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*Series on Upgrading in Small Enterprise Clusters and
Global Value Chains*

Participation in Global Value Chains as a Vehicle for SME Upgrading: A Literature Review

by

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Foreword

This document is part of a new series on “Small Enterprise Clusters and Global Value Chains” that forms part of the set of SEED Working Papers. This area of SEED’s work explicitly addresses the issue of isolation among individual small enterprises, which is frequently identified as one of the major factors constraining their growth, competitiveness and potential for job creation.

IFP/SEED’s work in its theme of Market Access is based on the premise that small enterprises can grow and become competitive economic ventures when they have clear and well-developed strategies to target and access quality market opportunities for selling their outputs. An important aspect in the strategic development of these small enterprises is a deeper and more nuanced understanding of the dynamic nature of market access, and furthermore, how this process shapes where market opportunities arise or become restricted. The present series aims to address this issue by examining the embedding of small enterprises in horizontal linkages between firms (through clusters and networks) and vertical linkages with markets (through local and global value chains). This perspective of small enterprise linkages can be a particularly effective approach to overcome many of the traditional constraints facing small enterprises and to help in fostering the development of truly vibrant and economically viable small enterprises that can serve as a sustainable form of quality job creation and income generation for developing countries. In a global economy, the vertical linkages between small enterprises and markets increasingly shape the range of market opportunities available.

An extensive body of literature already exists regarding clustering and value chains. However, largely lacking from these studies is a more explicit concern with the labour implications that may arise as part of small and medium enterprise (SME) upgrading, particularly within the context of globalization. More specifically, this area of SEED’s work is concerned to show that a cycle of “virtuous linkages” can be formed, where improved competitiveness of SMEs and better scale and quality of work and employment need not be mutually exclusive goals. Rather than state any direct causality, it is believed that such goals can walk hand-in-hand, given appropriate tools and demonstration cases.

The first publications in this series serve to set the conceptual framework for this new area of work and subsequent studies focus upon cases of particular interest, sometimes based upon experiences arising from project activities developed within IFP/SEED.

The present study in this series draws upon an extensive literature review to assess the prospects for SMEs in developing countries to compete and upgrade in global systems of production. In particular, the author considers whether global value chains may serve as a viable, and sustainable, vehicle for this type of upgrading, especially considering that SMEs in developing countries are found mostly concentrated in low value-added areas of production and frequently rely upon low labour costs as a key competitive strategy. SMEs in developing countries often lack the amounts of investment capital necessary to

pursue activities that rely intensively upon technology or know-how, such as R&D or marketing, or to engage in branding.

Regarding the nature of challenges faced by SMEs in developing countries, the author concludes that some case studies can provide important lessons regarding the positive opportunities for upgrading that can exist in a global economy. However, it is recognized that these opportunities may be limited, and furthermore that certain countries have been able to avail of “first mover” advantages that may no longer be available for many other developing economies entering more recently in to the global arena. Mention is made of the potential benefits offered by policies to encourage stronger inter-firm linkages such as through clustering, in order to strengthen the prospects for SMEs. Finally, it is argued that one also must look beyond the firms as actors to examine the role of public and private institutions that can foster a business environment conducive to learning and continuous innovation.

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1. Introduction

In most product markets, ranging from food items to footwear, cars or computers, the world market is dominated by a few big brand names. These worldwide producers such as Nike, Nestle and Microsoft are the global players that rule the sphere of commodity production, and there is not much room for competitors. Where in this picture are the small and medium enterprises (SMEs), especially those in the developing countries? They are found mostly at the low end of these global production chains because they do not have the enormous amounts of investment capital necessary to establish a new brand name in the increasingly demanding market of the rich countries or to pursue technological or know-how-intensive activities such as R&D and marketing. Yet, those smaller producers and enterprises are more numerous and arguably can have a greater impact on employment creation than large enterprises. Hence, several questions arise: What are the perspectives for SMEs in an economic environment largely ruled by these global corporations that can deploy huge investments in advertisement and image making? Are there market opportunities for them, which imply upgrading perspectives? Or are SMEs doomed to stay at the bottom end of the production scale, concentrating on the labour- or resource-intensive and low value-added parts of the production process? The latter scenario fits the economic theory of comparative advantage which suggests that an international division of labour along the lines of capital and labour between developed and developing countries, will yield benefits for both.

This paper looks at a concept which entails more optimistic and dynamic trajectories for SMEs in developing countries: the idea of global value chains as a vehicle for upgrading¹. This concept offers an appealing alternative to the rather pessimistic and static picture of developing countries locked in the role of resource-based and low-wage, cost-based competition. It conveys the idea of integration into global value chains as a means for SMEs in developing countries to access learning processes and upgrading opportunities. Driven by global buyers or transnational corporations (TNCs), participation in global value chains provides possibilities such as the opening up of new markets, bringing an impetus for modernization, accessing information on international quality standards, market trends, new fields of knowledge, technology and human resource development (Altenburg, 2000).

According to the more optimistic advocates of this approach, becoming part of global production linkages is imperative for improving the competitive and growth prospects of developing-country enterprises or economies: "Participation in global commodity chains is a necessary step for industrial upgrading because it puts firms and

¹ The *global value chain* approach originates from the idea that "the design, production and marketing of a product involves a chain of activities divided between different enterprises often located in different places" (Humphrey/Schmitz, 2000: 9). Central to this approach is the potential role of the lead firm or buyer as the primary source of material inputs, technology transfer and knowledge (Gereffi, 1999). These buyers include retailers, branded marketers and branded manufacturers which have the most direct link to international markets and determine what kind of product is being produced, how it is produced and by whom. The term "value" is chosen deliberately in this case, instead of "product" or "commodity", in order to draw attention to the question of who adds value and where this takes place along the production chain.

economies on potentially dynamic learning curves” (Gereffi, 1999: 39). The empirical basis behind the argument lies mainly in the success of the East Asian Newly Industrialized Economies (NIEs), which moved up from the labour-intensive assembly of imported inputs for export to the production of knowledge- and technology-intensive products such as cars or computer chips. Not surprisingly, SMEs in developing countries are attracted by the opportunity to participate in global production chains as opposed to local production chains, which are often perceived as being less dynamic and productive.

However, integration into global production chains implies clear strategic challenges for SMEs in developing countries. These firms face substantial barriers either to enter into these chains or to move up and improve their position. It is necessary to examine in more detail which factors inherent in the structure of the chains are conducive to learning from production for global buyers and which are not. Such an analysis entails an examination of the power relations inherent in the distribution of activities involved in the design, production and marketing of a product. Some questions arise: are there certain types of global chains which imply more learning opportunities for SMEs in developing countries than others, or does firm size determine whether a producer succeeds in upgrading? In addition, a closer look needs to be taken at those cases where developing country-producers successfully integrated into global chains. What kind of dynamics were unleashed in terms of upgrading perspectives and inter-firm relationships on the local level? Which enterprises profited most from integration – the smaller or the bigger firms – and how did their respective prospects change?

The answers to these questions are central to the identification of possible areas for intervention and policy strategies for SME promotion, given that competitiveness is increasingly determined on a global scale. At present, a shoe manufacturer in Brazil faces the more or less direct competition from shoe producers in China because they might both sell to the same buyer. The opening up of markets in the developing world is a steady trend. In times of ever-increasing trade liberalization and global policy efforts to promote the free flow of goods, the concept of production has become increasingly international. Therefore, when dealing with the promotion of SMEs in developing countries, is it essential to understand the dynamics between the global economic environment, global producers and local producers in order to determine their long-term prospects.

This paper seeks to provide SME specialists looking for market-oriented promotion or upgrading opportunities with an overview of current research in the field of global economic developments. It analyses relevant literature on global value chains and the links between TNCs and SMEs in developing countries. It draws from generic literature on significant trends in this area as well as from several case studies of developing-country SMEs in global chains, mainly from the traditional, craft-based industries such as footwear or garments. It is not within the scope of this paper to cover all existing case studies; instead, it focuses on those which were available through specialised sources and publications and which allowed generalizations to be made concerning issues at stake when investigating global production chains as a source of learning for SMEs.

This paper is divided into five sections. After the Introduction, Section 2 of the paper provides a detailed analysis of the trends and factors that influence how some global production patterns may offer windows of opportunity for learning and upgrading among SME producers in developing countries. Section 3 evaluates increasing competition, the structure of governance in global value chains and buyers' strategies within the context of increasing competition. Section 4 introduces perspectives for SMEs in developing countries and possible upgrading strategies for small enterprises and the implications that this raises for policy formulation. Section 5 concludes with some final considerations and highlights the role that institutions can play in helping to promote the upgrading of SMEs within global production regimes.

2. Global value chains: An upgrading opportunity for developing-country SMEs?

The argument of proponents of value chains as a window of opportunity for developing-country producers is that, through the linkages with enterprises from the industrialized countries, the producers obtain information on quality standards and technology; they learn about consumer preferences; and they become accustomed to thinking in terms of price, quality and timely delivery processes. Furthermore, they enjoy regular orders which, in turn, enable them to accumulate capital and possibly expand (Gereffi, 1999, Altenburg and Tilman, 2000, Tewari, 1999).

A particularly useful typology for analysing the relationship between different forms of buying relationships and the scope for SME upgrading has been developed, establishing four categories of chain governance, as summarised in Table 2.1.

Table 2.1: Four types of chain governance

Arm's-length market relationships	Describe a relationship where there are potentially many buyers and sellers for equivalent products, even though particular buyers and sellers may engage in repeat transactions. This implies that the producer either makes a standard product or designs the product without reference to the needs of any particular customer. The customer is a "design taker". It also implies that there is no transaction-specific investment required by either party to the transaction.
Network relationships	Occur when the supplier and buyer join complementary competences. They may jointly design the product, using their different competences, and transaction-specific investment will be made. This type of relationship is particularly evident when both buyer and supplier are innovators, close to the technology or market frontiers, but this situation also arises when firms focus on their core competences and outsource important activities to suppliers.
Quasi-hierarchical relationships	Occur when one party to the transaction (usually the buyer) exercises a high degree of control over the other. This often includes specifying the design (or the general specification) of what is to be produced and also process parameters such as quality systems, materials, etc. The introduction of monitoring and control procedures and the transmission of product design features requires transaction-specific investment.
Hierarchical relationships	Occur when the buyer takes ownership of the producers in the cluster or establishes its own companies within the cluster, or when firms in the cluster integrate forwards, establishing production or distribution facilities in other countries.

Source: Adapted from Humphrey and Schmitz (2000).

Using the typology developed in the table above, most developing country SMEs are based in quasi-hierarchical relationships. Although such relationships are costly, require asset-specific investments in relationships with particular suppliers and also increase the rigidity of supply chains by raising the costs of switching suppliers, this type of structure nevertheless provides the global buyer with control over specification of product design. Many buyers are concerned to control this element, in order to avoid potential losses arising from a failure to meet commitments (for example, delivering the

right product on time) or a failure to ensure that the product conforms to the necessary standards.

The term *upgrading* will be used in this paper with respect to three possible upward moves in the value chain. First, process upgrading refers to an increase in efficiency of the production process, such as through reorganization or investing in more advanced technology. Second, product upgrading involves shifting to more sophisticated product lines with increased unit value. Finally, functional upgrading is the process by which firms acquire new, more strategic functions in the chain such as design or marketing or by which they switch buyers, by moving to those chains catering to more sophisticated markets (Humphrey and Schmitz, 2000).

Box 2.1 outlines one case study of the garment chain in East Asia that provides the empirical basis for such a positive upgrading trajectory as a result of insertion into global chains (Gereffi, 1999). The links that were forged between East Asian garment producers with American and European buyers are seen as the main driving force for upgrading in countries such as Hong Kong, Singapore, South Korea and Taiwan. By moving up from the mere assembly of parts to the production of original equipment for buyers, the local entrepreneurs in these countries became familiar with the preferences of global buyers and substantial backward linkages were generated. Over time, the knowledge about international standards for price, quality and delivery spread and enabled these producers to take over higher value-added activities and to relocate labour-intensive activities to other countries in the region (1999: 55).

Box 2.1: A case of successful upgrading: The garment chain in East Asia (Gereffi, 1999)

In his analysis, Gereffi (1999) refers to the so-called “first wave” countries in the garment chain, namely Hong Kong, Singapore, South Korea and Taiwan, which underwent considerable upgrading processes. These countries moved from simple assembly of imported inputs to the coordination of regionally integrated production networks for American or European buyers and finally moved to the design and sale of their own branded merchandise. Essential to this success was the use of networks to create new sources of national and regional competitive advantage. Upgrading involved the following four stages: (1) building locally integrated manufacturing and marketing networks; (2) including new tiers of low-cost suppliers in the region; (3) coordinating buyer-driven chains through different types of networks; and (4) completing the apparel commodity chain within Asia (ibid.: 55). This “triangle manufacturing” involves US buyers placing their orders with the NIE manufacturers they have sourced from in the past who, in turn, shift some or all of the requested production to affiliated offshore factories in low-wage countries (ibid.: 60).

The main incentives for upgrading came from the opportunities arising out of the Original Equipment Manufacturing agreement. Local capacities came into play when dealing with the capability to make use of networks, matched with considerable manufacturing expertise. External factors were important as well. The internationalization of the garment industry was brought about by domestic supply side constraints (high wages and high land prices) on the one hand and external pressures on the other (currency revaluation, tariffs and quotas). “Quotas determined when the outward shift of production began, while preferential access to overseas markets and social networks determined where the firms from the East Asian NIEs went” (ibid.: 57). The NIEs focused on the higher-value added activities such as product design, quality control, packing, warehousing, transportation, quota transactions and local financing, whereas the labour-intensive activities were relocated.

The origins of these manufacturing networks can be traced back to the early traders in Asia, which established long-distance supply routes relying on social ties between Asian producers and their export markets. British merchant houses “... gave Hong Kong’s industrial enterprises the knowledge and logistical support needed for exports to distant countries, and they helped to establish confidence and goodwill for Hong Kong products among foreign buyers” (ibid.: 60). After the Second World War, Chinese-owned merchant houses took over this role, because they established the relationship between the European and North American export markets and the first-generation Chinese manufacturers. This historical process has led to the integration of East Asian manufacturers into the kind of global chain that implies good upgrading perspectives, i.e., the perspective to develop full-package sourcing networks and gain access to higher-value-added activities. “East Asia’s transition from assembly to full-package supply derives in large measure from its ability to establish close linkages with a diverse array of leading firms in buyer-driven chains” (ibid.: 38).

Another example of the advantages that can be derived from insertion into global value chains is the Altenburg analysis of three clusters in the electronics hardware chain. At the same time, it is a good starting point to depict the complexity of the issue at stake, namely the successful upgrading of developing-country clusters in global value chains. As Box 2.2 shows, Altenburg’s comparison of the differing characteristics among three clusters sheds light on how different their development can be, even when apparently starting at the same point, i.e., cheap labour as a comparative advantage. “The three industrial cases represent different stages in the evolution from a mere factor-cost based agglomeration of assembly plants to a knowledge-based industrial cluster with a vibrant development of complementary SMEs” (ibid.: 15).

Box 2.2: A look at three clusters in the electronics hardware chain (Altenburg, 2000)

Altenburg (2000) compares three clusters in three countries, namely Mexico, Malaysia and Singapore. The clusters are characterized by decisive differences in the development of their specialization pattern.

1. The cluster in Guadalajara, Mexico, is an agglomeration of assembly plants that started production based on low factor-costs. IBM established the first plant in 1985 and other leading electronics TNCs followed. The comparative advantage of the location was the cheap Mexican labour force for assembling and testing of electronic devices. To this day, no local supplier structure has emerged, in spite of the existence of a supplier development program by the local government. Accordingly, local innovations are limited to improvements in human resource management and plant layout.
2. In Penang, Malaysia, the first TNCs set up semiconductor plants in the early 1970s, profiting from the cheap, trainable, English-speaking labour force. Until the mid-1980s, no substantial linkages between the TNCs and the local SMEs had evolved. Thereafter, due to major changes in the sector, the TNCs delegated more responsibility to their foreign affiliates. They increasingly needed more flexible and quicker supply, as well as the production of specialized machine tools. The locational advantage of being close to the assembly plants became crucial. "During the first years, TNCs tried to produce the necessary tools in-house or to induce foreign suppliers to set up production plants in Penang. Yet, it proved more efficient to develop local suppliers" (ibid.: 16). Since then, there has been an extraordinary development of local SMEs in the four areas of metal stamping and precision tooling, contract manufacturing for assembly operations, plastic materials and packaging materials. The cluster has become a more mature production site with considerable dynamics of local suppliers and skills development, even though innovative capabilities remain limited. Most of these SMEs emerged as spin-offs from American TNCs. For example, Intel has been a seedbed for most local suppliers, as its in-house machine shops became a "school" for Malaysian engineers, some of whom set up local companies later. First, these local suppliers were given small contracts. Upon completion, larger contracts followed. This enabled the local firms to make incremental investments.
3. In the case of Singapore, the cluster developed successfully from a simple assembly site into a dynamic agglomeration of enterprises spinning off innovative SMEs and world-class local suppliers. Being the first of the three locations to become a host for assembly operations of electronics TNCs, Singapore is now the place where TNCs undertake more engineering-intensive activities such as automation, product redesign for manufacture and logistics functions. Now the Singaporean electronics companies are becoming TNCs (ibid.: 17).

The differing structure and maturity of the clusters in Altenburg's analysis highlight the need for further scrutiny when talking about chains as upgrading opportunities. The fact that these three clusters have entirely different positions in the electronics hardware chain invokes questions regarding the factors that determine successful upgrading. Obviously, the mere insertion into global chains is not enough. Rather, "... the focus of attention must also lie with the mode in which firms, countries and regions participate in the process of global production and exchange" (Kaplinsky, 2000: 119). This shall be done below.

3. *Increasing competition, chain governance and buyers' strategies*

Concerning the mode in which developing country producers are inserted into global chains, two main factors can be ascertained. First, there is a clear trend toward ever more concentration and fiercer competition among the few big players in the world market. Second, the pattern of a chain is a key structural factor, here referred to as chain governance; in turn, this factor is closely linked to the type of product produced and the strategy of the buyer. These two main factors decisively influence the nature of competitiveness and the division of labour between global buyers and producers in developing countries. They determine the windows of opportunity for learning and upgrading that can open up for SMEs in developing countries. How these factors are interlinked will be discussed subsequently. At the end of this section, a different way of looking at the learning opportunities in chains will be presented by undertaking an analysis of the strategies of buyers or TNCs.

The first factor, which involved the concentration processes going on in the world market, is a common theme. Be it high-tech sectors such as electronics and automobiles, resource-based sectors such as horticulture and furniture, or traditional manufacturing such as garment and footwear, in all of these industrial activities the world market is characterized by numerous mergers and acquisitions. These, in turn, mean that sooner or later the global markets for these goods will be dominated by a few big retailers who hold brand names and occupy the highest value-added activities in the chain, namely design and marketing.²

These concentration processes give considerable power to the big retailers or buyers in global chains. They are the developing-country producers' link to the world's biggest export markets. These companies know most about consumer preferences and future market developments, they define the structure of the production chains; they define who produces what and where and, therefore, who is in and out of these global chains. Box 3.1 describes this process in greater detail for the horticulture commodity chain, in which smaller enterprises are being crowded out due to strong requirements in order to continue participating in this value chain. As supermarkets are forced to concentrate on their core retailing activities, more pressure is exerted on their suppliers in developing countries in terms of quality standards, reliability of supply, cost, variety, value-added and innovation. Small enterprises are less able to fulfil these requirements than large enterprises and are therefore excluded from the chain.

² Altenburg says of the the automobile sector: "Within a few years, the global market will be dominated by a small number of very large firms and alliances" (2000: 18). Similarly, Rabellotti (2001: 27) and Dolan et al. (2000: 27) state similar trends for the higher segment of the footwear chain and of the horticulture commodity chain, respectively.

Box 3.1: Inclusion and exclusion in a global chain: The horticulture commodity chain in the United Kingdom, Zimbabwe and Kenya (Dolan et al., 1999)

In their analysis, Dolan et al. (1999) look at the dynamics of the commodity chain dealing with fresh fruits and vegetables and its impacts on exporters and producers in Africa. They observe an increasing concentration among retailers and supermarkets in most European countries. Compared to the 1980s, the vast majority of the market is now served by big supermarket chains competing aggressively with each other. This leads to an increasing specialization in marketing and in the organization of supply chains on their part. “The key driving process in the distribution of activities is the decision by the supermarkets to concentrate on their core retailing activities and to look for ways to reduce costs by distributing the risks of procurement, processing and quality to other actors in the chain” (ibid.: 20). Thus, the stake that importers (in the UK) and exporters (in Zimbabwe and Kenya) have in the chain is growing. This presents an opportunity for some developing countries to gain a share in the growing profits in the export of fresh vegetables and fruits.

Yet, the horticulture chain has demanding requirements and dynamics, making it very difficult and rather unlikely for small and medium growers in developing countries to be included. Factors such as quality and consistency, reliability of supply, cost, variety, value-added and innovation³ as well as compliance with hygiene standards are of major importance (ibid.: 11ff). “Paraphrasing the comments of a senior industry manager, UK customers are looking for good quality, wholesome, safe food, with a consistency of flavour, available when they require it at a competitive price” (1999: 10). In order to become a supplier to a UK supermarket, an exporter is expected to:

- have a high level of organizational capabilities to ensure product quality (via efficient management of the production processes and its supervision);
- be able to offer adequate post-harvest facilities (including further processing of the produce and cold chains⁴);
- be able to manage the logistics to ensure on-time delivery (which requires increasing competence in information technology⁵);
- profit from economies of scale to reduce costs; and
- work on product development together with the importers (ibid.: 25ff).

Large exporters are more apt to fulfil these requirements as they have more capital to invest in machinery for post-harvest facilities, they are in a better position to secure the logistics (such as forming joint ventures with airlines for rapid transport), to profit from economies of scale and to establish close ties with the European importers. Furthermore, there is a clear trend towards vertical integration in the chain that contributes to the crowding-out of small producers. The horticulture chain differs from other, manufacturing-based chains because agriculture faces uncertainties that do not exist in the latter (ibid.: 20). The damage caused by El Nino in 1998-99, for example, led to a reviewing of the sourcing strategies on part of the supermarkets. Since then, they have insisted more forcefully on enlarging their supplier base to reduce the risk of loss. This, in turn, increases the competitive pressure on the exporters, who realize they must set up their own farms in order to secure their position in the chain; i.e., to ensure continuity, cost and quality of supply. “All of these factors taken together weigh strongly against the survival of small and medium size exporters in the fresh-vegetable chain” (ibid.: 28).

³ For example, ready-to-eat mini carrots or papaya slices with lemon on a tray.

⁴ Cold chains refers to the capacity to keep the fruit or vegetable cooled at each stage of the transportation process, from the field to the supermarket shelf. For every hour delay in the removal of field heat, horticultural products lose eight hours of shelf life (Dolan et al., 1999: 25).

⁵ For example, for the development of computer-based product tracking systems.

The second factor influencing upgrading opportunities is the pattern of a chain, in other words, its chain governance. The governance of a chain is closely linked to the extent to which the buyer defines the product or the risk of supply chain failure which, in turn, influences the interest a buyer has in helping suppliers to upgrade. Thus, there is a link between the product type and the buyer's degree of control over suppliers. A distinction can be made between knowledge-intensive and standardized manufacturing or resource-based products and the resulting structure of the chain.

The more knowledge-intensive a product is, the more the buyer is dependent on highly specialized and reliable suppliers and, accordingly, the less willing the buyer will be to switch from one supplier to another solely on the basis of cost considerations. The more the non-price factors of a product matter, the more important the producers become for the buyers and the more is required from these producers in terms of quality standards and know-how. Under these conditions, buyers look for a cooperative-based relationship with suppliers and will try to contribute to the learning processes of their supplier base. The software and electronics industries provide relevant examples in this regard. The relationship between buyers and suppliers in these industries is characterized by mutual independence, not by dominance of the former, and therefore falls into what Humphrey and Schmitz classify as network-based chain governance (2000: 16f).

The nature of these chains in developed countries and developing countries differs, as most producers from the latter cannot live up to the standards and requirements imposed upon them by their buyers. Therefore, one would not usually consider networked-based chains when looking at electronics clusters in the developing world. Yet, in terms of learning opportunities, the importance of knowledge in these sectors seems to make investment in local suppliers economically rational even in developing countries, when combined with a critical mass of investment in a given location. Two examples of this type of upgrading opportunity include the electronics hardware cluster in Penang, Malaysia (Altenburg, 2000) and the installation of an Intel plant in Costa Rica (Gereffi, 2001).

Throughout the case studies analysed here, two additional factors can be identified that are central to the decision by the buyers to either make use of local enterprises, import inputs or convince their current and trusted suppliers to establish factories abroad: the distance from the market providing the inputs, and the competence-level of the local SMEs. In terms of distance from the market, the case of Intel in Mexico showed that it was not cost-effective to invest in a local supplier base because it is easy to import the needed inputs from nearby US plants (Altenburg and Tilman, 2000: 32). Concerning the competence of local SMEs, if these local firms are unable to fulfil required quality standards, it proves more cost-effective for buyers to convince their traditional suppliers to establish new factories near the buyer's plant abroad. Again, Mexico serves as an example: "Only a few Mexican SMEs are competitive in price as well as product quality and have sufficient marketing experience to access foreign markets. What is more, SMEs do not even play a major role as suppliers to the export industries. (...) Generally, large corporations either import almost all their required inputs or are vertically integrated"(Altenburg et al., 1998: 16). Thus, only if there is a certain distance from the input-providing market and an adequate competence level of the local

enterprises, can it be said that the buyer has an interest in transferring knowledge and fostering learning processes among their suppliers.

Learning from the global buyer is equally ambiguous for developing-country producers feeding into a chain for standardized manufacturing or resource-based products that can be produced by a whole variety of producers all over the world. For these products, there is an incentive for the buyer to source deliberately from several suppliers in order to reduce the risk of dependence on one single supplier. The arms-length, market-based relationship between buyers and suppliers of this kind does not imply know-how transfer.

For quasi-hierarchical value chains in which the buyer must retain more control over product quality and speed of delivery by suppliers, such as in the garment or footwear sector, firm size is a relevant factor for the degree of learning opportunities arising out of the links to global buyers. The buyers' interest in upgrading suppliers seems to decrease with the size of the firm. Schmitz (2000) refers to case studies of shoe clusters in India and Mexico and notes that closer cooperation with selected suppliers and subcontractors was found in the high-quality segments rather than in the low-quality ones. In the same vein, Altenburg points out "while the opportunities for technological learning are considerable in the segment of full-package suppliers, this is usually not the case in simple second- and third-tier garment assembly" (ibid.: 23). This can be explained by the fact that the larger full-package suppliers tend to have positions in the chains in which they take over more strategic functions, namely logistics such as the management of sub-production networks and certain marketing functions. They are responsible for the organization of several phases of the production process and, therefore, from the viewpoint of the buyers, deserve more attention in terms of investment in upgrading.

Finally, another way of looking at learning opportunities in chains is to analyse buyer strategies, independent from what kind of product is being produced. In doing this, Altenburg (2000) has identified characteristics of so called "developmental enterprises" which contribute decisively to the upgrading processes of developing-country producers. Box 3.2 shows a benevolent buyer in this regard.

Box 3.2: Characteristics of developmental enterprises

Developmental enterprises are those which, willingly or not, create new capabilities and business opportunities and induce technological learning among the local firms in their environment. Their main characteristics are:

- Investment which is driven by the search for strategic capabilities rather than for cheap natural resources, low wages or protected local markets;
- Investment to support in-house education and training of workers and managers (sometimes in excess of their own immediate needs) and participation in public-private partnerships to improve the skill base of their host region, thereby expanding the pool of technical and organizational knowledge available in their host country. Some of these enterprises spin off new innovative firms;
- A corporate culture that stimulates continuous innovation inside the company and in its environment;
- A corporate culture that favours the incorporation of local personnel in management and the adaptation of products and processes to local markets, norms and values;
- Demand for new inputs and services and creation of new capabilities, which generate new business opportunities in related fields which they cannot exploit by themselves. This increases the technological diversity of the local economy, deepens the inter-firm division of labour and thus fosters productivity growth in the environment of the developmental firms;
- Business models based on networking and inter-firm cooperation. Developmental enterprises often pursue comprehensive outsourcing strategies and act as system integrators which initiate and coordinate production networks;
- Cooperation with other enterprises based on a vision of synergetic long-term partnerships rather than short-term interests (e. g. exploitation of an oligopolistic market position or wage differentials);
- In the case of TNC affiliates, corporate decision-making is decentralized and local management is authorized to source independently, develop new products etc. Affiliates are provided with R&D facilities;
- Fast growing enterprises, with growth based on productivity dynamics rather than use of additional factors of production. If firms are able to reap innovation rents and have a relatively secure market position, there is more scope for long-term strategic partnerships than in companies involved in the short-term, cut-throat competition common to price-sensitive markets; and
- Commitment to the local business community and willingness to share their experiences as long as this does not jeopardize the company's core competences.

Source: Altenburg and Tilman, 2000: 32.

Box 3.2 points out several essential factors, which might render links between TNCs and SMEs into “virtuous linkages”. Notable is that non-price factors such as strategic capabilities, innovation, technological diversity, training of workers and managers, decentralized decision-making and growth based on productivity rather than the search for low wage-labour are the driving forces of buyer strategies that provide these opportunities for upgrading. Nevertheless, it is more likely to encounter this type of buyer in knowledge-intensive sectors. In turn, this means that benevolent buyers with these characteristics are not very likely to locate in a developing country or, if so, would encourage their own suppliers to move with them. Nonetheless, Box 3.2 presents the factors that are crucial for learning processes, establishing a sort of “ideal type” for linkages between small enterprises and TNCs.

Furthermore, special attention should be paid to the company's core competences which is the last point in Altenburg's list. This point conveys the possible limitations to

learning from global buyers, particularly in the case of small enterprises in developing countries where there is an imbalance of power between buyers and suppliers. To a large extent, if not entirely, it is the buyer who decides how far the upgrading of the other elements in the chain can go – and it is not very likely that they will actively help their suppliers transform into competitors by letting them upgrade into other functions such as design and marketing. Schmitz and Knorringa (2000) found empirical evidence for this dynamic in the footwear cluster in Sinos Valley, Brazil. Due to the threat of losing their main buyers, these Brazilian footwear producers refrained from upgrading in the area of design, which was perceived as the buyer's core competence.⁶

3.1 The division of labour within global value chains

The trends analysed above, involving concentration processes in the global economy, chain governance and buyers' strategies, affect two further issues which are relevant for assessing the degree to which SMEs in developing countries are able to profit from the potential advantages arising out of the insertion into a global chain: the division of labour between buyers and suppliers and the nature of competitiveness. The first refers to the increasing importance of so-called "intangible" assets, such as skills in marketing and design, and the danger of functional downgrading for smaller enterprises. The second deals with changes in the nature of competitiveness during the past decade. These two factors have a pivotal influence in defining which producers in developing countries can potentially profit from integration into a global chain and to what extent. This issue will be discussed in detail in the following section.

The division of labour between buyers and suppliers. It can be said that the concentration process going on in most sectors tends to deepen the division of higher- and lower-value-added activities between buyers and producers. The increasing competition between the few big buyers forces them to focus more exclusively on activities such as marketing and design, leaving less resources for the manufacturing-related parts of the production process. To a certain extent, this provides an opportunity for first-tier suppliers and export-agents to move up the chain by taking over functions such as managing production networks or product development and being supported in this by the buyers. In this way, more competitive enterprises can develop more direct contact with the end market, thereby learning more about consumer preferences and prevailing quality standards. However, these opportunities hold true only for larger firms, not small producers, as noted earlier. Smaller enterprises might end up being locked into a manufacturing position in the chain without any perspectives for upgrading, or being excluded from the chain altogether as shown in the example of the horticulture commodity chain.

Even for first-tier suppliers, the danger exists of being locked into a position wherein upgrading is only possible in the sphere of production, but not in those spheres that involve the highest value-added activities such as design and marketing (which constitute functional upgrading). Rabellotti (2001) labels these activities as "intangible", a term that amply defines their knowledge- and capital-intensive character, as well as the

⁶ For the complete case study see Schmitz, 1998.

fact that they are based upon a great degree of tacit knowledge. These characteristics are seldom found in developing countries or even among small producers in Europe.

The conclusion that can be drawn is that intangible activities are more and more becoming the major assets in the footwear industry. In the past, Italian industrial districts, such as Brenta, have built their excellence on a mix of skills in design, fashion and production but the small size of firms has limited their capability to face the massive investments required to control intangibles in the global market. These intangible activities have become the core competencies of a few large oligopolistic companies (ibid.: 27).

Closely related to what has been stated about the reluctance of buyers to help their suppliers to upgrade into activities that concern their core competences, the danger exists of functional downgrading where developing-country producers might actually be impeded by their global customers from learning and moving up the value chain.

Box 3.3 showcases Rabellotti's findings on garment clusters in Brenta, Italy. It illustrates the increasing importance of intangible assets and the resulting danger of functional downgrading due to the concentration of these activities in the hands of buyers. She also provides empirical evidence that it matters to which buyer a producer sources. The producers interviewed in the footwear cluster in Brenta, which are suppliers to big fashion firms, proved to be highly dependent on their clients, leaving the management of the overall production process to their buyers, whereas those selling to several smaller German retailers maintained their independence and kept most of the production process in their own hands.

Box 3.3: The danger of functional downgrading: A footwear cluster in Brenta, Italy

Rabellotti (2000) looks at two different chains, which are linked to the industrial district Riviera del Brenta, Italy. She examines how these two chains influence the local governance structure in Brenta and the countries where the lead firms emerge. She finds a trade-off between local and global linkages, therefore emphasizing the costs that insertion into global value chains may involve for clusters.

The district in Brenta has existed since 1900 and has proved successful in providing the market, mainly in Europe, with shoes for the high and medium-high segments until now. It is characterized by firms that chose to remain small and increasingly subcontract out specialized phases of the production process to lower-wage countries such as Romania.

Rabellotti interviewed 36 firms, reflecting the size distribution of the district, and asked entrepreneurs about changes in upgrading and cooperation at the local and global level via their relationships with buyers. The sample can be divided into three main groups, according to customers they serve: subcontractors for the fashion companies (comprising 22.5 per cent of the sample), firms operating in the "German chain" (comprising 17.5 per cent) and the remaining 60 per cent serving these two and other markets (ibid.: 26). In addition, six buyers belonging to some of the main German buying groups were interviewed during the international shoe fair in Dusseldorf.

Two types of chains were assessed in this study. First, the luxury high fashion chain was examined, consisting of fashion giants specializing in design and marketing and which subcontracted to enterprises in Brenta. Second, a chain of German buyer groups (independent retailers), that integrated a large number of Brenta's enterprises in their list of approved suppliers, was researched.

(Box 3.3: Continued)

In the first chain, 82 per cent of the firms worked as subcontractors for the fashion companies. The fashion firms showed a clear trend to directly select suppliers, sometimes through the acquisition of firms or setting up their own production facilities. Here, the study identified a process of downgrading in the local footwear firms, in the activities which are the typical core competencies of luxury fashion companies such as design, marketing, branding and sale. This is apparently the price paid by producers to supply the high fashion chain. Yet, the majority of the subcontracting firms also stated that the high fashion companies were helping them to introduce product innovation. In the same vein, all but two of the subcontracting firms labelled their relationships with the companies as cooperative rather than hierarchical (ibid.: 15).

Rabellotti mentions licence production as an alternative to insertion in the high fashion chain. However, as the fashion companies tend to expand their activities into the production sphere, they are not as willing as before to give out licences to local firms. As a reaction to these developments, the local entrepreneurial association has started to push Brenta's firms to invest in their relationships with the high fashion companies for increasing cooperation, "making themselves unavoidable partners and eventually acquiring licences" (ibid.: 16).

Concerning the chain of German buyers, Rabellotti finds rather stable relationships between the buyer groups and a selected set of firms. The most important field of cooperation is information exchange. Producers, retailers and buyers have many opportunities to meet at special events organized by the buying groups. She quotes one German retailer from the buyers groups, confirming the existence of a very cooperative spirit between them and Brenta firms: "With some of our Brenta suppliers, we have been growing together, we consider ourselves as family friends. My children come and stay in Brenta's firms to learn how a shoe is made and their children stay with us to learn how to sell a shoe in the German market" (ibid.: 20). In the same vein, 60 per cent of the sample firms said that their main buyers are helping them to introduce product innovation.

Yet, looking at performance indicators and innovation, the firms mainly selling to buyers fared worse than the rest of the sample. German buyers complained about a decrease in quality, delays and lengthy response times. Rabellotti traces this back to an underlying conflict with production for high fashion companies because backward suppliers tend to satisfy first of all their demand (2001: 21). Overall, she concludes that the Brenta producers maintain their independence in the German value chain because they can sell to many retailers within the chain. Furthermore, there is no downgrading process underway as the buying groups concentrate on sale-related activities whereas all the rest of the production process remains in the hands of the manufacturers.

One of the main findings in Rabellotti's analysis is the issue of the ongoing concentration processes in the global economy and the concomitant rising importance of the intangible aspects of a product (brand names, design, marketing). She states that, in future, a few global brands will dominate the market. This implies high entry barriers due to the high costs involved in establishing a brand name reputation in the market. For small enterprises, the investment requirements are beyond their means, at least as individual enterprises. Rabellotti draws the conclusion that this implies a specialization in rent-poor activities and the acceptance of functional downgrading "leaving leading firms (outside the local sphere) in the chain to control rent-rich activities" (2001:27). This, in turn, erodes the competitiveness and the independence of Brenta's producers.

The nature of competitiveness. The danger of downgrading relates directly to the second factor: the changing nature of competitiveness over the past decade. In the wake of increasing trade liberalization and globalization in the sense of the functional integration and coordination of internationally dispersed activities, competition is getting tighter and markets are more demanding. The traditional comparative advantage of developing countries – their abundant and cheap labour force – is decreasing in relevance, even for chains with resource-based or simple manufacturing products whereas non-price factors are becoming crucial.

Firms have to optimize four factors in order to be competitive: cost-efficiency, quality, variety, and responsiveness. The ability to offer a variety of products without sacrificing quality and efficiency is necessary to meet an increasingly differentiated demand. Responsiveness means the ability to react quickly to changes in demand and new opportunities (Altenburg et al., 1998: 9).

Thus, when striving for a better or longer-term secured position in a chain, a developing country producer is obliged to look at factors other than low labour costs as locational advantages. Given the relative power of buyers to choose among a broad number of potential suppliers and their tendency to push any activities not belonging to their core competencies back up the chain to their suppliers, it is imperative for the latter to raise their profile through improvements in non-price factors. An example from the horticulture chain reveals that the most viable way for producers and exporters to become indispensable to buyers is to develop new products and promote their production. “In a labour-intensive industry, a competitive strategy based on cost always runs the risk of being undermined by new, low-wage sources of supply. Product differentiation would seem to be a more secure route towards long-term survival and maintenance of margins” (ibid.: 34). These new requirements pose major challenges to firms, in particular to small enterprises. They involve the adoption of a whole range of new working practices and forms of industrial organization.

In the same vein, buyers certainly include these new competitive factors in the evaluation of their suppliers. For example, what buyers criticized most in an Indian cluster was its concentration on static and quantitative comparative advantages such as low wages and its unreliable product quality. Consequently, they predicted buying less from this cluster in the future (Schmitz and Knorringa, 2000). This shows that the days in which low-cost strategies could secure adequate markets for developing-country producers will come to an end and will cede the way for a world in which those that move up will need to be flexible, quick and reliable.

Box 3.4 The increasing relevance of non-price factors for competitiveness: Evidence from a four-country-case-study from the footwear sector

The analysis by Schmitz and Knorringa (2000) is based on clusters in Brazil, China, and India. They add Italy as the benchmark for world-class competitiveness in the shoe business. The focus of their research is the role of buyers in upgrading. The study is based on in-depth interviews with 12 buyers from Europe and the US, as well as interviews with participants of the world's largest shoe fair in Dusseldorf, Germany. They also refer to in-depth studies of footwear clusters in India (Knorringa, 1999), and Brazil (Schmitz, 1998, 1995). The study represents an interesting insight into the different linkage points that clusters in developing countries can have and how they are expected to develop in the future – in this case, from the vantage point of the global buyers. This analysis depicts the challenges facing producers in developing countries, in the wake of changing concepts of competitiveness.

Schmitz and Knorringa provide country profiles, reflecting the opinions of buyers on their experiences with suppliers as to where their greatest strengths were perceived (ibid.: 8f):

Italy: innovative design; small and high fashion orders;

Brazil: surpassed Italy in reliable product quality and speed of response, prompt delivery and flexibility in coping with changes in large orders; price is a weakness compared to other developing country suppliers; “middle-class” retail chains for not particularly innovative designs but quality branded products at rather higher price;

China: price is the principal reason for buyers to source from there; very cheap source of shoes with reliable product quality; massive standardized orders;

India: same as China, but it is stronger in coping with small orders (smaller size of factories); shoes which sell on price rather than quality; small to medium sized orders;

The buyers gave the following evaluations concerning the future development of the clusters in the developing countries (2000: 12):

Brazil: remains very weak in design capabilities due to the resistance the local suppliers face from their buyers in this respect; additionally, entirely external factors influence buyer's decisions on sourcing from this country: exchange rates and fashion; the devaluation of the Real in January 1999 made sourcing for the buyers more attractive whereas fashion lead to a preference for Chinese producers at the lower end and for Italian shoes at the upper end;

China: the fastest growing footwear exporter over the last 10 years; continued growth requires faster response and more flexibility in dealing with changes in large orders; exports to Europe are endangered due to the imposition of quotas on the part of the EU (on shoes with canvas or textile uppers from China); the US market remains very much focused on China;

India: most respondents expected to buy less from India; achieving reliable product quality was seen to be the most urgent task; shoe manufacturing and component manufacturing are seen to be very weak due to labour relations and skill levels which are “not in tune with the new quality and speed requirements” (ibid.: 12); The Indian case shows very clearly that a concentration on static and quantitative comparative advantages such as low wages is no longer sufficient to prosper in the world market. Factors such as quality, speed and flexibility are gaining more and more importance. This implies that strategies to enhance competitiveness can no longer be based on an approach which looks only at firm-level factors. To be able to comply with requirements such as speed and flexibility, the interaction between firms – be it vertical or horizontal – is crucial.

3.2 Impacts of integrating into global value chains: Who profits?

What happens once a producer or several producers have integrated into a global chain? Which firms integrate most successfully: the smaller or the bigger ones? Where do those who integrate or even upgrade successfully derive their greatest support – mainly from within the chain or do local dynamics and cooperation between local producers also play a role?

Two major tendencies are identified throughout the case studies that have been examined in this text. First, the growing heterogeneity in terms of size among producers participating in global value chains, and second, related to that, the increasing importance of vertical vis-à-vis horizontal linkages. The SMEs which become successfully part of a global chain grow closer to the international buyer and the demands of the chain than to those of the local environment. What kind of SMEs these are and what this implies for the difference in prospects of medium versus small or even smallest producers for upgrading through global chains is discussed below.

First, case studies assessing the effects of the link to global buyers on local producers emphasized that they all became more heterogeneous in terms of firm size and position in the chain. Larger firms, either local or from outside the cluster, take the lead in the upgrading efforts: “Dynamic clusters are rarely communities in which equals compete and co-operate. Instead, they are organized around larger lead firms in a ‘hub-and-spoke’ or ‘core-and-ring’ fashion” (Humphrey and Schmitz, 2000: 9). The lead firms are likely to be the larger firms and are the most eligible to become the first-tier suppliers⁷ of the foreign buyers. For smaller enterprises, this means that their upgrading perspectives become more closely linked to the lead firms and are shaped by the nature of their ties to these global buyers. If the lead firms feel closer to the latter than to their local network, the perspectives for upgrading into more strategic functions such as design and marketing are limited, because lead firms would try to avoid conflict with their main customers by not challenging their core competences (Humphrey and Schmitz, 2000). The emergence of lead firms might also mean that, in terms of the smaller enterprises’ dependence nothing much changes and the pressure that the buyers previously exerted on them is now exerted by the local leading firms. It might even mean a worsening of their situation. They might face the danger of functional downgrading. As noted earlier, Dolan et al. (1999) point out several factors that make large exporters in the horticulture chain much more apt to serve the big supermarket chains in the United Kingdom than the small producers. As a result, the latter are facing rising competition by the exporters who, increasingly, start to set up their own production facilities in order to be able to cope with the demanding quality and delivery-time requirements. Similarly, Bazan et al. (2001) in their analysis of the shoe cluster in Sinos Valley, Brazil, observe that the increasing heterogeneity within the producers in the developing country “is already causing firms to downgrade as in the case of one interviewed firm that used to sell for external markets through agents (and therefore was in charge, at least, for buying inputs) and now has

⁷ Those suppliers which are directly supplying to the buyer, contrary to the second-, third-, etc. tier suppliers which supply the suppliers in the chain, not the buyer itself.

become a subcontractor for another local footwear firm. From this position, the downgraded firm does not even deal with input suppliers anymore” (2001: 87).

Concerning the second dynamic unleashed by integration, which explores where the main thrust for upgrading comes from, all the case studies examined for this paper find an increase in intra-chain (vertical) linkages as a reaction to dynamics at the global level, in particular to increasing competitive pressures. A trade-off seems to be involved in the linkages between the local producers and the vertical linkages between firms integrated in the chain, where horizontal linkages to other firms that are neither clients nor suppliers, are perceived to be of less importance. “Comparing local governance in the past with our most recent findings, it appears that it is undergoing a process of crowding out between linkages within the cluster and links with actors outside it” (Rabellotti, 2001: 23). Only relationships with suppliers assume real importance. This development can be seen as a logical consequence of the nature of the new competitive pressures and the concomitant need to cooperate more closely in the vertical chain relationships in order to ensure quality, speed and flexibility.

Schmitz (2000) provides empirical evidence for these developments, as summarized in Box 3.5. His analysis of four case studies on the footwear sector in India, Brazil and Mexico and a surgical instrument cluster in Pakistan shows an increase in vertical cooperation that is in response to competitive pressures which, in turn, are linked to an increase in performance that proves crucial for dealing with crises. He provides evidence that learning does not take place between equals, but that the larger local firms are leaders for upgrading given their greater capacity for investment. All this points to the fact that learning and upgrading incentives are unleashed mainly from within the chain and from the bigger firms.

Box 3.5 *The increasing heterogeneity of developing country-clusters; a case from the footwear and surgical instruments sector*

Schmitz (2000) looks at four clusters to shed some light on the dynamics of clusters as a reaction to major challenges. He distinguishes between the external economies arising out of geographical proximity and joint action as a deliberate force to deal with crises. He suggests that “such joint action is particularly important when clusters confront major turning points,” one of which is the new competitive pressure developing-country producers are facing nowadays (2000: 324). The article examines whether the clusters have stepped-up local cooperation in response to new competitive pressures and whether enterprises which have increased cooperation are performing better than those which have not. Cooperation is defined as a process where firms start to cooperate *consciously*, by sharing equipment, forming sectoral associations to build horizontal cooperation, improving components by producers and users or forming an alliance along a chain in order to upgrade the entire chain via vertical cooperation (2000:327).

These four cases use a common methodology and contain comparable data. In all four clusters, random sample surveys have been undertaken, measuring changes in cooperation and performance during the four to five-year period following the onset of the crisis (2000: 328). These surveys were complemented by in-depth interviews with selected manufacturers, their suppliers and subcontractors, as well as with representatives of business associations and other local support institutions.

(Box 3.5: Continued)

Common characteristics of the four clusters include production for distant markets, and all faced major crises in the early to mid-1990s, which encouraged major increases in quality, flexibility and speed without a concomitant rise in price. No cluster went into decline due to the crisis. The main characteristics of each cluster and the key issues at stake are the following:

Pakistan (Nadvi, 1999): All inputs were sourced from local suppliers. The major challenge faced was the imposition of new quality standards after severe problems with US buyers. Restructuring resulted in increased exports, after local enterprises were certified for meeting international standards.

Brazil (Schmitz, 1999): All inputs were sourced from local suppliers. The major challenge faced was China's massive penetration of the US market. Restructuring resulted in major advances in speed and quality, but the cluster was merely able to retain its export levels.

Mexico (Rabellotti, 1999): Inputs were only partly sourced from local suppliers. The major challenge faced was increased competition due to import liberalization, which led to the closure of firms and widespread reorganization of processes in surviving firms. Restructuring resulted in increased quality and speed and devaluation of the Peso boosted exports as well as recover some of the lost internal market.

India (Knorringa, 1999): Almost no inputs were sourced from local suppliers. The major challenges faced were loss of sales to the former Soviet Union and increasing import liberalization. Restructuring resulted in increased product quality, but sales growth was uneven in different markets.

The main findings are that vertical cooperation increased substantially more than horizontal cooperation. The latter turned out to be weaker than expected but nonetheless relevant. The cases of some highly selective new initiatives of small groups of entrepreneurs which emerged in the four clusters trying to break into new markets are described. Nevertheless, the clearest finding of the four studies is that vertical bilateral cooperation increased decisively, in particular in that the backward linkages have been transformed.⁸ For factors such as quality and speed, close collaboration between suppliers and manufacturers was indispensable. "The demands of the new global competition can only be met if the whole chain responds. Better product quality and greater speed cannot be attained by enterprises individually" (2000: 334).

⁸ There was no evidence for an increase in multilateral vertical cooperation. "This arises when associations (or consortia) representing different stages in the local supply chain work together" (Schmitz, 2000: 331). Only the Brazilian cluster offered an example for an increase in this kind of cooperation. In this case, five associations (footwear manufacturers, tanners, component producers, equipment makers and export agents) set up a joint programme for upgrading the entire chain in order to cope with competitive pressure from China. The programme did not come to fruition, first, due to the resistance of the most influential entrepreneurs to participate for fear of upsetting the relationship with their main foreign buyer and, second, due to irresolvable conflicts arising over time with no mediation mechanisms in place.

4. **What is needed for successful upgrading?**

When looking at individual SME producers or clusters of producers that have been successful in either maintaining or even improving their position in a global chain, some questions arise: What made them successful? Is there a special set of capabilities required to succeed, or does it all depend on the type of chain and the resulting chain structure? The case studies examined in this paper highlight two factors that relate to chain dynamics. The first factor refers to the capabilities of the developing-country producers integrated into the chain; the second to the way they link to their foreign buyers. Apart from these factors internal to the dynamics between clusters and chains, there are external factors that might have a decisive influence on success or failure of a given cluster in a chain. These external factors are also discussed in detail in this section.

The capabilities of developing-country producers. In all the case studies analysed, two capabilities are crucial for reaching a higher-value added position in a chain: (1) the ability to manage production networks and, (2) skills in design and marketing. Referring to the former, the key is to be able to organize all the necessary inputs for a given product in the required quality and quantity and deliver it on time to the buyer. Gereffi (1999) describes this for the case of South East Asia, where – due to the ability of a few former trading houses – these countries succeeded in building up a sourcing network in the region, from various low-wage countries. This is labelled “triangle manufacturing” (ibid.: 60). These countries now occupy the highest positions in global chains, such as the electronics or software industry, or have even become buyers themselves. In the same vein, several other case studies uncovered a common pattern in most of the clusters dealing successfully with upgrading challenges, which consisted of an explicit strategy to open a new cluster which would perform the lower value-added parts of the production process.

Accordingly, Schmitz and Knorringa (2000) identify this as a new trajectory in their analysis. The spin-offs of the old clusters had “little history in industrial shoemaking, its enterprises were born large and they were able to export soon after birth” (2000: 15). In the case of a cluster in China, for example, it was Taiwanese joint ventures which coordinated the sourcing network and established the link to buyers in Europe and the US. The same process was identified where new, cheap-labour-based clusters were set up in Vietnam for the old Taiwanese clusters, in Romania for Italian ones and in North East Brazil for Southern Brazilian clusters. Often, these new clusters are set up exactly in those countries which pose the most dangerous competitive threat. “The choice of a new location is driven by labour costs and reasonable proximity for transporting components. The old Italian, Taiwanese and South Brazilian clusters provide the capital, the manufacturing capability, the connection with buyers and the components” (2000. 16).

A closer look needs to be taken at *which* enterprises from the clusters set up these new low-cost production sites. Two further studies find the pattern of triangle manufacturing, but these are the larger intermediaries in the local sphere, namely the export agents that outsource or internationalize their production sites. For the horticulture commodity chain, Dolan et al. (1999) identify the internationalization of growing

operations as a strategy that might prove important for the export agents in Africa to reduce their dependence on one big customer, and thereby improve their position in the chain. “This might be a means by which Kenyan exporters could profit from the diversification of sourcing in Africa rather than be threatened by it” (1999: 35). This same phenomenon is found in the shoe cluster in Sinos Valley in Brazil. Export agents there “are becoming international export agents and they are even establishing their own production plants in China via joint ventures with their final buyers or by buying plants themselves” (Bazan et al. 2001: 24). Thus, once again, it seems that larger enterprises prove the most apt and able to develop the capabilities required to move up the value chain.

Skills in design and marketing. These skills in design and marketing are by definition of utmost importance when looking at upgrading trajectories. Not surprisingly, most large buyers concentrate on these higher value-added areas and try to pass the manufacturing-related parts of the production process to other producers. Thus, it is crucial to look at where and how the successful producers developed skills in these fields. In this respect, the role of alternative chains as learning opportunities is an interesting one. Two case studies provide empirical evidence for the fact that domestic or regional chains might offer better learning opportunities than global ones. These case studies come from two countries with huge internal markets, which indicates that the findings cannot be generalized to all developing countries. Nonetheless, they provide insightful conclusions for learning trajectories.

The successful clusters in India (Tewari, 1999) and Brazil (Bazan et al. 2001) owe their comparatively more developed skills in design and marketing to the fact that they were serving a more demanding domestic market prior or simultaneous to entering the export sector. Due to the demanding nature and size of the domestic market, these clusters learned how to think in terms of quality and customer-orientation and how to serve the higher market segments. Thus, once these skills were acquired, these clusters were in less danger of being locked into a pure manufacturing position when starting to serve the export sector. Linked to this factor was the absence of dominance in the internal market, thereby, producers did not face any limitations in terms of governance. Rather, they acted in market-based relations, in which they were not dependent on one buyer. Therefore, they did not run the risk of upsetting their relations with such a buyer by upgrading into more strategic functions and becoming competitors of their main customers. Accordingly, Bazan et al. find that “functional upgrading efforts are more likely to happen within firms servicing the internal market, firms exporting to Latin America and firms exporting to Europe” (2001: 82).

Links to global buyers. This discussion leads us directly to the second factor central to successful upgrading trajectories of clusters in chains: the nature of links to global buyers. These linkages define the extent to which clusters are able to develop the above two main ingredients for upgrading. This dependence relates to how direct the producers’ contact to the end market is and how vulnerable the producer is in terms of sales concentration. With regard to contact with the end market, Bazan et al. state that the more knowledge the producer has about buyer’s preferences, the more equal is the relationship between them. If intermediary agencies are involved, such as export agents, the producer learns less about the end market in terms of quality requirements or

consumer preferences and, instead, has to rely on information from the agency. This reduces learning opportunities in terms of design and marketing, as it prevents producers from selling their own brands directly to new markets (2001: 35).

In terms of looking at the sales concentration, dependence increases when the number of buyers decreases. A producer who sells total output to one buyer does not have much independence. For example, in the footwear cluster in Brenta, Italy, Rabellotti finds that those enterprises that sell to many small retailers in Germany maintain their independence much more than those selling to big fashion companies. “In other words, they maintain many exit options. Furthermore, there is no conflict on functional specialization, with Brenta’s manufacturers taking care of the whole production cycle from design to production and the buying groups (the small retailers) concentrating their efforts on activities related with sales” (2001: 21f). Thus, by establishing links to several small buyers, the firms reduce the risk of functional downgrading and, therefore, enjoy more learning opportunities than their counterparts that sell to only a few big buyers. Bazan et al. consequently argue that “by using different channels to enter a value chain, firms can increase their number of clients in the final market and therefore reduce sales concentration” (2001: 30).

Box 4.1 outlines a case study that addresses all the above aspects and provides a detailed analysis of how the domestic market can serve as a learning curve. It also identifies which links to buyers are more conducive to local learning and upgrading than others in the knitwear cluster in Ludhiana, India (Tewari, 1999). Evidence is provided of all the factors discussed in the present section. Furthermore, her analysis looks in detail at the linking processes that took place at the local level. As a result, this study provides a rare attempt to explain how “local capital” emerges. The fact that the transferability of the Indian experience to other countries is limited – not every country has an enormous dynamic market in combination with a government active in industrial policy and export promotion – does not make her findings less insightful for the purposes of this paper.

Box 4.1 Learning from alternative chains and avoiding dependence on foreign buyers: The case of the knitwear cluster in Ludhiana, India

Tewari (1999) focuses on the factors that enabled this cluster to successfully handle two major crises, namely the loss of sales to the former Soviet Union market and the opening up of the domestic market towards imports. The cluster recovered rapidly after the collapse of its main market, the Soviet Union, in 1991, and succeeded in increasing exports of woolen knitwear by 42 per cent in 1992-93. This growth was accompanied by a shift in the direction of exports toward the more demanding markets of Europe and the US. The main questions explored are the explanations for this rapid recovery and the factors that enable some firms and clusters to respond to such crises and rise above them. The research findings are based on interviews with 110 firms in the region as well as government officials, business associations, traders and consultants during 1990, 1991-92 and 1998.

Two main factors contributed decisively to the smooth recovery of the clusters. First, the dual insertion of the local firms into the export sector *and* the domestic market support the argument that clustering and the advantages of co-location are not sufficient to explain the success of the cluster. One needs to look also at the market segments into which the cluster had been integrated. Second, the emergence of a particular relationship between the local firms in Ludhiana and foreign buyers in Europe and the cooperative dynamics in the region affected developments and the ability of clusters to react to challenges. The analysis is a thorough documentation of the successful upgrading and insertion of a local cluster into a global chain.

(Box 4.1: Continued)

The first main factor, that of dual insertion, reveals that not only export-oriented strategies but also the domestic market played a decisive role in preparing firms to face new competitive challenges. These firms served a domestic market characterized by higher requirements and demanding customers while at the same time serving the export market to the Soviet Union, consisting of large, standardized orders of lower quality garments. This market strategy helped firms to spread risks more broadly across two different markets and was a market-enlarging as well as a learning strategy (ibid.: 1660). The export sector enabled the firms, first, to accumulate capital and use it to diversify into the domestic market or other lines of production and, second, it helped them to learn how to produce large volumes, minimize wastage and reduce overheads. Firms developed an extensive system of local subcontracting and task-based specialization. This led to the development of other upstream and downstream industries and, eventually, to the deepening of the region's industrial structure.

The domestic sector was central in forcing this cluster to target quality and customer-orientation. "The point is that the competitive pressures emanating from the high end (and to some extent the middle segment) of the domestic market gave firms the incentives to think in more quality-conscious ways" (ibid.: 1661). Accordingly, these firms, above all the large to medium-sized ones, developed considerable capabilities in design and quality which later became the main anchor of support for its diversification into Western markets (ibid.: 1658). Furthermore, their dual insertion led to the development of two very different organizations of production: one for the large scale orders from the Soviet Union and one for the more sophisticated domestic market. These two different production systems "provided firms with the experience of developing complex management structures. It forced them to manage a diverse supplier base and organize complex distribution networks" (ibid.: 1661).

For the smaller enterprises, the domestic market represented an insurance mechanism to make up the losses faced in the Soviet market. In terms of cluster dynamics, this case provides empirical evidence for the importance of vertical cooperation. It was of crucial importance that the domestic market was not monopolized, but rather, consisted of several competitors, looking aggressively for market shares. These competitors, most of them based in Ludhiana, developed a set of relationships with their upstream suppliers, such as spinning mills, in the wake of the new challenges. "The evidence presented in this paper suggests however, that while horizontal ties between Ludhiana's knitwear firms may be weak, vertical cooperation among firms in the cluster is strong" (ibid.: 1666). Not to discard the relevance of horizontal cooperation, the inter-firm learning necessary for a rapid response to the new competitive challenges was greatly facilitated by the fact that all the critical actors were concentrated in Ludhiana. Furthermore, the existence of a critical mass of interlinked knitwear producers contributed to the rise of local upstream supplier industries (such as a knitting machinery or spinning industry), the emergence of a widespread distribution network, as well as the building up of local knowledge and a pool of highly skilled workers.

Thus, the analysis reveals, that the combination of clustering and learning through the insertion into a national value chain can prove a very successful means to move up an international value chain. "In the cases discussed here, (...) the intricate inter-firm relationships that the exporters developed through their stake in the domestic market helped build a set of capabilities among them that are likely to mitigate some of the risks and dependencies associated with being low-value suppliers in global commodity chains" (ibid.: 1662).

Second, the other main factor of success, namely the special relationship between international buyers and the Ludhiana cluster, provided essential linkages with small- and medium-sized buyers and a diversified production portfolio on the part of producers. "The above example suggests another path to learning: since tutelage is often a key element of the learning relationship between a small producer and an outside buyer, in building quality-conscious export ties, it may be important not to go for high volume and low cost at the start, but perhaps to begin small, and enter into relationships with smaller or medium-sized overseas firms that place small-sized orders but emphasize feedback and tutelage" (1999: 1664).

External factors that influence success or failure. In addition to these internal factors that influence the dynamics between value chains and clusters, there is a broad range of external factors that might determine the success and failure of a given cluster and its upgrading efforts. Although systematic discussion of these issues goes beyond the scope of this paper, some are highlighted here. First, the exchange rate: several of the successful clusters profited from an advantageous exchange rate while struggling with competitive pressure, so that their products enjoyed a sudden decrease in price in the international markets (for example, the case of Brazil in Schmitz and Knorringa, 2000). Second, the historical situation at the point when a cluster becomes part of a global chain seems to be relevant. Singapore profited from “first mover” advantage and from lower entry barriers for local suppliers due to less sophisticated production processes (Altenburg, 2000). Furthermore, trade policy may influence the strategies of the buyers in the garment sector in Mexico or Eastern Europe (Gereffi, 1999, Musiolek, 2001). Preferential access and reduced import tariffs might render it cost-effective to import all necessary inputs, and therefore, never develop a local supplier base.

5. Final considerations

This analysis shows that SMEs in developing countries face a range of obstacles that make it difficult for them to enter or move up a value chain. First, relating to firm size, the global economic environment is increasingly characterised by ever-fiercer competition where major global firms fight for market share and may become “manufacturers without factories” (Gereffi, 2000) that concentrate on the highest value added parts of the global value chain. For the manufacturing-related parts of the production process, they rely on carefully selected suppliers that ensure the smooth supply of inputs in the required quality and time, so these global firms can concentrate on their core competencies in design and marketing. These selected suppliers are frequently larger and better-off enterprises in the local environment, comprising the so-called first-tier suppliers. The investment requirements and the know-how needed for higher value-added activities are out of reach of the smaller enterprises in developing countries, that are in danger of being locked into the low value-added parts of the production processes or run the risk of functional downgrading. This is currently reflected in the emergence of so-called hub-and-spoke clusters in which the smaller firms are organized around the bigger lead firms.

Second, more promising learning opportunities in value chains bring with them higher entry barriers. The more attractive chains in terms of learning curves are those that involve the production of more knowledge-intensive products. These chains are characterized by what Humphrey and Schmitz (2000) classify as “network-based chains”, i.e. chains that involve a high degree of learning-by-interacting⁹ and a good deal of interest on the part of the buyer to invest in the supplier. Yet, requirements for an enterprise to become a supplier in these chains are high. “The barriers to entry for each export role are more demanding as one moves along the industrial upgrading trajectory” (Gereffi, 2000: 54). Accordingly, Humphrey and Schmitz state that the network-based chains are “both the most desirable and least likely scenario for most developing-country clusters” (2000: 25).

As a consequence, it is even more important for smaller producers in developing countries to keep pace with growing requirements in terms of quality standards, speed and flexibility. As nearly all national economies move towards free trade on a global scale, these producers face the fact that competitiveness is no longer bound to local, regional or national boundaries. Quoting the words of an Indian producer, “We are expected to produce at Third World prices to First World standards” (Schmitz, 2000: 324). These “First World standards” create new competitive pressures that undermine a comparative advantage based on low labour costs. The ability to manage production networks or develop skills in design and marketing are crucial for achieving a comparative advantage that is viable in the long run.

⁹ For example, “playing with open cards on costs and schedules, mutual visits (for more than just collection or delivery of inputs), learning about each other’s technical and organizational possibilities and limitations, making suggestions for improvement and, most importantly, not taking advantage of each other at difficult times” (Schmitz, 2000: 332).

Regarding long-term viability, Schurman's analysis (2001) of the development of the resource-based sectors in Chile offers a good example of the drawbacks of a strategy largely built upon low costs and unskilled, cheap labour. The investigation illustrates that this type of strategy runs the permanent risk of being underbid by new, ever lower-cost sources, therefore becoming part of a race to the bottom, as shown in Box 5.1.

Box 5.1 Price-based competitiveness – a long-run comparative advantage? The case of Chile

Schurman (2001) reviews the development of Chile's export sectors from 1975 onwards, with a special focus on working conditions. For the late 1980s and the 1990s, the study finds improving working conditions and rising real wages. This is traced to the emergence of secondary and tertiary industries around resource-based export industries (forestry, fishing and fruit). These industries, on one hand, provided an impetus for the development of secondary industries, involved in processing outputs, such as fish-meal, canned seafood or industrial wood products (2001: 17). On the other hand, there was an impetus for upstream investment in larger and better equipped fishing fleets. Similarly, tertiary industries emerged, supplying an array of services to these other sectors. "What emerged over time was a diverse set of natural-resource-based export-production complexes with dense linkages among firms engaged in extracting or cultivating resources, processing raw materials, providing goods and services, and conducting foreign trade" (ibid.).

These forward and backward linkages contributed to a rise in wages and working conditions due to the continued growth of the export sectors, which accompanied the upgrading processes and the move into higher value-added activities. The labour market became tight and employers had to offer better wages and working conditions to attract and keep a high-quality, reliable labour force. In addition to rising real wages, firms began offering off-season employment to retain their best employees. Yet, the kind of employment that grew most was unskilled labour (2001:19).

In the same vein, Schurman gives a rather sceptical evaluation of the prospects for a "high road" approach of good labour factors tied with the future development of Chile's export sectors. Several factors undermine the long-term viability of Chile's past successful strategy. First, production costs for firms have risen in recent years, bringing about a fall in profit rates. Second, international market competition has become fiercer as new suppliers have entered the market and existing producers have increased their output. Third, the appreciation of the peso has further deteriorated the competitiveness of Chilean products abroad (2001: 20f). Prospects to counterweight these trends by continued rapid growth or the expansion to new economic activities appear bleak. New investment may not be attracted to Chile, with profits down and the danger of oversupply in international markets. The opportunities to move into new activities remain limited for a resource-based strategy: "Yet there is only so much a firm can do to a salmon fillet, clam, or peach before it is ready to be eaten, and many are already doing it"(2001: 23).

This means that firms will likely turn their attention to cost reduction. For labour, this implies an end to high wages and good working conditions that were obtained in a labour-scarce context. Neither trade unions nor the State appear disposed to intervene in this regard.

Facing new competitive pressures requires thinking in terms of increases in efficiency, quality and speed through improved capital and labour productivity. This involves strategies that focus on learning, innovation, upgrading and the diversification of the sales channels rather than mere cost-based advantages. Left to the market, it is the

larger enterprises and even larger global buyers that are able to cope with these new competitive pressures. This scenario supports the argument that responding to major upgrading challenges requires greater local governance.

One strategy suggested and implemented by an increasing number of development agencies in order to foster this local governance is the promotion of cooperation between local firms in developing countries. Cooperation and the creation of local external economies, through promoting clustering and denser horizontal inter-firm relations, represent a useful means to counterbalance the above-analysed trends against smaller enterprises. Through firms consciously cooperating, or joining forces in business associations and other groupings, small enterprises can increase their access to the investment capital and bargaining power required for successful upgrading. “The argument is that clustering facilitates the mobilization of financial and human resources, that it breaks down investment into small riskable steps, that the enterprise of one creates a foothold for the other and that ladders are constructed which enable small enterprise to climb up and grow” (Schmitz, 1997: 21).

Case studies from SMEs in developing countries show that cooperation can, indeed, make a difference and serve as a way to move up the value chain. Yet, with regard to the nature of challenges faced by SMEs in developing countries, one needs to look beyond the firms as actors to examine the role of public and private institutions in fostering a business environment conducive to learning and continuous innovation. In some of the case studies, government policies in the field of export promotion have been mentioned (Tewari, 1999; Bazan et al., 2001). Other important fields of action are skills development and training, technological support and financing (Meyer-Stamer, 2001: 6). The role of institutions in these areas tends to be neglected in research on the integration of developing country SMEs into chains and therefore needs to be examined in greater detail in order to design feasible strategies of intervention.

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