

Learning and Earning in Global Garment and Footwear Chains

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This article explores the power of the global value chain approach in explaining the growth of production capabilities and the distribution of gains. It suggests that the upgrading opportunities of local enterprises are structured by the relationships in global value chains. This is shown clearly for the case of the garment and footwear industry, where advances have been rapid in product and process upgrading but more limited in functional upgrading. With regard to the distribution of gains, the global value chain approach also provides clear hypotheses but the empirical evidence remains weak.

Cet article se penche sur l'apport le pouvoir explicatif des analyses de chaîne de valeur pour comprendre la croissance des capacités de production et la distribution des gains. Il suggère que les occasions de montée en gamme des entreprises locales proviennent des relations dans la chaîne de valeur. C'est clairement le cas dans l'industrie du textile, de l'habillement et des chaussures où les progrès ont été rapides pour les produits et processus mais plus limités pour les fonctions d'organisation et commerciales. En ce qui concerne la distribution des gains, l'approche en termes de chaîne de valeur propose des hypothèses claires mais les résultats sont peu probants.

INTRODUCTION

It is universally acknowledged that the amount of trade that regions engage in has a fundamental effect on their economic development. There is much less knowledge about how trade is organised and how this affects economic development. Recent global value chain (GVC) analysis has made some important advances in this field. Its central proposition is that it matters how trade is organised: it matters for understanding market access, the acquisition of capabilities and the distribution of gains.

In the thinking on trading relationships, one can broadly distinguish between three phases:

- Traditionally, the relationships between producers and customers are thought to be market-based. This assumption continues to prevail (though not always explicitly) in many textbooks concerned with international trade.

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- In the 1970s and 1980s, the importance of intra-firm trade was highlighted in research on multinational corporations and their subsidiaries.
- In the 1990s, a new form of coordinated trade was shown to be of increasing importance: lead firms from developed countries coordinate (or govern) the trade with developing country firms that remain nominally independent.

Over the past two decades, this latter form of trade has grown particularly fast. It gave rise to a new line of research: GVC analysis shows that there are new opportunities which come from operating in global chains but also limits and traps. This paper analyses these in detail, focusing on the prospects for developing country enterprises and workers in the garment and footwear industry. The paper seeks to answer three questions: how are garment and footwear chains governed? What are the implications for learning and upgrading? What do we know about the distribution of gains in these chains?

The remainder of this introduction highlights those aspects of the GVC approach which are critical for understanding the empirical parts of the paper. A value chain is the sequence of all the activities required to make a product or provide a service. This in itself is a very simple concept which becomes useful for analytical and policy purposes, once we consider that:

- first, the activities are often carried out in different parts of the world, hence the term *global* value chain;
- second, some activities add more value and are more lucrative than others (the policy-makers' concern is to help local enterprises to move into the lucrative activities);
- third, some actors in the chain have power over the others.

The powerful actors are often called the 'lead firms' who seek to 'govern' the chain. Chain governance means that lead firms set and/or enforce terms under which the others in the chain operate. A central concern of value chain analysis is to understand the relationships between global lead firms and local producers – and the opportunities and constraints that result from entering such relationships.

Understanding why lead firms seek to govern chains and how chains are organised is critical because it helps to understand the acquisition of capabilities and the distribution of gains analysed later in this paper. In garments and footwear, the lead firms tend to be the global buyers. Why would these lead firms go to the trouble and expense of setting up and supervising supply chains? No firm will incur the expense of developing arrangements with specific suppliers in order to purchase products that the market freely provides. There are two reasons why the global buyers do not rely on the market and seek to govern their chains:

- *Product definition.* The more the buyers pursue a strategy of product differentiation, for example, through design and branding, the greater the need to provide suppliers with precise product specification and to ensure that these specifications are met.

- *Risk of supplier failure.* The increasing importance of non-price competition based on factors such as quality, response time and reliability of delivery (together with increasing concerns about safety, labour and environmental standards) means that buyers have become more vulnerable to shortcomings in the performance of suppliers. Reducing the 'time-to-market' has become particularly critical in garment and footwear chains due to ever-changing fashions.

Not all chains are governed by powerful lead firms. Some chains are merely strings of market-based relationships: there is transaction but little interaction in terms of exchanging information and learning from each other. In other chains there is intensive interaction but the relationships between enterprises are uneven. More systematically, one can distinguish between four types of relationships in value chains.

- *Arm's-length market relations.* Buyer and supplier do not need to develop close relationships because the product is standardised or easily customised. A range of firms can meet the buyer's requirements. When problems arise buyers move on to different suppliers.
- *Modular networks.* Firms develop information-intensive relationships, dividing essential competences between them. The buyer provides the design and product specification and highly competent suppliers provide products and services at short notice to any kind of specification drawing on the specialisations in their cluster. Information intensity is high, transactional dependence is low and confidence in supplier competence is high.
- *Captive networks.* In this case, one firm exercises a high degree of control over other firms in the chain. In garment and footwear chains, buyers often specify the characteristics of the product to be made by their suppliers, specify the processes to be followed and inspect that these specifications are followed. Typically this occurs when the buyer has doubts about the competence of the supply chain.
- *Hierarchy.* The lead firm takes direct ownership of some operations in the chain. The case of the intra-firm trade between a trans-national company and its subsidiaries falls into this category.

These four categories represent a continuum from loose to very tight relationships between global lead firms and local suppliers. The categories and typologies found in the literature vary slightly depending on the purpose of the investigation.¹ The fine differences between them do not matter here; the key point is that distinguishing between different types of chains is important because some types of chains offer local producers better development prospects than others. *A central proposition of GVC analysis is that the development prospects for local producers vary with the way chains are organised.*² The remainder of the paper examines this proposition for the garment and footwear industry.

The paper is structured as follows: the next section draws together the available evidence on chain organisation. Subsequent sections then bring out the implications

for the acquisition of capabilities and examine the (scarce) evidence on the distribution of gains along the chain. In all these sections the focus is on global chains; the final section asks what difference it makes if local firms feed into national chains.

GOVERNANCE OF THE GLOBAL GARMENT AND FOOTWEAR CHAINS

The central proposition of early GVC research was that trade with developed countries was increasingly coordinated by global buyers. This proposition came from Gereffi's research on the East Asian garment industry carried out in the 1990s (Gereffi, 1999). The question examined in this section is whether subsequent research on the garment and footwear industry confirms this proposition.

Unfortunately the question cannot be answered by drawing on global trade statistics. Trade data informs us about the quantity and direction of trade but not about the way trade is organised. The best one can do is piece together an overview based on the (often qualitative) case material.

Garments

Bair and Gereffi's (2001) research on the Mexican jeans industry underlines the power of the US retailers over their suppliers – a clear example of captive networks. This is confirmed by van Dooren's analysis of export manufacturing from Mexico. While the export chains to the US were historically producer-driven and took the form of outsourcing organised by US garment manufacturers, the bi-national US-Mexico chain is increasingly driven by large US buyers who have no manufacturing facilities of their own (Van Dooren, 2003: 98–109).

The Mexican knitwear industry also relies heavily on the US market but in comparison with the jeans industry there is much more variation in the organisation of the chain. At the production end of the chain, there are some large firms but there is also a multitude of small and medium-sized firms, most of them clustered in small towns (Vangstrup, 2002; Wilson, 1992). The connection to the US market occurs in a variety of ways. Some manufacturers, especially the larger ones, work directly for large US buyers to their design and specification (Vangstrup, 2002). Some manufacturers export through small traders, with design and specification sometimes coming from the producer, sometimes from the buyer. Then there is a substantial trade in clothes carried by border-crossing people rather than lorries. Wilson (1992) draws attention to garment export trade being under-recorded 'due to the considerable clandestine trading and the "seepage" of goods over the border, taken for sale in myriad of sacks and suitcases. In the absence of data, it is impossible to guess even the order of magnitude of the "real" flow of garments to the US' (p. 59). Indeed, the Mexican case material underlines variety and fluidity and does not make it possible to establish the relative importance of sale channels or dominant trends over time.

A varied picture emerges also from India. The knitwear cluster of Tiruppur in the state of Tamil Nadu accounts for 90 per cent of India's cotton knitwear exports,

worth an estimated US\$1 billion. Large global buyers source from Tiruppur, but the cluster also feeds into other types of chains in which buyers are less powerful. Ludhiana, in the Punjab, accounts for most of India's woollen knitwear exports. In her study of this cluster, Tewari (1999) stresses that the customers are not typically the huge retailers. Local producers' relationships with their (smaller) buyers range from market-based to network-based.

There is a danger that in trying to establish patterns of relationships we miss changes over time. One of these changes over time is the emergence of triangular trade. Gereffi's (1994, 1999) research on the East Asian garment industry provided the paradigmatic example of buyer-driven chains. He showed, however, that over time the relationship between producer and buyer sometimes became 'triangular'. As manufacturing moved to new low wage sites, especially mainland China, the former producers from Hong Kong or Taiwan became the new intermediaries. The buyer continues to set the terms under which others in the chain operate, even though they have passed on the coordination of the lower part of the chain.

Such triangular trade has become increasingly common: some companies have begun to specialise in supply chain coordination, offering this as a specialised service to big retail retailers (Wortmann, 2003). The most significant example is the Hong Kong based firm Li & Fung, one of the world's biggest supply chain coordinators in textiles and garments (www.lifung.com). For example, most garment exports of Mauritius to the US or EU are organised by Hong Kong-based intermediaries. According to Gibbon (2000), the Mauritius manufacturers are feeding into captive chains even though the export trade is triangular. However, when exporting to the US, relationships and specifications seem to be tighter than when exporting to Europe.

In conclusion, there is considerable literature on the garment trade between developed and developing countries, but only a few of these studies give attention to the way the trade is organised. In doing so, they have given particular attention to the captive relationships between global buyers and local producers. While accounting for a large part of the trade, it is impossible to quantify its relative size. There remains a significant share of garments that are exported through chains which are more symmetrical, in which both producers and traders are typically smaller, and about which much less has been written. However, there is no doubt that over time, buyer concentration has increased considerably and that buyer power has increased (Gibbon, 2001; Gereffi and Memedovic, 2003):

There has been a dramatic consolidation of the retailer segment of buyer-driven value chains in the United States, and a growth in the strength of retailers as opposed to apparel manufacturers in the EU and Japan. While retailing and marketing is becoming more concentrated, manufacturing is splintering (Gereffi and Memedovic, 2003: 31).

It is, however, doubtful whether this splintering at the production end continues. In garments, the location of export garment manufacturing has for a long time been influenced by trade rules, notably the multi-fibre agreement. With the termination of the Agreement on Textiles and Clothing at the end of 2004, China is expected

to increase its share of the world market. There are disagreements about the likely speed of change resulting from the quota removal (see e.g. Mayer, 2004) but there is no doubt that China's share will increase substantially and force many manufacturers in other parts of the world to close down. It could well be that over time the main garment clusters in China and elsewhere will change from being captive to modular networks. The increasing competence of the manufacturers would then make buyer control redundant.

Footwear

The trends in chain governance in the footwear sector have been similar to those in garments. In some ways the trends have been even clearer because there were no trade rules comparable to the Multifibre Agreement. During the 1980s and 1990s, an increasing number of footwear producers engaged in contract manufacturing for a decreasing number of global buyers. In this overall constellation, captive relationships became the norm. This came out clearly in a study on how global buyers source footwear from Brazil, China and India (Schmitz and Knorringa, 2000).

However, not all chains were or are captive. Hsing (1999) shows that some Chinese fashion shoe companies (in Taiwan and mainland China) export through small trading companies with whom they seem to have more even relationships. Bazan and Navas-Aleman (2004) in particular stress that there are enormous variations in the organisation of chains. In their analysis of Brazilian footwear producers they found that: producers exporting to the US (main market) belong to captive chains; relationships with European buyers are also uneven but less so; exporters to Latin American countries are not dominated by their buyers, relationships are more market-based. And some manufacturers have managed to operate simultaneously in different kinds of chains.

Italy has been able to hold out as a major shoe exporter. One would not expect that the Italian manufacturers end up in captive relationships with their customers. Indeed Rabellotti (2004) finds that the manufacturers of Brenta export to Germany and other European countries (main market) and enjoy even relationships with their customers. However, the fastest growing segment is contract manufacturing for the top luxury brand companies. According to Rabellotti, relationships with these customers are close to captive: the big fashion houses are in the driving seat; they dictate the design and product specification. But perhaps it is more appropriate to see this as a case of modular network. The fashion houses can turn to Brenta because some of its manufacturers possess the full range of skills to respond to their exacting demands. By giving up the design and marketing function, and concentrating just on manufacturing, the Brenta producers, however, risk being replaced by producers from low-wage regions, some of which are able to match Italian quality standards.

In garments, we noted the emergence of triangular relationships in which the former suppliers become the agents managing the relationships with new suppliers in regions with lower wages. The same can be observed in the case of footwear (Schmitz and Knorringa, 2000). China's emergence as a major shoe exporter to the US was possible because the Taiwanese manufacturers became the new

intermediaries, helping to establish production capabilities on the mainland and organising the supply of all required inputs. The Taiwanese did the same in Vietnam. And the South Brazilian manufacturers play a similar role in the north of the country.

Likely Trends in Chain Governance

This section has brought together the main findings on how garment and footwear chains are governed, using the chain categories proposed in the Introduction. These categories are ideal types and reality does not fit neatly into these boxes. Nevertheless, they help us not to get lost in the complexities of the real world and provide a frame for recording and understanding key differences between types of chains.

As regards changes over time, it seems that in the 1980s and 1990s captive chains have increased in importance as a way of sourcing garments and shoes from developing countries. While the exact share is difficult to determine, the importance of such buyer-driven chains seems to have increased in both absolute and relative terms.

Will this trend continue? In order to answer this question, a number of issues need to be considered:

- *Concentration in retailing.* The general increase in chain governance is connected to the big changes in retailing in the advanced countries. There has been an enormous concentration in retailing, particularly pronounced in the US and UK, but also evident in Germany, France and more recently in countries with traditionally very diffuse retail sectors such as Italy and Japan. Concentration in retailing does not necessarily lead to concentration in sourcing but the potential for uneven relationships with manufacturers rises.
- *Brands* play an increasingly important role in enterprise strategy. While there is no hard data about the relative importance of branded versus non-branded products, the importance of brands seems to increase, particularly in consumer products such as garments and footwear, and particularly for products aimed at young people. The enormous investment required to create (or maintain) brands is increasingly made by retailers or other companies which have no (or only limited) production facilities of their own. Product and process definition, however, is a strategic part of their operation. To the extent that luxury segments of markets become dominated by global brands, the companies holding these brands will play an increasing role in structuring GVCs. Because brands stand for high quality or well-defined images, they need to define and enforce product and process parameters. Branding and strong chain governance thus tend to go together.
- *Risk of supplier failure.* As stressed earlier, the risk of supplier failure is a key driver of chain governance. Will this risk diminish with time? The risk of suppliers not being able to produce to the required specification is highest in new producer countries. Over the past two decades, many new producer countries have been able to export to advanced country markets under the tutelage of the global buyers. As the competence of these suppliers increases, chain governance through the buyers can be expected to loosen – provided that the increasing

competence of suppliers is accompanied by the emergence of local agents who can monitor and enforce the compliance with general or buyer specific standards. Some of the formerly new producers will become world leaders in *producing* promptly to the specification of the foreign buyer. To some extent this is already happening as in the South Brazilian footwear cluster (Bazan and Navas-Aleman, 2004) which is loosening the ties with the foreign buyers.

- *Scouting for new producers.* There is, however, a counter-tendency. While non-price factors (quality, brand, speed) have come to play an increasing role for competing in global markets, price competition continues to be unrelenting, leading to a downward pressure on prices, particularly in labour-intensive products sourced from developing countries. The resulting profit squeeze leads buyers to scout continuously for new producers who offer lower labour costs. This then raises again the risk of supplier failure and the need for chain governance. The question is whether this cycle remains relevant for garments and shoes. Perhaps the process has bottomed out in these labour-intensive sectors. Therefore, consolidation is most likely in these two sectors, with some locations emerging as preferred suppliers. Some of these preferred suppliers are then likely to overcome the captive relationships with their customers and become modular production networks.
- *Speed and flexibility.* As indicated above, some captive developing country regions are likely to mature and develop modular production networks which have information intensive but flexible relationships with their main customers. The extent to which this will happen is hard to predict but the trend is likely to be reinforced by the ever-increasing buyer interest in speed and flexibility, particularly in garments and shoes. 'Supply chain flexibility and speed to market are the principal drivers shaping the future of the retail apparel industry in Europe, and are key to the success of these speciality apparel chains' (Retail Forward, 2003: 16). While the European garment market has not grown overall in recent years, retail companies such as H&M and Zara have been able to grow fast, because they have been able to combine fast response with brand development. The retailers develop the brand and the modular production network delivers the speed and flexibility, provided that new information and communication technology is used to coordinate the entire chain.
- *Governance from outside the chain.* The type of chain governance that emerges depends to some extent on whether parameters (noticeably quality, labour and environmental standards) are set and enforced by agents outside the chain. The more conformance/compliance with parameters can be codified, generalised and credibly applied, the less need there is for governance from within the chain.
- *B2B electronic commerce.* It was widely predicted that B2B (business to business) electronic commerce would make it easier for developing country producers to access developed country markets. Altenburg et al. (2002) confirm the enormous potential of improving market access and business relationships through e-commerce, but they also show that the uptake has been very slow

even in the German clothing industry. Humphrey et al. (2003) examined the application of B2B e-commerce in the garment industry of three developing countries (Bangladesh, South Africa and Kenya). They found that it enhanced the relationships between existing trading partners: existing ties between local producers and global buyers were strengthened. However, B2B e-commerce did not lead to relationships with new customers. Very little business with new buyers was being generated. Similarly, Moodley et al. (2003), in a study on e-commerce in the South African garment industry, found little evidence of manufacturers bypassing the 'middle men' in the value chain. While little is known about the diffusion and impact of e-commerce in footwear chains, the situation is probably similar to that in the garment chains. In conclusion, the available evidence suggests that so far B2B e-commerce has first, not been effective in helping developing country firms find new customers; and second, led to closer integration between existing partners.

UPGRADING IN CLOTHING AND FOOTWEAR CHAINS

This section examines how chain governance affects industrial growth and learning. It suggests that the rapid build-up of industrial production capabilities in developing countries can only be fully understood if we draw on the GVC approach. The central proposition is that *the upgrading opportunities of local enterprises are often structured by the relationships in GVCs*. The focus on chain governance, however, does not imply that other factors are not important.³

In order to explore the connection between chain governance and upgrading it is useful to start with the view of Gereffi who has been the leading author in this field. There are two propositions that are central to Gereffi's (1999) work: first, their trade with developed countries is increasingly coordinated by global buyers. We have discussed this in the previous section. His second proposition is that developing country producers that integrate in such buyer-driven chains can expect rapid upgrading. These conclusions were informed by his research on the East Asian garment industry and its connections with the US market. Subsequent research on other industries and regions suggested that reality is more complex.

In order to get a grip on these complexities it helps to distinguish between different types of chains and different types of upgrading. Such distinctions provide the tools with which one can explore, for example, whether certain types of chains are associated with particular types of upgrading. The typology of chains was suggested in the Introduction. The proposed typology for upgrading is as follows:

- *Process upgrading*: transforming inputs into outputs more efficiently by re-organising the production system or introducing superior technology.
- *Product upgrading*: moving into more sophisticated product lines (which can be defined in terms of increased unit values).
- *Functional upgrading*: acquiring new functions in the chain (or abandoning existing functions) to increase the overall skill content of activities. The functional upgrading route frequently discussed in the literature is the transition

from assembly to OEM (original equipment manufacture) to ODM (own design manufacture) to OBM (own brand manufacture).

- *Inter-sectoral upgrading*: using the knowledge acquired in particular chain functions to move into different sectors. For example, using the knowledge acquired in producing TVs in order to move into the computer sectors, initially by producing monitors.⁴

Upgrading in Captive Chains

As noted above, our starting point is Gereffi's optimistic view that producers entering captive (buyer-driven) chains have good prospects for upgrading within production and subsequently into design, marketing and branding. On the basis of his research on the garment chains he suggests that East Asian suppliers working for large US buyers were on an upgrading trajectory from OEM all the way to ODM and even OBM.⁵ Gereffi attributes this to 'organisational succession', a process by which manufacturers start producing for buyers catering for the low end of the market and then move up to buyers targeting more sophisticated market segments: 'This succession of foreign buyers thus permitted manufacturers to upgrade their facilities as they met buyer demands for more sophisticated products' (Gereffi, 1999: 53). In our terminology, not just product and process upgrading, but also functional upgrading seems to have resulted from integrating into captive chains in East Asia.

Consensus on Product and Process Upgrading. To what extent can this finding be generalised? Most authors would agree with Gereffi that local producers experience significant product and process upgrading (for example, Keesing and Lall, 1992; Piore and Ruiz Duran, 1998). Local producers learn a great deal from global buyers about how to improve their production processes, attain consistency and high quality, and increase their speed of response to customer orders.

This upgrading effect is not automatic. First, it requires continuous investment by the local firms themselves in people, organisation and equipment. But the local producers' own efforts are rarely enough and the foreign buyers are critical for accessing distant knowledge and markets.

Second, buyers do not always provide support for this upgrading. Some accounts suggest that buyers present challenges to suppliers but do not provide support to help meet these challenges. For example Gibbon (2000) gives an account of the relentless pressure that foreign buyers put on the clothing manufacturers of Mauritius to improve their processes and products – apparently without providing active support to cope with these pressures.

This then gives rise to a more specific question: in what circumstance do powerful global buyers actively support the upgrading of the comparatively weak local producers? The short answer is that buyers are more likely to provide active support where the risk of supplier failure is high. If it is easy to replace suppliers, then active buyer support is less likely.

It is easy to recognise that the risk of supplier failure is particularly high when buyers begin to source from producers in a region not accustomed to producing for

the global market. This arises typically when buyers begin to source from a region which has lower wages. By seeking to take advantage of the wage differential, the buyers need to confront a capability differential. New producers are likely to require much more help than well-established ones. Distinguishing between producers at an incipient and an advanced stage seems therefore helpful in examining the learning effects. Examining the relevance of this distinction requires research which captures change over time. For the case of the Brazilian shoe industry, such a historical account can be obtained by drawing together the studies of Schmitz (1995), Schmitz and Knorringa (2000), and Bazan and Navas-Aleman (2004).

As regards export production, Brazil was at an early stage in the early 1970s. Both buyers and producers interviewed confirmed the important contribution which buyers made to the upgrading of producers. For buyers this was not an act of generosity but one of necessity. In order to sell Brazilian shoes in the US or Europe, they had to assist suppliers to reach international quality and delivery standards and conform to the specific requirements of each market. Accordingly, buyers maintained substantial staff with specialised technical and organisational know-how. Initially, most of the staff came from the US but they were gradually replaced with local staff. Over time, however, the need for such assistance diminished.

This decrease in buyer assistance was confirmed by both buyers and manufacturers (interviews with the author). For example, according to Brazil's main producer for the UK market, the number of visits from the technical staff of UK buyers diminished in the course of the 1980s and 1990s (confirmed by the buyer). Or, to use another example, the largest US buyer of Brazilian shoes had an agent with a large technical department in Brazil. A large proportion of that department was moved from Brazil to China in the early 1990s, because the risk of supplier failure in China was much higher at that time – since it entered the global market much later.

There are other factors explaining differences in buyer contribution to process and product upgrading. For example, ex-manufacturers are more capable tutors than buyers without production expertise; and suppliers of high-quality products receive more tutoring than suppliers of low-quality products. While these differences need to be recognised they do not challenge the emerging consensus that insertion into captive chains provides a fast track to process and product upgrading. Note that even where buyers have no explicit policy of assisting the local producers, rapid learning often occurs in the context of detailed monitoring, especially where this monitoring includes both identifying failures and suggesting how these failures can be overcome.⁶

Controversy on Functional Upgrading. There is no agreement on whether insertion into captive chains provides a route to functional upgrading, that is, moving into the design, branding and marketing functions in the chain. The most thorough analysis of the OEM → ODM → OBM transition is provided by Hobday (1995). While concerned more with the electronics industry, his conclusions are worth quoting for the purpose of this study.

...by the late 1980s foreign buyers and TNCs had begun purchasing goods under so-called ODM, allowing local companies to exploit their design talents and thereby gain more of the value added. Sometimes the latecomers designed goods independently, using their own knowledge of the international market. In other cases, they worked closely with foreign buyers and TNCs. The emergence of ODM signified a new phase of latecomer technological progress, indicating that local firms had internalized much of the ability to understand market needs, then to design, develop and make electronic products for overseas markets. As with OEM, the ODM system allows the foreign buyer or TNC to brand and distribute the goods...enabling the latecomer to circumvent the need for heavy marketing investments (Hobday, 1995: 193).

Hobday's model of latecomer export-led learning includes the transition to developing own brands and own overseas marketing but there is more evidence of firms reaching the ODM stage than attaining the OBM stage.

This cautiously optimistic view is confirmed by Kishimoto's research on the Taiwanese computer industry (Kishimoto, 2004). He emphasises, however, that those firms which progressed to ODM and OBM did not withdraw from OEM. Typically, a large part of their production capacity continued to be 'reserved' for their OEM clients and only some of their production lines were given over to production using their own design and brands. This strategy of operating in different types of chains simultaneously and leveraging competences across them has also been emphasised by Lee and Chen (2000) and will be given special attention later.

The common feature of these studies is that they consider producing for global buyers as a promising starting point for moving up the value chain, thus confirming Gereffi's findings on the East Asian garment industry. This optimistic view contrasts with another set of studies which has emphasised the obstacles which firms face when trying to upgrade. These obstacles are of two types: buyer resistance and resource requirements.

Research on global footwear chains suggests that local producers (in China, India and Brazil) encounter barriers to developing their design and marketing competence. They face obstacles because such upgrading encroaches on their buyers' core competence (Schmitz and Knorringa, 2000). Bazan and Navas-Alemán (2004), in their more recent study of the Brazilian footwear manufacturers, confirm that even leading export manufacturers refrained for many years from making substantial investment in design and marketing, content to remain subordinated to their US buyer. They feared that advancing into design and marketing would upset their main buyer who accounted for 80 per cent of their output and close to 40 per cent of the cluster's exports. Only after a long delay (of almost two decades), did they make inroads into own design, branding and marketing, prompted by rapidly declining profit margins in contract manufacturing for their main buyer.

Gibbon (2000) found no functional upgrading in the tightly controlled garment chains leading from Mauritius via the Far East to the US. In the chains leading to the EU, a number of local producers did try to move up the value chain and develop their

own brands but they had little success. In their study on the buyer-driven chain, which connects the Mexican cluster of Torreon to the US, Bair and Gereffi conclude that local manufacturers of blue jeans were 'generally confined to translating the buyer's specifications into practical knowledge that is necessary for production. No manufacturer in Torreon markets its own apparel brands in the United States...and no Torreon producer of US brand is able to sell its branded output directly in Mexico' (2001: 1895).

Similarly, truncated upgrading can also be observed in the East Asian electronics industry. A study by Stephen Chiu and Wong Ka-Chung of the Hong Kong electronics industry concludes that 'most OEM suppliers remained locked in low-end production' (2002: 12), and that:

The weakness of local suppliers in marketing and the tight control of overseas buyers in distribution are just two sides of the same coin. Underlying this business arrangement is such power asymmetry that a buyer's approval is always prior to anything done on the part of a supplier, leaving most suppliers with few choices but to take buyers' orders and sales forecast as the primary source of market information...Information asymmetry of this kind helps explain why a local supplier is prone to get locked into the subcontractor role (Chiu and Wong, 2002: 11).

How can we explain this failure to upgrade beyond the sphere of production? One of the reasons seems to be buyer power. As stressed by Palpacuer (2000), the source of power in GVCs lies increasingly in non-production activities, notably in branding, marketing, product development and the coordination of inter-firm relations. The lead firms of such chains focus on and invest in these activities as they regard them as their core competence. One would therefore not expect these lead firms to share this core competence with their suppliers. Bazan and Navas-Aleman (2004) confirm that, in the Brazilian footwear industry, local suppliers were for a long time discouraged from functional upgrading by their main US buyer.

While the conflict between the ambitions of manufacturers and the interests of buyers is obvious in marketing, it is not so clear-cut in design. Some buyers consider design as part of their core competence, others do not.⁷ We cannot establish here whether such differences have systematic sectoral determinants or whether they are due to enterprise-specific strategy.

Buyer power is not the only obstacle to functional upgrading. The investment required is substantial and entails risks. This is apparent from Bair and Gereffi's study of Torreon, which notes that, 'One company that we interviewed planned in the future to launch its own line of apparel in the US market, but the amount of capital necessary to promote and market a new brand makes such endeavours risky' (Bair and Gereffi, 2001: 1895).

While upgrading in the sphere of production is often possible in small steps, in particular where clustering facilitates specialisation and the coordination of upgrading efforts, bigger steps are required for functional upgrading. The Mauritius clothing producers exporting to Europe found this out at their cost. In most cases they retreated from their initiatives because they had underestimated the expertise

and financial resources required in launching their own brand. 'They also underestimated the extent to which distinct knowledge and skills were required to operate even a small retail chain' (Gibbon, 2000: 33). This is not a new recognition. Both Lall (1991) and Roberts and Tybout (1995) have stressed the marketing barriers facing export manufacturers in developing countries. Working for foreign buyers and accepting the captive relationships is a tempting solution, even if it means low profit margins.

Conclusion. There is agreement that insertion into captive chains provides latecomer firms with a fast track to process and product upgrading. There is no agreement, however, on the prospects for functional upgrading. Some authors regard the upgrading process as open-ended, others have identified blockages: the perceived power of the buyers and the discontinuous leap required to move from production to design, branding and marketing. The latter two have been particularly difficult whereas advances into design have been more common. Thus, two questions arise that need answering. First, why have firms in some regions been able to overcome these more difficult barriers even though they started off in captive chains? In other words, how have they been able to escape the lock-in that can arise from operating in such captive chains? Second, if barriers arise due to the captive relationships, do enterprises in different types of chains make more progress in terms of functional upgrading? Answers to these questions will emerge in the course of later sections.

Upgrading in Market-based Chains

It was argued in the Introduction that there were two main reasons for the development of explicit coordination of GVCs, that is, the buyer's role in product definition and the risks to the buyer of supplier non-compliance with product or process requirements. It follows that market-based value chains tend to develop when these two factors do not apply. In particular, when:

- Products are standard (produced to well-known designs available to many companies) and can be evaluated cost-effectively with regard to critical characteristics at the point of sale.
- The buyers are 'design takers', who buy products from suppliers who take responsibility for design and production. In this case, the supplier may be considered to have greater competences in these areas than the buyer. This is most likely to occur when the buyers are relatively small. They may lack the competences to define product and process parameters, or the volume requirements may be too small to justify the costs of explicit coordination. In value chain coordination, there are substantial economies of scale.

Clearly, in spite of the rising level of trade in differentiated (non-standard) products,⁸ many products are traded through arm's-length market relationships. In these cases, the supplier has to be able to meet the requirements of customers, design products and have marketing know-how. The question then is where this knowledge comes from.

The importance of both market knowledge and customer size for market-based chains is underlined by Bazan and Navas-Aleman (2004), who explicitly compare the captive chains linking Brazilian shoe producers to Europe and North America with market-based chains linking producers to both the domestic market and regional markets within Latin America. In the case of these latter markets, small buyers purchase ready-designed shoes and either sell them under their own labels, or under the supplier's own brand. Market-based relationships in the (large) domestic market facilitated the build-up of substantial capabilities in design and marketing; and Brazilian producers were then able to export to the Latin American market products which they had designed and branded. Brazilian brands and designs are very visible at trade fairs in Latin America, but much less so at trade fairs in Europe or the US.

Tewari's (1999) analysis of exports of the Ludhiana (India) knitwear cluster to advanced country markets reinforces this point. Some of the leading knitwear exporters in the Ludhiana knitwear cluster prefer to work with small foreign traders, rather than large retailers, because these relationships are more symmetrical and give them the space for learning gradually in the context of small orders. However, in order to do this the producers need to develop their own products (rather than produce to somebody else's specification), hiring designers who travel to Europe and have first-hand knowledge of the final market (Tewari, 1999). In addition, Tewari emphasises that the firms which were first able to export to advanced country markets were those which had previously developed products for the high end of the domestic market. It was the experience of this market which gave them the design and quality capabilities needed to break into the European market. In this case, therefore, the characteristics of the domestic and export markets were similar enough for knowledge gained in one market to be applicable in the other. This will vary considerably according to product and country. In a similar vein, Hsing (1999) found that some Taiwanese fashion shoe companies distinguished themselves by shifting, from producing to order, to manufacturing products which they had designed themselves. She argues that this functional upgrading was achieved by working with small trading companies.

What does this tell us about the connection between chain relationships and upgrading? It shows that in chains consisting of market-based relationships, the producers experience neither support for, nor blockages to, upgrading. Advances in functional upgrading seem to be facilitated by dealing with small rather than large customers. However, local producers do not necessarily make the required investment for functional upgrading where such circumstances exist. The chain approach cannot explain why they do in some cases and not others.

The connection between chain organisation and functional upgrading does, however, emerge clearly in an inter-chain comparison. This can be observed at trade fairs. Producers operating in captive chains are unlikely to exhibit, because they do not have their own design; and marketing is taken care of by their buyer. Producers who take it upon themselves to find new customers and orders, need to develop a design (even if copied) and invest in marketing (have a stall at the fair). Take the example of the twice-yearly shoe fair in Düsseldorf, the biggest shoe fair in the

world and the main fair for the European market. In spite of their large and increasing market share, developing country producers have been poorly represented at the fair. In contrast, a large contingent of exhibitors comes from Italy and Spain, whose producers tend to have market-based relationships with their customers (the retailers).⁹

This observation from trade fairs underlines our basic point that in market-based relationships local firms are unlikely to be locked into the sphere of production. This 'freedom', however, comes at a price. The producers themselves need to invest in design, branding and marketing, and the sums involved are often bigger than for process or product upgrading. Large firms can make the leap on their own, small firms find this much more difficult, and often rely on collective initiatives. Significantly, the strong presence of small Italian and Spanish producers at the Düsseldorf trade fair is prepared and organised by their business associations.

Upgrading by Operating in Different Types of Chains

A conclusion which can be drawn from the analysis presented so far is that the explanatory power of the chain approach increases with the extent of explicit coordination of the chain. In particular, the section on captive chains shows a clear pattern: that is, producers in developing countries experience fast process and product upgrading while functional upgrading is often blocked. In some cases, however, local producers are able to overcome these difficulties. Explaining these cases is the purpose of this section.

In order to do so we need to widen our focus. The analysis so far has assumed that enterprises operate in only one type of chain. In many cases, this is true not just for particular firms but for entire clusters. Concentrating on the implications of this dominant type of chain governance is a sensible way to proceed. However, we risk not recognising some of the most interesting upgrading experiences unless we consider those cases in which firms operate in several types of chains simultaneously. This conclusion can be drawn from the study of Bazan and Navas-Aleman (2004) on the shoe industry but we draw here also on Kishimoto's study of the computer industry in order to stress this point (Kishimoto, 2004).

The most interesting finding on the Taiwanese computer industry is that local producers have progressed from producing to the specifications of their buyers to own design manufacturing (ODM). This is particularly impressive given that the technology in this sector changes so rapidly. In order to understand this achievement, it is important to recognise that the producers pursue a double strategy – maintaining their OEM production (which often means continuing in a captive chain) while starting to experiment with and building up their ODM operations in a different chain. This Taiwanese experience has also given rise to Lee and Chen's thesis on the leveraging of competences across chains. They argue that firms were able to acquire new capabilities by applying lessons from one chain to another. Firms could, for example, take a design supplied by one customer and then make adaptations and use the modified design to supply other customers in other markets (Lee and Chen, 2000).

Bazan and Navas-Alemán (2004) show that upgrading by operating in several chains simultaneously has begun in the Sinos Valley shoe cluster in Brazil. However, the leading export manufacturers pursued this strategy with great delay because they were locked into relationships with existing buyers from the US. Interestingly, it was above all second-tier and/or second-generation exporters that began exploring different markets, in particular the Latin American market. Some Brazilian firms, which were world-class suppliers of very big US buyers, found it difficult to succeed in the smaller markets of Latin America or establish themselves in the Brazilian market. Manufacturing to tight specifications for the main customer requires an internal organisation geared to this purpose, and capabilities which are highly developed but narrowly-focused (limited to the sphere of production). Entering new markets requires a different set of capabilities.

Where producers sell to powerful customers, they cannot compete directly with them and must find other markets when diversifying and upgrading. Interestingly, the firms which were most successful in functional upgrading and exporting to new markets were companies which had acquired their design and marketing experience in the national market. Some of them had never exported to the US market but, by operating in the Sinos Valley, they were able to absorb many of the process and product innovations which those manufacturers targeting the US market had brought to the cluster under the tutelage of their buyers. This means that the widely held view of the superiority of learning-by-exporting needs to be revised. Clearly some forms of capabilities are easier to acquire in national markets. The chain and upgrading distinctions used in this study would be useful for such a revision. It also seems to be the case that diversifying markets and customers is essential for upgrading beyond the OEM plateau.

THE DISTRIBUTION OF GAINS ALONG THE CHAIN

While the changing distribution of capabilities along the chain has been researched a great deal, comparable information is not available for the distribution of the monetary gains. This is somewhat surprising because the income issues were central in the early stage of the value chain debate. Gereffi et al. (1994), in the first major publication on GVCs, announced that the approach 'explains the distribution of wealth within a chain as an outcome of the relative intensity of competition within different nodes' (p.4). Kaplinsky (1998) took the debate further: 'Sustainable income growth can only be assured by developing the capacity to identify – and then appropriate – areas of value accretion that are protected to some extent from competition. These protected spheres are characterised by economic rents' (p.14). He then developed a framework for analysing and recording pockets of rent along the value chain.

Gains for Developing Country Enterprises

Empirical studies using this (or an alternative) framework for examining the distribution of gains along the chains only exist for very few cases, such as the coffee chain (Fitter and Kaplinsky, 2001; Kaplinsky and Fitter, 2004), but not for the

garment and footwear chains. The dearth of empirical studies for the manufacturing industry does not mean that the issue has been avoided. Running through the value chain literature is the concern that too many countries/regions/enterprises are squeezing into the manufacturing nodes of the chain. The concern has been expressed most clearly by Kaplinsky (1998: 31): 'In previous eras, participation in the industrial segments of the value chain provided the source for sustainable income growth. But, increasingly, in a globalising economy these industrial niches have become highly competitive, raising the spectre of immiserising industrial growth'.

Since first expressing this fear, Kaplinsky suggests that it has become reality. He draws attention to micro-level and macro-level evidence, in particular the decline in the terms of trade for developing country manufactured exports (Kaplinsky, 2005). Exports from China seem to be a major reason for the price and profit squeeze in manufacturing, affecting many industries, including the garment and footwear industry. Many producers, especially those of small and medium size, find that participating in and gaining from the global economy do not always go together.

This then gives rise to the question of whether other nodes of the value chain (such as logistics, design, marketing) offer higher returns. On this critical question there is little information. Much of the literature assumes that those activities which the lead firms of the chain seek to carry out themselves (notably coordinating the sourcing, subsequent distribution, branding, and often design) must be the functions in which profitability is much higher. But hard evidence (or counter evidence) is rare. An exception is the study by Bazan and Navas-Aleman (2004) on the Brazilian shoe industry. They suggest that the profitability of manufacturers who embarked on selling their own design and established their own marketing channel is not higher than the profitability of those who kept to manufacturing only. 'We did not find evidence of increased incomes for firms pursuing functional upgrading activities in the Sinos Valley in comparison to others that remained solely unbranded manufacturers. Investments in marketing, design and branding are high at the beginning so perhaps another survey should be made in a few years' time to measure whether the returns justified such expenditure' (Bazan and Navas-Aleman, 2004: 127).

Gains for Developing Country Workers

Most value chain research stops at the enterprise level but some has gone deeper and asked how the earning opportunities of workers are affected where enterprises have entered global value chains. Three findings stand out:

- the increase in the number of jobs has been massive;
- women workers have gained most;
- wage trends have varied between regions.

Let us review the evidence in more detail, starting with the Brazilian shoe industry. During the period 1970–90, Brazil raised its share of world leather shoe exports from 0.5 to 12.3 per cent. The bulk of these exports came from the Sinos Valley,

whose local enterprises operated in chains driven by US and European buyers. Employment in the industry increased from 27,000 in 1970 to 76,000 in 1980, an increase of 280 per cent over the decade. The number of jobs continued to rise, by approximately 80 per cent over the subsequent decade (1980–90). One might have expected that such substantial growth in the number of jobs would be accompanied by rising wages, but during the period 1970–80, average wages remained roughly at the same level. And during the period 1980–90, average *real* wages fell. The reasons were not just rampant inflation, but also the labour surplus. In the early years of the export boom, the Sinos Valley attracted migrants from other regions. In later years, the factories tended to expand mainly in the more distant municipalities of the valley where labour was abundant. While wages did not increase, poverty was reduced substantially, mainly because more members of the household went out to work. Multiple sources of income per household lie behind the increase in material well-being during two decades of export boom (Schmitz, 1995). Developments during subsequent years are hard to summarise because of the ups and downs in export levels – influenced heavily by major exchange rate fluctuations. From the workers' point of view, the main features of recent years have been: fluctuating employment levels, greater emphasis on the quality of employment and the elimination of child labour.

The trend was roughly similar in the Mexican cluster of Torreon that exports blue jeans to the US: Bair and Gereffi (2001: 1896) observed 'dramatic employment growth' during the 1990s export boom, but wages improved only in some enterprises and for some categories of workers. Subsequent employment levels have fluctuated and even fallen, in particular among small local subcontractors.

With regard to Asian countries, we can draw on the experiences in the garment industries of Bangladesh and Vietnam, summarised by Nadvi (2004). He addresses explicitly the question 'Does insertion into global value chains deliver pro-poor outcomes?', and concludes: 'The findings from the case studies clearly show that engagement in global markets through GVCs can deliver significant employment and income gains'¹⁰ Export garment production generated 1.6 million new jobs in Bangladesh, most of which were captured by women (Kabeer and Mahmud, 2004). Employment in Vietnam's garment industry rose by 132 per cent during the 1990s to nearly 320,000 in 1999; in the country's textile sector, however, employment fell by 30 per cent during the 1990s, mainly due to the restructuring of the state-owned enterprises (Nadvi and Thoburn, 2004).

Fortunately, wages in the expanding Bangladeshi and Vietnamese garment industry are compared to earnings in alternative work. In both countries, the wage levels of workers in the export garment sectors were higher than those found for similar types of workers in non-internationally traded activities. In Bangladesh, wage levels for garment workers were double that of other non-traded wage workers. Moreover, garment workers in the export processing zones (EPZ), where factories were either foreign-owned and/or were manufacturing for high-value branded retailers, average levels were some 70 per cent higher than those prevailing in non-EPZ factories (Kabeer and Mahmud, 2004). Similarly, Vietnamese garment workers employed in joint venture units earned higher average wages than those

in the private, small-scale and cooperative enterprises not feeding into global value chains (Kabeer and Tran, 2003; Nadvi and Thoburn, 2004).

Nadvi (2004: 24) concludes:

The evidence from the case studies points to significant gains for developing country workers from insertion into global value chains. Employment levels have risen, often substantially...This has generated significant work for particular groups of poorer workers, especially women. Women, both within their communities and their households tend to have poorer entitlements to productive assets, and suffer from gender disparities in terms of access to critical resources and formal education, thereby making them especially vulnerable to poverty...Export garment manufacture has resulted in significant levels of new jobs for women workers. It is also, however, clear that gender divisions of labour imply that women are less likely to obtain the technically higher skilled and better remunerated jobs.

Nadvi's assessment brings out clearly the substantial gains made in particular by young women. It is difficult to reconcile this with the conclusion of a recent Oxfam report:

Commonly hired on short-term contracts – or with no contract at all – women are working at high speed for low wages in unhealthy conditions. They are forced to put in long hours to earn enough to get by. Most have no sick leave or maternity leave, few are enrolled in health or unemployment schemes, and fewer still have savings for the future. Instead of supporting long-term development, trade is reinforcing insecurity and vulnerability for millions of women workers. (Oxfam, 2004: 4)

How can we explain such different conclusions? It seems that they are largely due to different reference points. Judging existing conditions against an ideal standard highlights the shortcomings. These are well known from studies which show the difficulties encountered by women workers in global supply chains – see for example Smith et al. (2004), *Women Working Worldwide* (2003) and Yimprasert (2003). Documenting existing conditions is important but is equally important to capture the enormous opportunities that have opened up for women. Comparisons of before and after have shown that new job opportunities have opened up for many women and that these have transformed their lives (Carr, 2004; Joekes, 1999; Kabeer, 2000; Nadvi, 2004; Wood, 1991). In terms of sheer numbers, the population group that has – on a global scale – benefited most from globalisation is young women workers. While gender disparities remain and while working conditions are often precarious, this transformation is of historical significance and needs to be recognised.

CONCLUSIONS

The world map of manufacturing has changed fundamentally over the past two decades. Developing countries, particularly in Asia and Latin America, have become major exporters of manufactured products, forcing developed countries

to abandon some industries and restructure others. This build-up in production capabilities has gone furthest in the garment and footwear industry.

Explanations for this build-up tend to rely mainly on the lower labour costs in developing countries. Labour costs certainly play a big role but they do not explain why some low wage countries have been more successful than others and they do not explain why some countries have been able to become competitive at great speed and enjoy fast growth. The value chain approach is critical for explaining the speed of change.

Conclusions on Upgrading

Chain governance structures the upgrading opportunities of developing country producers. This is the proposition which has driven the analysis. The clearest and least controversial pattern is that accepting foster parents offers a fast track to product and process upgrading. Captive local firms producing for global buyers can expect to progress fast. This applies in particular to newcomers – when certain conditions are met.

The fast upgrading of the suppliers results from the dual role of the buyers: they are extremely demanding but they also need to provide assistance so that these demands are met. Much of this assistance takes place in the context of detailed monitoring, that is, not just exposing failures but also showing how these failures can be overcome. It is this combination of high challenge and support which propels the supplier forward and leads to fast improvement in processes and products.

This does not mean that all newcomers can expect to learn fast from their customers. Recall that buyers only provide this support where they define the product and where they perceive a risk of supplier failure. Recall also that supplier learning, where it occurs, is not necessarily due to an explicit and elaborate support policy of the buyer. Much learning occurs in the context of constructive monitoring, that is identifying failure and indicating ways to overcome them.

This paper has also shown that integration into global captive chains is often a double-edged sword. On the one hand, it facilitates inclusion and rapid enhancement of product and process capabilities and enables developing country firms to export into markets which would otherwise be difficult for them to penetrate. On the other hand, it can lead to producers being tied into relationships that prevent functional upgrading and leave them dependent on a small number of powerful customers.

This need not necessarily last. Chain governance is a dynamic process. A dynamic perspective helps to recognise why (in captive chains) the limits to functional upgrading might be temporary. Power is relational, that is, the exercise of power by one party depends on the powerlessness of other parties in the chain. Existing producers, or their spin-offs, may acquire new capabilities and explore new markets, and this changes power relationships. The acquisition of these new capabilities does, however, require investment in equipment, organisational arrangements and people. Where this investment is made, there is a way of breaking out of the captive relationship: using the knowledge acquired in supplying the main global buyer for supplying other (probably smaller) markets in which relationships with the customers are more symmetrical.¹¹

The multi-chain strategy of enterprises has important implications for researchers and policy-makers. The researcher, in order not to drown in the complexities of the real world, is usually well advised to focus on the main products and customers. This is a mistake when considering upgrading paths. Products and customers that appear minor in volume terms could be of major significance for the learning and eventual functional upgrading of the enterprise. Policy-makers keen to support such upgrading also need to re-think their strategy. Rather than asking the broad question of what institutional support do local enterprises need, the policy-maker needs to ask a more specific question: what is it that the global customers of local enterprises are unlikely to provide and how can the local institutions fill this gap and assist in the acquisition of the missing capabilities?

All this gives the impression that the extra investment from within the enterprises and from the support institutions should go into functional upgrading. This focus on moving up the chain takes attention away from other forms of upgrading, notably the deepening of competences within a particular stage of the chain. In some cases functional specialisation may well be superior to functional upgrading. Sturgeon (2002) and Gereffi, Humphrey and Sturgeon (2005) suggest that modular production networks are among the winners in the global economy. Existing work on the garment and footwear sectors has, however, given little explicit attention to the relevance of the modular production network idea. Recall that such networks include not just manufacturers proper but also the full range of producer services, notably logistics. They do not, however, include basic research and development, design and branding.

Conclusions on Earnings

This paper has pulled together the evidence on earnings at both the enterprise and worker level. There is little conclusive empirical research on how insertion in GVCs affects the profitability of enterprises and how this varies with the node occupied in the chain. Available information, however, indicates that the degree of competition, particularly in mature industries such as garments and footwear, is high and increasing, and that profit margins are low and decreasing. Non-production activities do not offer easy routes to higher profits. This seems a rather gloomy conclusion if seen in a static sense. A historical and dynamic perspective would draw attention to the massive build-up of export-oriented production capabilities in developing countries, which has offered many entrepreneurs earning opportunities they did not have before. The gains have been substantial, given that the domestic markets provided only limited space for growth. A stage has now been reached at which existing global production capability has outstripped global demand. The resulting profit squeeze enforces consolidation and restructuring. The conclusion is not 'keep out' but 'move on'.

As regards earning opportunities for workers, the three main conclusions are: first, the number of jobs has increased enormously; second, young women have gained most in terms of new earning opportunities, even though old gender differentials often persist; third, in spite of the enormous increase in demand for

labour, wages have not always increased. The evidence is mixed: wages have risen in some places but not in others due to the continuing labour surplus.

Global Versus National Chains

Value chain research has paid more attention to global compared with national chains. As shown above, in global chains the fast progress in the sphere of production contrasts with the slow progress in non-production activities. Comparisons with national chains show a surprising finding: substantial functional upgrading. Studies from India and Brazil, in particular, show that firms specialising in the national market are more likely to develop their own designs, brands and marketing channels (Tewari, 1999; Bazan and Navas-Aleman, 2004). Having acquired these capabilities in the national market, they then begin to break into markets of neighbouring countries and other parts of the world. The lesson from these cases, however, is not entirely clear: is the key difference national versus global chain or is it captive versus even relationship? In national markets, captive relationships have been less common, giving local producers more space to develop their own products rather than produce to somebody else's specification. But is this changing? Perhaps captive chains are becoming more common *within* developing countries given that retailing is becoming more concentrated. New questions arise which have as yet no answers: are the patterns of chain governance observed internationally beginning to be reproduced within developing countries? Are the upgrading implications similar to those observed in global chains? Equally unclear is whether enterprise profitability and workers wages are higher in global compared with national chains. In conclusion, a lot more research is needed comparing the governance patterns and the upgrading and earning opportunities in global and national chains before one can draw firm conclusions. Ideally such research would compare trajectories rather than experiences at specific moments of time.

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NOTES

1. See for example Gereffi, Humphrey and Sturgeon (2005), and McCormick and Schmitz (2002).
2. The conceptual distinctions and theoretical underpinnings of this approach are set out in more detail in Humphrey and Schmitz (2000; 2002, 2004).
3. The case material in Pietrobelli and Rabellotti (2004) and Schmitz (2004) shows how the combination of chain and cluster organisation influences upgrading. Giuliani et al. (2005) emphasise that sectoral specificities have a major influence on the mode and extent of upgrading.

4. This fourfold distinction is finding rapid acceptance in the international debate (as shown for example in UNIDO, 2002). These categories are, however, not without problems (see, for example, Meyer-Stamer, 2004, and Humphrey and Schmitz, 2004).
5. OEM = original equipment manufacture; ODM = own design manufacture; OBM = own brand manufacture.
6. Mitsuhashi's (2005) study focuses on the role of buyers in supplier upgrading and makes a useful distinction between upgrading through deliberate buyer support and upgrading through incidental learning.
7. For differences in the footwear trade, see Schmitz and Knorrninga (2000: 197–8).
8. Rauch (1999: 16) shows that the share of differentiated products in international trade has been rising and estimates that it accounted for two-thirds of world trade in 1990.
9. These observations are based on visits to this fair by the author and on statistics made available by the Düsseldorf trade fair organisation.
10. What follows is based on Nadvi's (2004) excellent review, in particular pp.24–26.
11. A dynamic approach would in particular look to the role of a new generation of managers in existing enterprises and, especially relevant in clusters, to the spin-offs. Often they feel less constrained by the bonds with existing powerful customers and are more able to take new initiatives.

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