishing/packing). It is generally in these firms that levels of desperation and bankruptcy are increasing, compliance with labour codes is more tenuous, and firm managers have fewest options for manoeuvre. Such conditions are now compounded by regional differences in the costs of inputs. For example, recent estimates suggest that electrical power is approximately 60% cheaper in Ukraine than in Slovakia, gas is about 50% cheaper and water is about 80% cheaper (see Benková 2004). As one of the managers of this firm explained very clearly:
‘The firm is really thinking about what we will do. We may close. …Buyers have learned to be very flexible and have shifted from long-standing commitments to a much more flexible locational strategy. Small firms need contacts to create new orders … Firms are too focused on OPT, and increasingly they must shed their subcontracting arrangements as contracts decline. Small firms are shifting down the value chain and this is the last step in the existence of such firms’.

In similar firms in Bulgaria, the degree of desperation was even sharper. Although such firms often have had long-term supply contracts with the same western buyers, many have been unable to translate these into processes of firm learning and product development. They continue to rely on OPT-like transactions, and have determined that – as a low-cost strategy – this is currently their best option. As one manager explained in a discussion of contract negotiations, “we are the weak side of the contract relationship…. we have to be like diplomats [in our negotiations with buyers]”.

In the face of such pressures, some smaller firms work cooperatively to help each other meet delivery deadlines or pool capacities to bid on the larger contracts increasingly demanded by buyers. In other cases, inter-firm relations are more ‘despotic’ and asymmetrical in nature; to maintain flexibility for the contracting firm, inter-firm relations are mobilized or terminated as contracting conditions change (Smith 2003). For many ‘core’ firms contracting with western buyers the outsourcing of lower value tasks to smaller firms and workshops is common. Many of these sub-contractors are located in small villages or in surrounding towns, or in some cases in other countries (such as in Prešov, Slovakia, where the use of larger firms in Ukraine and Belarus is increasing).
Other firms have been able to build on OPT contracting and are now investing to capture higher value production; such as adding new sewing processes, including buttonholing, embroidery, or finishing, such as labelling, packing and bar-coding. These OPT firms are moving into full-package export production (Figures 3 and 4). As western contractors are increasingly looking to reduce their own transaction costs and to outsource input sourcing and logistical functions to suppliers, particularly as the customs benefits of full bundle assembly diminish, new opportunities arise for some ECE producers. An important consequence in regions with such firms is the deepening and extension of domestic input suppliers (such as button makers and thread suppliers) and service providers (such as cutting machine vendors, software firms, and technical and logistical support companies).

One way in which some firms have been able to position themselves in assembly export contracting is through concentrating on working with key buyers who seek to contract higher value clothing products, such as the sewing of men’s and women’s suits, jackets and trousers. Where this involves the incorporation of higher levels of design activity and of new information technologies (especially for tailored garments), producers have been able to compete more readily in the quick response markets in the EU. Such production often still involves using bundled inputs, but improves the profitability and/or reliability of contracts and enables the development of some OBM/ODM activity, diversifying the profile of activity and spreading risk.

One of the largest firms in Prešov in eastern Slovakia working in this way is OZKN. It employs nearly 900 people and has its origins in the early 20th century capitalist industrialisation of Slovakia. It produces a range of men’s suiting for various EU markets. Production is based largely on assembly, with very limited responsibility for purchasing. The
firm’s main customers are two leading Spanish department stores which together account for 45% of total production, although markets and customers change rapidly making it difficult to develop longer term relationships with buyers. OZKN is able to supply high quality clothing quickly and with great flexibility on orders. Delivery time on men’s suits is 4-5 weeks, and, while 15 years ago OZKN was producing only single colour suits, in 2004 they were producing 15 different styles in a wide range of different colours. Aware of its precarious dependence on unstable contracting, export assembly production is combined with own brand, own-label production of suits accounting for about 5% of activity. But, as one manager explained the firm is “OPT-bound with limited opportunity to expand beyond its 5% own brand production. The limit is largely the cost of advertising. OZKN has adopted several defensive strategies and is now outsourcing to Ukraine and planning on buying a factory there. It also is attempting to increase its flexibility and technical capacities.”

As with higher value tailored clothing, some Slovak and Bulgarian firms producing outer-wear and work-wear have built on their earlier experience and personal contacts with buyers to extend technical and process capacities. The recent growth in importance of technical textiles and specialist operations such as weather proofing, testing technologies, and the use of new materials under licence to brands such as Goretex, has further increased opportunities for some.

In addition to capturing additional parts of the value chain, some assembly firms, particularly Bulgarian firms producing for US markets, have been implementing corporate codes of conduct to consolidate their relatively ‘privileged’ positions in supply chains. Such codes are increasingly required for U.S. contracting and, while many questions remain about enforcement and the extent to which codes penetrate into the whole supply chain (Jenkins et
al, 2002), they have resulted in noticeable improvements in working conditions within factories (to the extent that some Labour Inspectorates in Bulgaria no longer carry out unannounced random inspections in firms with such codes: Author interviews with Haskovo Labour Inspectorate). Tightening labour markets resulting from heightened demand for skilled labour may also require firms to sustain their commitments to a wider social economy, such as extra wage payments, support for sports clubs and recreational facilities, and the provision of subsidized food and transport facilities, in order to retain skilled employees (Pickles 2002).

**Diversification and own product development**

To what extent are own-brand production and product development emerging in the ECE apparel industry and does their development represent an upgrading of activity? It is important to recognise that the development of own-product development was a central element of state socialist production and continues to be part of the industry. In both Bulgaria and Slovakia, firms are increasingly using the experience and knowledge of style, patterns, fabric selection, and production methods developed from export contracts to develop in-house capacity to develop own-design manufacturing (ODM) and, less commonly, own-brand manufacturing (OBM), particularly for domestic markets (Figures 3 and 4).

Some firms developing ODM and OBM have explicit strategies to develop a presence in the domestic retail market – a development that is very apparent in the appearance along virtually every high street of a large number of boutiques and clothing stores, often owned by the producing firms. While small in international terms, such domestic outlets can yield more advantageous cost structures and higher profits than the increasingly tight margins from
export contracts. Controlling input supplies and focusing on lower-priced quality niche markets have enabled such firms to maintain smaller facilities and shorter runs, but improve cost structures. One such firm is that of a men’s shirt manufacturer in Plovdiv. In 1991, the manager was working as a translator for two American visitors who were looking to source shirts from Bulgaria. Recognising a market opportunity, she decided to set up her own business in 1993, initially focused on the careful selection of fabrics but producing under OPT from a former state-owned enterprise in Haskovo. In 1998 the firm moved to its present location in Plovdiv and began own-brand production for the Bulgarian market. This has been possible, in part, because of stable access to credit, in-house design capacities, careful sourcing of textile inputs, and strenuous efforts to build and retain a high quality workforce. Central to this firm’s business strategy has been its ability to produce for a particular sector of the Bulgarian market (middle to high quality business shirts) where volume is limited and prices are relatively low, but margins are much higher. Like several others, this manager had consciously opted out of export production because contract prices had dropped so low, volume demands had risen beyond the capacity of middle-sized firms, and penalties imposed by buyers were too risky for smaller firms to bear. In Slovakia, despite the growth of many small boutiques, the domestic retail sector is more closely associated with the new western-owned hyper-markets such as Tesco and Carrefour or with the former state owned enterprises such as Makyta from Púchov, which is the largest clothing firm in Slovakia with 2,600 employees and has a network of 45 shops in Slovakia and 12 in the Czech Republic. Additionally, growth in domestic markets and the success of EU exporters to them (Table 5) are now beginning to attract interest from EU apparel suppliers such as the outdoor apparel supplier Sympatex Technologies, which has recently expanded its sales structure throughout

Table 5 about here

By contrast, other firms are now using OPT production to develop own-design manufacture (ODM) and to a lesser extent own-brand manufacture (OBM) for export markets (Figure 2). Working through German and Italian retailers and catalogue firms, these producers have established in-house design capacity and have developed relationships with retailers in Italy and Germany to allow their designs to be sold under the brand name of the EU outlet. There are also cases of full-package export producers trying to move into own-brand export production and domestic producers moving into full-package export production as the competition on the domestic market has tightened.

Perhaps the most dynamic – albeit rare – example of own brand development is that of a company in eastern Slovakia, Lifeline, which has adopted the ZARA and Mango models of business practice. The firm has moved out of OPT export production and into the development of a franchised network of stores oriented to the women’s 18-30 market, linked into electronic point of sales (EPOS) systems with close daily monitoring of store sales profiles to enable rapid restocking of popular lines. In the space of ten years Lifeline has established itself as an emerging branded retailer on the Slovak, Czech, Ukrainian, and Russian markets. It specialises in the production of relatively low cost, young women’s fashion designs. The firm has limited in-house production capability and uses a network of contractors in East Slovakia, Lithuania (through a Danish partner with whom the original
OPT relationship was established in the early 1990s), and more recently in China for knitwear. Lifeline used the knowledge and contacts established during OPT production and earlier in state socialist trade links established by the owner, to develop its growing own brand lean retailing system for post-socialist markets.

*Low value full-package domestic market producers*

As we have seen, own-brand and full-package producers in Slovakia and Bulgaria are highly differentiated in terms of product lines, the markets for which they produce, suppliers, capitalization, scale of operations, and market position. If assembly producers occupy multiple positions in the value chain, so too do own-brand and full-package firms.

After 1989, domestic markets for lower end and lower quality products became an important niche opportunity for local producers. In some contexts, a second-hand clothing market developed, involving the import of clothing from the EU (Walton 2002). In other contexts local producers supplying ‘own-brand’ low-cost clothing increased alongside design-oriented firms supplying new social elites. Perhaps the clearest example of this range and diversity of firms is illustrated by the garage firms of Haskovo, Bulgaria (Begg *et al*., 2005) (lower left-hand segment of Figure 3).

These garage producers are small family firms operating out of innumerable garages in the basements of houses in three districts of the town of Haskovo, in southeast Bulgaria. One district is a predominantly Bulgarian Muslim neighbourhood, a second is predominantly Turkish Bulgarian, and a third is a community comprising both groups. The garage firms emerged in the 1990s out of a combination of rural economic crisis, a collapse of production, mass unemployment, and urban migration among these ethnic minority populations. They
have now established themselves as an important element of the regional economy and the primary anchor of the large market in Dimitrovgrad, close to Haskovo. Most of the firms that sell in the market are locally owned; about 3000 of the 4800 stalls are operated by garage firms selling their own products (Dimitrovgrad Market Administration survey, December 2003). 1700 of these 3000 are from Haskovo. Virtually all of the production of these garage firms is sold through the Dimitrovgrad market, generating a total turnover of 10 million Euro a week. About 15,000 to 20,000 buyers use the market each week; most are commercial buyers and wholesalers who come from all over Bulgaria and from elsewhere in the Balkans, including Turkey, Greece, Serbia and Romania. The manager of the market estimates that up to 80% of clothing sold in Bulgaria comes through the market, while about 30% of market sales are for export to similar small retailers in neighbouring countries. The market has plans for major expansion in 2005-2006 even though competition from low-cost Turkish and Chinese imports may weaken the dominance of the domestic garage firms in the market.

*Full package export production and the emergence of regional and cross-border production networks*

A key element of full-package production is the emergence of local suppliers of fabric and trim, technical and on-site support services, logistical and quality control services, and – in some cases – design capacities. This process of value chain upgrading seems to be emerging in ECE for at least four reasons. First, with now ten to fifteen years or more of business experience some buyers are now more likely to trust local assembly firms to provide the required quality of inputs and final product. Second, high quality inputs that meet international standards are increasingly available domestically. Third, with the phasing out
outward processing rebates buyers are now seeking to reduce the transaction costs involved in sourcing and shipping bundled inputs, and are shifting these costs to producers. Fourth, local sourcing is only possible if firms have access to the local credit and financing that allows them to purchase inputs and wait for payment from buyers. Firm-level purchasing is more fully developed in Slovakia than in Bulgaria, with 38% of Slovak firms surveyed having developed their own input sourcing capability compared with 10% of Bulgarian firms. But this situation is also changing quickly. Indeed, the stabilization of the Bulgarian banking system, with improved conditions of credit, have permitted an increasing use of local sourcing and an expansion of foreign investment in the textiles sector, notably from Italy.

Cutting, finishing, and logistics have expanded and enable firms to provide a wider range of services to buyers and to compete for higher volume or higher value contracts. Cutting capacity has become ubiquitous in recent years as firms move away their earlier reliance on fully bundled, pre-cut cloth assembly. In many cases, enhanced cutting capacity is linked to the growth of CAD-CAM technologies and the emergence of local agencies supplying western CAD-CAM technologies, software development systems and support services. Finishing activity is much more widespread across all firm-types in Bulgarian firms than in Slovak firms.

In Slovakia, OPT producers that have upgraded have either turned to full-package export production, associated with the easterly movement of production, especially involving subcontracting to Ukraine and Belarus (see Benková 2004, Kalantardis et al 2003), or they have spring-boarded from OPT into full-package export production to develop their own brands for domestic production. With increasing price pressure from buyers and rising
production costs in parts of western Slovakia a few firms have become what Yoruk (2001) called ‘network organisers’ of cross-border production systems. One such firm is a subsidiary of E Walters UK, which began sewing operations in Trenčín in the early 1990s. In the past five or six years E Walters UK outsourced first production and later packaging, pressing, warehousing, and logistics to its subsidiary, Walters SK, which in turn implemented its own pan-regional ‘hubbing strategy’ (Figure 5). This involved the shifting of sewing operations to a number of part-equity and independent producers in Ukraine. The Slovak site focused on a hub-organiser role involving the co-ordination of production using the company’s electronic management system. It also organized fabric and trim sourcing and cutting, finishing, and logistics.

Figure 5 about here

As cost pressures push the industry further east, internal and cross-border processes of de-localisation are deepening. Walters illustrates both processes. According to the Managing Director of E. Walters International (Interview 10 January 2006), continued decline in retail prices in the United Kingdom industry was compounded when quotas ended (January 1, 2005). Buyers were working on what has become known in the industry as ‘Chinese prices’ and sales declined, resulting in the need to drastically reduce overheads (by an average of £1m each quarter). In the face of these concerns, the UK banks reduced financing while increasing the performance targets the company was expected to meet. Under these combined pressures of price competition and credit squeeze, the firm went into administration in August 2005 and was subsequently bought out by the Walters family and
one other person. With the rapid increase in facilities and staffing costs (especially of key
English-speaking personnel) that followed EU accession, the Slovak hub – an innovative
response to regional competition in the 1990s – has now been closed. Sustained lower
production costs in Bulgaria has led to the re-location of logistical and co-ordination
functions for East Europe to Walters’ Bulgarian office, while production is now contracted
directly from the UK to Ukraine, where producers are becoming more self-sufficient and – as
we saw earlier in Slovakia and Bulgaria – are starting to source their own trim.

**Understanding diverse trajectories and industrial forms**

‘Upgrading’, ‘downgrading and ‘back-sliding’ are terms often used to refer to the ways in
which a firm’s competitive position is changing within international systems of contracting
and trade. But this focus on position within international sourcing arrangements is precisely
what makes the concepts difficult ones to use in efforts to understand industrial
competitiveness, regional linkages, and future prospects in the ECE apparel industry in any
broader sense. Some firms are literally sliding backwards (losing capital and capacity,
suffering workforce depletion and weakening management skills). But other firms may be
increasing their workforce skills, levels of capitalization, and production and still experience
‘downgrading’ as their relative position in the supply chain becomes precarious because of
changes in regulatory policies (such as OPT regime changes) or shifts in the competitive
‘field’ within which they are situated shifts (such as the rapid emergence of lower-cost
producers in China, technical shifts in the industry requiring new processes, or new inputs
that disadvantage an otherwise well-placed and efficient producer). It remains an empirical
question as to whether these relative changes in position in international value chains reflect
significantly on the financial position and regional impacts of specific firms. Full-package industrial production in ECE prior to 1989 may have ‘downgraded’ to assembly platform production in the 1990s, but the consequence was subsequent industrial expansion – albeit in limited forms and with increasingly tenuous outcomes. Chinese imports have certainly forced prices down and increased competition in EU and US markets since January 1, 2005, but – while many firms in Eastern Europe are losing contracts and closing their doors – many others continue to expand and diversify their activities by supplying additional services and flexibilities not yet available in China.

Much of the existing literature on upgrading and value chains argues that the action and motivations of global buyers are the key causal forces in the organisation of global contracting systems and upgrading possibilities; ‘lead firms’ are seen as the organisational motors in value chains (Gereffi 1999, Schmitz and Knorringa 2000). While it is clear that such lead firms have considerable power in the organisation of global contracting, and that in the European apparel sector there is a clear squeezing of contract prices and conditions by such firms, focusing explanations one-sidedly on global buyers does not help us understand how such strategies articulate with embedded and localised institutional arrangements in producing regions. Upgrading possibilities for apparel producers in ECE must also be understood within local institutional contexts in which, for example, tightening local labour markets, national legal requirements and the legacies of a social economy of state socialism create a dynamic field of opportunities and constraints. Our emphasis on the embeddedness of production systems suggests that understanding the trajectories of firms in ECE requires a broader understanding of the over-determined nature of firm-level action – not only driven by conditions set by lead firms and buyers from core export markets, but by a much wider
range of forces in complex production networks (see Henderson et al 2002, Smith et al 2002, Coe et al 2004). Indeed, a wider body of work on the political economies of post-socialism has been arguing for more than fifteen years that any explanation of transformation – as opposed to a linear transition to capitalism – requires understanding the complex, multiple and embedded geographies of post-socialism (see Creed 1998, Pickles and Smith 1998, Grabher and Stark 1997, Smith 1998, Pavlínek and Pickles 2000). Across a range of studies of political economic industrial and regional change, inward investment and regional transformations, and environmental transformations, this work has highlighted the importance of situating any account of post-socialism within a context of locally embedded networks of social and economic power.

One crucial issue shaping the geographies and timing of recent international contracting has been state policy. Internationally, EU customs agreements and trade policies have played a vital role in encouraging European manufacturers and retail buyers to expand their production networks into ECE. For the most part, industrial resurgence in the post-socialist apparel industry was tied to full-bundle (later cut-and-make (CM) and cut-make-trim (CMT)) production for assembly and re-export of imported fabric and trims under special EU customs agreements (OPT). Moreover, since OPT as a customs policy was a time-limited mechanism to help EU-based textile manufacturers to adjust to trade liberalization and increasing competition, it has now been phased out for most Central European producers, but has been extended further east to the ‘next tier’ of producers such as Ukraine. At the national level, state banking policies have determined access to credit and hence the kind of risk management, sourcing, and investment strategies available to managers, depreciation policies in the tax code have discouraged new capital investment, and
political struggles over state employment, insurance, and benefit policies have created uncertainty for manufacturers and workers.

A second important condition for the emergence of these new regional production systems has been the legacies of prior contracting arrangements with state socialist enterprises. Many OPT full-bundle assembly contracts were initially established with pre-existing firms and their managers, often those who had formerly orchestrated contracting with ‘the West’ under state socialism. With increasing consolidation in the supply chain, contracts requiring larger production runs are now beginning to favour manufacturers with larger capacities and more diverse services (input sourcing, pressing, packaging, labelling, and ability to meet international standards and codes), and many of these larger firms are the former state firms, in some cases still retaining their pre-1989 senior management. Such managerial networks and inter-firm legacies are also important in shaping localized ‘communities of knowledge’. In the Prešov region of Slovakia, for example, relationships between one of the most successful new private firms in the region, Ozex, (which was established by a former manager of OZKN and operates out of a building formerly owned by the former state owned enterprise) and one of the leading UK investors in the Slovak apparel industry have been built over a period of more than ten years. The relations began on the basis of earlier sub-contract work that Ozex performed for the UK firm and has now developed to the extent that the Slovak manager regularly calls the owner of the UK firm for advice about, for example, realistic production costs, price points for products, and the expectations of UK buyers. The relationship has been built in a reciprocal way with the Slovak manager introducing the UK firm to a variety of production partners in Bulgaria and Ukraine where both now have operations. Similarly, in Bulgaria, firms value the importance
of sharing knowledge, particularly in relation to questions of different buyer strategies and who is ‘good’ to work for, who pays on time, and which buyers have habits of over-contracting resulting in higher rejection and return rates at delivery.

In these conditions of changing state and industry contracting policies, CM, CMT, and other producers are increasingly offsetting tightening contract conditions and pricing either by rejecting contracts (explained by one manager as “go to China then!”) or by reducing input costs by turning to local fabric and trim suppliers. Since wages comprise only about ten percent of the FOB price for a typical shirt and input costs account for about 75% of costs, firms that have been able to shift from full-bundle assembly to CMT production and those that have been able to source fabric and other inputs locally have been able to improve their cost structure significantly (Knappe 2004). Regional service providers and input suppliers have begun to (re-)emerge across the region to supply the more diverse needs of assembly producers. In particular, Italian textile manufacturers have recently made major investments in Bulgarian textile factories to supply directly apparel producers and reduce input costs. These changes have facilitated a relatively easy re-integration of fabric and trim suppliers, dyers, and other apparel service providers.

A related element is the domestic market. Scholars and policy analysts of global apparel and those working on post-socialist restructuring have tended to pay only passing attention to domestic markets in relation to export production; in most cases domestic markets have been assumed to be insignificant for the bulk of manufacturers. Yet the role played by domestic markets can be quantitatively and qualitatively very different from that of export markets. Post-socialist apparel production has certainly become increasingly locked into export production, but a significant number of producers are turning back to domestic or
regional markets, either in standard low quality goods or in some cases for the new emerging elite through branded labels. Some firms are also using their experience of own-design and own-brand manufacturing for domestic markets to expand into export markets in the former Soviet Union. Others have shifted part of their activity away from export production into domestic markets, while others have always been oriented primarily towards local markets.

Post-accession increases in labour costs and other factors of production (such as energy and rental space) certainly pose serious challenges to manufacturers in higher wage regions. But, a model of industrial change based on wage rates, labour costs, and factor costs more generally may be inadequate to an understanding of the imperatives towards regionalization of sourcing and production, particularly those resulting from logistical and policy costs beyond factor costs (see Abernathy et al 2007 in this volume). Moreover, analyses of regional competitiveness based on wage rates and labour costs reproduce very specific models of industrial locational flexibility (see Smith et al 2005 on this fallacy in EU competitiveness policies) and fail to attend to the reasons for regional ‘stickiness’ (see Markusen 1996). Of particular importance in the ECE apparel industry is the specific product niches it supplies in EU (and to a lesser and diminishing extent US) markets (Table 4). Such product configurations have very specific geographical implications. Higher value men’s and women’s suits, trousers, dresses, and shirts make proximity to markets of greater value in sourcing decisions. In these kinds of product lines the competitive pressures faced by retailers and manufacturers in Western Europe have generated increasing demands for flexibility and speed in replenishment. Consequently, the regionalization of production networks has deepened where ECE manufacturers have been able to upgrade their production
and logistical functions to meet the demands of regional proximity, rapid response, and emerging international standards (cf. Abernathy et al 2003).

Finally, if we understand the ways in which the networked practices of the state socialist economy, domestic markets, input suppliers, and regionalized production function, it becomes important to re-focus attention on the importance of inter-firm linkages. It is precisely the absence of what Storper (1995, 1997) has called ‘traded’ and ‘untraded interdependencies’ that characterizes much research on the limits to upgrading in maquiladora-type industrialization (Ong 1987; Cravey 1998), and many apparel producers of ECE certainly exhibit characteristics similar to these assembly platforms. But, many producers are also increasingly developing forward and backward linkages, extending existing and developing new forms of locational agglomeration, dense inter-firm divisions of labour, networks of formal and informal collaboration, and traded and untraded interdependencies among firms, if only as a form of defensive restructuring in the face of intense contract competition and pressure. Such inter-firm co-operation is not a ‘passive legacy’ of state socialist networks (although such professional and familial ties do remain), but a re-mobilization of social resources based on enforced production flexibilities by western buyers, inter-firm cooperation to bid for larger contracts, informal barter and exchange arrangements to guarantee regular supplies of inputs, or struggles to produce for local markets under poor technological and skill situations.

**Conclusion**

Understanding the diversity of adjustments and the broader processes of transformation in the ECE apparel industry requires that we attend to the embeddedness of
decision-making and the over-determined nature of production outcomes, and that we pay particular attention to the ways in which individual firms and regional production networks have emerged in the context of a range of processes, including the complexity and contingent nature of upgrading; the importance of institutional and geographical legacies in understanding the ways in which regional apparel producers are ‘inserted’ into global value chains; the geographical and firm-specific unevenness of upgrading; and the importance of upgrading as a relational process that generates competitive advantages for some and disadvantages for others, and which may proliferate as well as fix forms of production in any particular region.

Understanding post-socialist apparel production in ECE in terms of proliferating organizational forms and production practices that are structured temporally, spatially, and sectorally focuses out attention on a more complex ‘landscape’ of producers, buyers, intermediaries, regulators, and rapidly growing numbers of local suppliers. In this palimpsest network of producers, there is evidence that some firms are able to manage labour costs and competitive pressures within a broader assessment of factor costs, especially input costs, while factor costs themselves are only part of the costing of profitable production. Instead of ‘reading’ post-MFA geographies of apparel production and sourcing in terms of a single logic of cost competition, producers and workers might also understand the more complex role of, and possibilities for, regional production networks, and of mobilizing their location close to major international markets, to offset rising labour costs with other factor cost savings achieved through using local input and service providers, and to create support and training mechanisms that deepen, not weaken, the value of untraded interdependencies and local capacities and opportunities.
References


Table 1. Size of surveyed firms (number of employees)

<table>
<thead>
<tr>
<th>No. of employees</th>
<th>Bulgaria</th>
<th></th>
<th>Slovakia</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of firms</td>
<td>%</td>
<td>No. of firms</td>
<td>%</td>
</tr>
<tr>
<td>1-10</td>
<td>7</td>
<td>3.5</td>
<td>40</td>
<td>37.7</td>
</tr>
<tr>
<td>11-50</td>
<td>104</td>
<td>51.5</td>
<td>33</td>
<td>31.1</td>
</tr>
<tr>
<td>51-250</td>
<td>72</td>
<td>35.6</td>
<td>16</td>
<td>15.1</td>
</tr>
<tr>
<td>251-1000</td>
<td>17</td>
<td>8.4</td>
<td>13</td>
<td>12.3</td>
</tr>
<tr>
<td>1000+</td>
<td>2</td>
<td>0.9</td>
<td>3</td>
<td>2.8</td>
</tr>
<tr>
<td>Total</td>
<td>202</td>
<td>100.0</td>
<td>105</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Firm surveys carried out by authors, 2002-2003

Table 2. Market orientation of surveyed firms

<table>
<thead>
<tr>
<th></th>
<th>Bulgaria</th>
<th></th>
<th>Slovakia</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of firms</td>
<td>%</td>
<td>No. of firms</td>
<td>%</td>
</tr>
<tr>
<td>Export production only</td>
<td>70</td>
<td>47.6</td>
<td>39</td>
<td>36.8</td>
</tr>
<tr>
<td>Domestic production only</td>
<td>43</td>
<td>29.3</td>
<td>41</td>
<td>38.7</td>
</tr>
<tr>
<td>Export and domestic production</td>
<td>34</td>
<td>23.1</td>
<td>26</td>
<td>24.5</td>
</tr>
<tr>
<td>Total</td>
<td>147</td>
<td>100.0</td>
<td>106</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Firm surveys carried out by authors, 2002-2003

Table 3. Role of outward processing production in surveyed firms

<table>
<thead>
<tr>
<th>Role of outward processing production (% value of production)</th>
<th>Bulgaria</th>
<th></th>
<th>Slovakia</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of firms</td>
<td>%</td>
<td>No. of firms</td>
<td>%</td>
</tr>
<tr>
<td>0</td>
<td>57</td>
<td>37.5</td>
<td>59</td>
<td>55.1</td>
</tr>
<tr>
<td>1-24</td>
<td>11</td>
<td>7.2</td>
<td>3</td>
<td>2.8</td>
</tr>
<tr>
<td>25-49</td>
<td>4</td>
<td>2.6</td>
<td>6</td>
<td>5.6</td>
</tr>
<tr>
<td>50-74</td>
<td>12</td>
<td>7.9</td>
<td>5</td>
<td>4.7</td>
</tr>
<tr>
<td>75-100</td>
<td>68</td>
<td>44.7</td>
<td>34</td>
<td>31.8</td>
</tr>
<tr>
<td>Total</td>
<td>152</td>
<td>100.0</td>
<td>107</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Firm surveys carried out by authors, 2002-2003
Table 4. Proportion of total national apparel exports to the EU comprised by men’s and women’s suits, trousers, etc. (6203 and 6204) for the top 20 apparel exporters to the EU, 1990 and 2000. (Source: EUROSTAT, 2001)

<table>
<thead>
<tr>
<th>Country</th>
<th>1990</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>27.5</td>
<td>19.8</td>
</tr>
<tr>
<td>Turkey</td>
<td>24.8</td>
<td>26.3</td>
</tr>
<tr>
<td>Tunisia</td>
<td>54.7</td>
<td>49.7</td>
</tr>
<tr>
<td><strong>Romania</strong></td>
<td><strong>40.2</strong></td>
<td><strong>46.9</strong></td>
</tr>
<tr>
<td>Morocco</td>
<td>43.3</td>
<td>48.9</td>
</tr>
<tr>
<td><strong>Poland</strong></td>
<td><strong>39.6</strong></td>
<td><strong>46.4</strong></td>
</tr>
<tr>
<td>Hong Kong</td>
<td>24.5</td>
<td>25.5</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>9.5</td>
<td>19.7</td>
</tr>
<tr>
<td>India</td>
<td>24.9</td>
<td>19.4</td>
</tr>
<tr>
<td><strong>Hungary</strong></td>
<td><strong>51.2</strong></td>
<td><strong>38.4</strong></td>
</tr>
<tr>
<td>Bulgaria</td>
<td>22.2</td>
<td>35.9</td>
</tr>
<tr>
<td>Pakistan</td>
<td>26.9</td>
<td>39.7</td>
</tr>
<tr>
<td>Indonesia</td>
<td>19.9</td>
<td>13.0</td>
</tr>
<tr>
<td><strong>Slovakia</strong></td>
<td><strong>50.9</strong></td>
<td><strong>46.9</strong></td>
</tr>
<tr>
<td>Lithuania</td>
<td>n.d.</td>
<td>47.5</td>
</tr>
<tr>
<td>Czech Rep.</td>
<td>50.9</td>
<td>41.4</td>
</tr>
<tr>
<td><strong>Croatia</strong></td>
<td><strong>44.7</strong></td>
<td><strong>44.1</strong></td>
</tr>
<tr>
<td><strong>Slovenia</strong></td>
<td><strong>44.7</strong></td>
<td><strong>54.5</strong></td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>23.8</td>
<td>22.6</td>
</tr>
<tr>
<td>Ukraine</td>
<td>n.d.</td>
<td>50.2</td>
</tr>
</tbody>
</table>
Table 5. Percentage change in the value of EU15 exports of apparel to ECE6 between 1995 and 2004

<table>
<thead>
<tr>
<th>Country</th>
<th>Knitted apparel</th>
<th>Non-knitted apparel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>69%</td>
<td>40%</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>28%</td>
<td>330%</td>
</tr>
<tr>
<td>Hungary</td>
<td>191%</td>
<td>107%</td>
</tr>
<tr>
<td>Poland</td>
<td>153%</td>
<td>204%</td>
</tr>
<tr>
<td>Romania</td>
<td>37%</td>
<td>56%</td>
</tr>
<tr>
<td>Slovakia</td>
<td>343%</td>
<td>159%</td>
</tr>
</tbody>
</table>

Source: Eutostat Comext Online Trade Data, June 2005
Figure 1. ECE6 exports of apparel to EU15 (in 000,000 Euros)  
(Source: Eurostat Comext Online)
Figure 2. Bulgaria and Slovakia maps
Figure 3. Ideal typical forms of firm transformation in the Bulgarian apparel industry

<table>
<thead>
<tr>
<th>Position in supply chain</th>
<th>Full bundle assembly</th>
<th>CM CMT</th>
<th>Full package</th>
<th>ODM OBM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export</td>
<td>100</td>
<td>OPT producers @ bottom of supply chain</td>
<td>OPT producers upgrading into full-package and OBM</td>
<td>Full-package producers</td>
</tr>
<tr>
<td>Domestic</td>
<td>100</td>
<td>Low-end domestic market</td>
<td>Domestic producers upgrading into OBM</td>
<td>Domestic producers upgrading into export markets and OBM</td>
</tr>
</tbody>
</table>

Figure 4. Ideal typical forms of firm transformation in the Slovak apparel industry

<table>
<thead>
<tr>
<th>Position in supply chain</th>
<th>Full bundle assembly</th>
<th>CM CMT</th>
<th>Full package</th>
<th>ODM OBM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export</td>
<td>100</td>
<td>OPT producers @ bottom of supply chain</td>
<td>OPT producers upgrading into full-package export and/or domestic ODM</td>
<td>Large full-package former SOEs diversifying positions and product niches from OPT to domestic OBM</td>
</tr>
<tr>
<td>Domestic</td>
<td>100</td>
<td>OPT producers upgrading into domestic and export OBM</td>
<td>Domestic producers upgrading into ODM</td>
<td>Domestic producers upgrading into ODM</td>
</tr>
</tbody>
</table>
Figure 5. Logistics, Hubbing, and the Emergence of Network Organizers
(Reproduced with the permission of E. Walters UK)