

**Opportunities for SMEs in Developing Countries to  
Upgrade in a Global Economy**

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## **1 Introduction**

Over the past decade, one of the major policy prescriptions for SME development has centred on the benefits of clustering and the potential for small enterprises to achieve economies of scale and scope through co-operation at the local level. The considerable literature on industrial districts and small firm clusters has focused on the dynamism of small firms arising from linkages between firms within a local setting, which leads not only to economies of agglomeration, but also dense inter-firm networks and the development of local public and private institutional capabilities. Analyses drawing principally, but by no means exclusively, on the experiences of Italian industrial districts emphasised how development based principally on small firms could provide high incomes and sustainable growth through continuous upgrading and development. Two collections of papers published by the International Institute of Labour Studies (Pyke *et al.* 1990; Pyke and Sengenberger 1992) brought the experience of the Italian Industrial Districts to a wider audience of policymakers concerned with developing countries.

In the early 1990s, analysis and policy prescriptions for SME development based on the cluster concept were extended to developing countries. While clusters of small- and medium-sized enterprises in developing countries did not necessarily have all the characteristics attributed to the Italian industrial districts, it was certainly possible to find agglomerations of small firms, inter-firm co-operation and division of labour and local institutions that nurtured their development. The widespread application of the cluster perspective to the analysis of small firms in developing countries was evident in the review of the literature carried out by Nadvi and Schmitz (1994). This perspective became increasingly important for small enterprises development policies. These policies looked not only to reinforce clusters of manufacturing enterprises where they existed, but also sought actively to encourage co-operation between small firms. The *Proyectos de Fomento* programme and the small firm export development programme in Chile in the early 1990s were examples of policies based around promoting inter-firm collaboration and division of labour (Henriques 1992). Similarly, Tendler and Amorim (1996) described how the Brazilian small enterprise

development agency, SEBRAE, fostered collaboration between small firms in the furniture industry.

One of the most impressive features of the performance of the Italian industrial districts in the 1980s was their continuing prosperity in the face of increasing global competition. In the case of the footwear industry, for example, Italian producers not only thrived while shoe industries in other parts of Europe went into decline, but also contributed to the prosperity of the regions in which they were located. In the 1970s and 1980s, the regions of the "Third Italy" experienced greater rises in per capita income than other parts of the country (Rabellotti 1995). In spite of competing in the global economy, the districts were able to upgrade their capabilities sufficiently to maintain and improve the standard of living of those working in them.

The lessons from the Italian industrial districts have been applied to small enterprise promotion in developing countries. Nevertheless, more recent work on globalisation and the position of developing country producers within the global economy has cast doubt on the potential for sustained upgrading and income improvement in at least some developing countries clusters. The issue is not simply one of export orientation and increasing competition in the global economy. One of the measures of success of industrial districts in Europe has been the success and export markets. The key question concerns the position of developing country firms and clusters within particular global divisions of labour. Globalisation is not solely a question of increasing trade:

"'Internationalisation' refers simply to the increasing geographical spread of economic activities across national boundaries; as such it is not a new phenomenon. 'Globalisation' of economic activity is qualitatively different. It is a more advanced and complex form of internationalisation which implies a degree of functional integration between internationally dispersed economic activities" (Dicken 1992: 1).

For developing countries, in particular, the critical question is what role they might play in internationally-dispersed but functionally-integrated economic activities. This question has been highlighted in the literature on global value chains. In some global value chains, firms, and even clusters of firms, may undertake only a limited range of functions. Like subcontracting firms, they may work to designs provided for them, using materials which are sourced by other firms. But in this case the "other firms" might be located thousands of miles away. What implications would this have for both the potential for upgrading, and policies aimed at upgrading local productive systems? This is the question addressed in this paper.

The argument, therefore, is not about insertion *per se* into the global economy, but rather about the nature of this insertion. Similarly, it will not be argued that the development of global value chains undermines any possibility of local development policy. However, recognising the different ways in which small firm clusters in developing countries can be inserted into global value chains does have implications for the nature and scope of local development strategies.

This paper is divided into six sections. The second section discusses how analyses of Italian industrial districts view the linkage between the districts and the outside world. Section three considers how clusters in developing countries have been analysed, and

how their linkages to the global economy are different to those hypothesised in the industrial district literatures. This is followed by the application of global value chain analysis to linkages between clusters and global production and retail systems in section four. Section five considers how a recognition of value chain linkages might change the way policy for clusters in developing countries might be formulated.

## 2 Industrial districts and clusters

The literature on industrial districts has emphasised the close links between firms and entrepreneurs within geographically-bound spaces. Industrial districts are networks of small firms which are linked together through division of labour and specialisation in ways that lead to the enhancement of collective capabilities and economies of scale and scope. The competitive advantage of small firms within districts compared to isolated small firms, and possibly even to larger firms, lies in the dense networks of co-operation and competition within industrial districts. Local capabilities may also be enhanced by institutional support, such as the provision of real services (Brusco 1992: 16-18). These business linkages may be built on all reinforced by social identities and developed civic associations, which contribute to the construction of trust.

All this is familiar. However, for an analysis of the question of globalisation, three other, less visible, elements of the industrial district perspective need to be emphasised:

- ? Industrial districts are viewed as complete productive processes, producing product ready for end-users.
- ? The relationship with the market is arm's-length.
- ? Even as districts develop more complex divisions of labour with firms and localities elsewhere, the key parts of the overall production process remain within the district.

The idea that industrial districts are "complete" productive process, or "an almost complete productive process" (Beccatini and Rullani 1996: 164-65) is pervasive within the literature on Italian industrial districts. For example, Sengenberger and Pyke suggest that:

"The networks of industrial districts belong to the *same industrial sector*, in the sense of containing all the upstream and downstream processes and services going towards the manufacture of a family of products (such as ceramic goods or knitted clothes). In an industrial districts these networks tend to be locally related; i.e. an industrial districts is *geographically bounded*" (Sengenberger and Pyke 1992: 4, stress in original).

The same point is made equally forcefully by Brusco:

"As has already been stated, all these companies operate within a relatively small geographical area within the same vertically integrated sector. An industrial district that manufactures shoes, for example, comprises not only shoe producers but also those companies involved in the advertising of shoes,

those that produce shoe boxes, the manufacturers of glue, buttons, buckles, elastic bands, leathers and patent leathers and also of course the manufacturers of machines for producing shoes" (1992: 178).

The same perspective is also expressed by Brusco *et al.* (1996: 32), and they lament the loss of product design within the motorcycle cluster in Bologna. It is the completeness of the local production system, comprising both production processes and the knowledge systems that supports innovation within it that are essential for continuous upgrading and competitiveness.

The density and complexity of inter-relationships within the district is in sharp contrast to the depiction of relationships across the boundary of the district. These are either not discussed or are characterised in terms of arm's-length relationships. Once again, Brusco makes this point very clearly. Within industrial districts there are three basic types of firms: those that support productive activities, those that provide intermediate products for other firms within the district, and those that "manufacture the finished product and deliver it either to the retail system (as with consumer goods) or directly to the companies that use the product (as almost always occurs in the case of investment goods)" (Brusco 1992: 178).

The relatively weak linkages between the districts and their consumers is reflected in other analyses. For example, dei Ottati's treatment of adjustment strategies of firms in industrial districts in Tuscany describes how they have made changes to the products they produce, but she makes no reference to linkages with the people and firms that would buy these products (1996: 42-43). Similarly, the discussion of the role of sales consortia and the provision of export services focuses mainly on such issues as the provision of information about regulations in overseas markets or translation of tenders advertised in foreign countries (Brusco 1992:186-87). These are the types of services which facilitate arm's-length transactions. At most, real service providers might offer the kind of market intelligence that would allow firms in the district to tailor their products to the needs of particular markets. This is important. It means that the knowledge processes involved in interpreting the needs of the market and translating them into products are retained within the district itself.

In many respects, this view of industrial district relationships as internally complex but externally simple goes back to the perspective of Alfred Marshall:

"In his original formulation of the industrial district, Marshall envisioned a region where the business structure is comprised of small, locally owned firms that make investment and production decisions locally....Within the district, substantial trade is transacted between buyers and sellers, often entailing long-term contracts or commitments. Although Marshall did not explicitly say so, linkages and/or co-operation with firms outside the district is assumed to be minimal" (Markusen 1996: 297-299).

Finally, even when analyses of industrial districts recognise that the division of labour between firms inside and outside the district is becoming more complex, this is not held to substantially undermined the perspective outlined in the previous two points. It is argued that increasing subcontracting to firms in other parts of Italy and even to firms in other countries does not involve the loss of strategic activities: "this decentralisation is not necessarily a bad thing, providing that higher value adding and

strategically important activities in the production cycle are retained locally" (Pyke and Sengenberger 1996: 8).<sup>1</sup> Even increasing investment by multinational companies into industrial districts is viewed as unproblematic. Crestanello (1996: 76-77) argues that the arrival of multinational companies in the Montebelluna sports shoes district and the Schio-Thene machinery manufacturing district only served to strengthen their competitiveness and has not undermined their internal cohesion. This outcome is particularly likely when firms come into the cluster as a means of strengthening their knowledge base rather than to secure cheap labour.

Nevertheless, a number of commentators have argued that Italian industrial districts were experiencing important changes in their characteristics in the 1990s, in large part as a result of changing competitive conditions. Belussi's review (1999) of the district concludes that they had shifted towards core/ring or hub-and-spoke structures. She argues that, "Often present within local production systems are hierarchical enterprises or leading enterprises that have direct access to the market and which control internally the more strategic functions (R&D, marketing, logistics, quality control and so on)" (Belussi 1999: 731). In many cases, this shift seems to be related to the costs of reaching markets. Camagni and Rabellotti (1997), for example, suggest that Italian shoe clusters had become more hierarchical in the 1990s mainly due to increasing investment requirement in marketing.

This view of the continuing importance of Italian industrial districts as centres of innovation even when certain activities are located outside of the district is very clearly expressed by Amin and Thrift (1992). In their analysis of the Santa Croce leather cluster in Tuscany, they argue that:

"If the twin processes of internationalisation of the division of labour and vertical integration at the local level become the dominant trend, Santa Croce will lose its current integrity as a self-contained 'regional' economy. But, and this is the point, it will continue to remain a central node within the leather-tanning industry. Twenty years of Marshallian growth have made Santa Croce into a nerve centre of artisan ability, product and design innovation and commercial acumen within the international fashion-oriented leather goods filiere. This unrivalled expertise will guarantee survival as a centre of design and commercial excellence, even if the activities of the 'hand' are reduced or internalised" (Amin and Thrift 1992: 581).

If industrial districts do continue to display these characteristics, even if their internal structures continue to evolve, then they would be in a strong position to compete in global markets. Contained within the cluster is the capability for innovation and upgrading, which is essential to sustain incomes in the face of global competition. In particular, the fact that this capability is based on tacit knowledge, trust and hard-to-replicate institutional structures means that it is not available to many potential competitors. Globalisation makes this localised knowledge even more important. As Porter argues:

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<sup>1</sup> Similarly, dei Ottati argues that while the divisions of labour developing in the 1990s involve the loss of lower value-added jobs, this is frequently compensated by the creation of jobs in areas such as design and marketing (dei Ottati 1996: 48-49).

"In theory, more open global markets and faster transportation and communication should diminish the role of location in competition. After all, anything that can be efficiently sourced from a distance through global markets and corporate networks is available to any company and therefore is essentially nullified as a source of competitive advantage... the enduring competitive advantages in a global economy lie increasingly in local things - knowledge, relationships, motivation - that distant rivals cannot match" (Porter 1998: 77-78).

The same type of reasoning leads Maskell and Malmberg (1999: 172) to argue that because codifiable or tradable knowledge is increasingly available across the globe, the only sustainable form of competitive advantage lies in non-tradable and non-codifiable knowledge, often referred to as tacit knowledge.

Local productive systems do not eschew codified knowledge. On the contrary, the competitive advantages of localities are constructed around their ability to combine the two types of knowledges. Industrial districts, like other localities, need to "engage in dialogue and trade with the system of codified knowledge and thus with the latest breakthroughs of the world scientific and technical community" (Brusco 1996: 153).

This notion of the position of the industrial district in the global economy is similar in some respects to the analyses of regions in the global economy put forward by authors such as Scott (1998). Within a global economy characterised by increasing trade and diminishing communication costs, "localised production complexes" or "neo-Marshallian nodes" become more rather than less important. They arise from the persistence of tacit knowledge, knowledge spillovers and untraded dependencies. While codifiable knowledge can be applied at far-flung locations around the world, key centres will play the dominant role in organising the global economy, and as a result take a disproportionate share of the benefits.

This emphasis on the importance of the local within global very much focuses on the central nodes within particular global production networks. However, to the extent that these central nodes become locations for the organisation of much broader production networks, created in part by the dispersion of what Amin and Thrift call "activities of the hand", or low value-added activities, then what are the prospects for the firms and clusters at the periphery of these systems? Will they be able to increase value-added? How do they relate to the global economy, and with what consequences for sustainable income growth?

These questions can also be applied to some Italian industrial districts. Recent research by Rabellotti (2001) on shoe producers in the Brenta region has revealed further significant shifts, beyond those discussed above. By 2000, a significant proportion of the producers had begun to supply shoes to international fashion chains. The shoes were part of a package of fashion accessories (handbags, belts, shoes, etc.) marketed globally by international high-fashion brand names such as Prada. Unlike shoes produced for footwear retail chains, these fashion products were not designed within the cluster. Their design had shifted to global design centres, such as Milan. What would be the consequences for the long-term growth of the Brenta footwear cluster were this trend to become the dominant one?

### 3 Developing country clusters

In the previous section it has been argued that the conception of the industrial district taken from the European, mainly Italian, literature sees the linkage with the global economy primarily in terms of arm's-length relationships between end-users and a cluster of firms that contains both key manufacturing activities and the information-generating and information-processing capabilities needed to sustain innovation and competitiveness. This is one particular way in which clusters of firms could be linked to the global economy. In this section, it will be argued that analyses of clusters of firms in developing countries have focused on question such as the number of firms and the division of labour between them and failed to recognise important differences in the extent to which these clusters are "complete" and in the linkages they have with the global economy.

In the course of the 1990s many studies of industrial clusters in developing countries were undertaken. While these clusters did not have all the characteristics of Italian industrial districts - in particular, they were unlikely to have a long history of municipal autonomy - they appeared to possess many of the characteristics of the Italian districts. Studies found clusters of firms operating in the same industrial segment and, within this, specialising in particular tasks and developing complex divisions of labour. Schmitz's use of the terms "cluster" and "collective efficiency" (Schmitz 1995a) was a recognition of the need to abstract from specificity of the Italian cases in order to isolate the root causes of the competitive advantage of the districts and to judge which aspects of their make-up could be seen in other locations. This abstraction also led to the specification of policies that could reinforce the competitive advantages of existing districts or promote inter-firm networks where they did not already exist.

Many industrial clusters in developing countries are primarily oriented towards the domestic market. Examples of such clusters include the woodworking enterprises in Kenya and Zimbabwe studied by Sverrisson (1992). Similarly, the large cluster of footwear producers in the Indian city of Agra studied by Knorrinda (1995) produced predominantly for the domestic market. However, some of the most spectacular stories of innovation and growth seen in developing country clusters have involved articulation with the global economy. In some cases, the clusters have been predominantly export-oriented. This is the case of the footwear cluster in the Sinos Valley in the south of Brazil studied extensively by Schmitz (1995b). An even higher level of export orientation is visible in the surgical instruments cluster in Pakistan studied by Nadvi (1999; 1996). In other cases, the integration of manufacturing clusters into the global economy occurs through articulation with foreign machinery and input producers. This is the case for the ceramic tile cluster in Santa Catarina in Brazil (Meyer-Stamer *et al.* 2001).

How do such clusters fare in the global economy? In particular, does it matter, for example, that these clusters display neither "completeness" nor arm's-length relationships with their buyers. In the case of the ceramic tile industry, for example, the key areas of innovation are in equipment and glazing, and these are either imported into Brazil or produced by Spanish-owned firms operating within the Brazilian cluster? Similarly, Brazilian shoe manufacturers built up very successful export businesses by making shoes to designs supplied by export agents or by large retailers in the USA. Furthermore, the shoe manufacturers appeared to have close

relationships with, and a high level of transactional dependence<sup>2</sup> on, a small number of powerful global footwear buyers.

The industrial district literature did not provide those analysing developing countries with the tools to consider these questions. While they were recognised empirically, they were not considered analytically. This problem is seen clearly in the work of Schmitz, the leading writer on industrial clusters in developing countries.

In Schmitz's more analytical work, where he defines the concept of collective efficiency and explores its implications for industrial development and industry policy in developing countries, the focus is firmly on the dynamics of intra-cluster relationships. Schmitz does not apply the Italian industrial district model blindly. On the contrary, on the basis of his previous analyses of industrial districts in other parts of Europe (Schmitz and Musyck 1994; Schmitz 1992), he shows clear awareness of issues such as the variety of forms that can be taken by industrial clusters (groupings of "equal " small firms, the hub-and-spoke configurations, etc.<sup>3</sup>) and considerable size differentiation amongst firms (Schmitz 1995a: 538). He is also aware of the role played by export agents in the Sinos Valley shoe cluster. This is cited as one of the specialist services that tend to agglomerate around clusters of producers, and the 70 export agents in the cluster are also included in the category of producers services (Schmitz 1995a: 533 and 544). In other words, the export link is not seen as a problem. There are difficulties in export markets, but these arise from competition from other countries.. Most of the paper is focused on the internal organisation of the cluster, in just the same way as analyses of the Italian industrial districts. The case study material focuses on vertical co-operation within the cluster, local rivalries, local institutions and socio-cultural identity.

In a more detailed, empirical analysis of the situation of the Sinos Valley shoe cluster, written at more or less the same time as the collective efficiency paper, Schmitz provides a more detailed description of the role of export agents, with a clear indication of the limits to the activities carried out within the cluster. This description is worth quoting at length:

"These export agents were not just buyers. In addition to negotiating with the US retail chains on the one hand and the Brazilian producers on the other they carried out the following functions: they studied the market which necessitated visiting shoe shops in the United States and Europe as well as international shoe fairs. They developed models which required setting up model shops in the Valley to produce samples. They inspected product quality and production schedules on site; they providing technical assistance; they organised the transport and payment arrangements. All this required building substantial technical departments for which they initially recruited experienced personnel from the United States and Europe but then pirated skilled workers from the local manufacturers" (Schmitz 1995b: 14).

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<sup>2</sup> Transactional dependence refers to the extent to which producers are dependent on a small number buyers for a significant proportion of their sales.

<sup>3</sup> For a discussion of the various forms that can be taken by clusters of firms, see Markusen (1996).

In this case, certain important activities in shoe design, production and delivery are either not located in the cluster at all - such as the interpretation of market trends and the creation of designs from which the models are derived - or are under the control of traders. These traders may have interests in other countries, or be directly subordinate to the retailers, who also source from multiple countries. In this sense, the cluster is not "complete".

Later in the same paper, Schmitz notes that further research is required on traders, and it is suggested that what traders do has significant consequences for the development of the cluster: "Ongoing research by Nery dos Santos suggest that the manufacturers accommodated themselves to this division of labour with the export agents and invested little in product development and marketing" (Schmitz 1995b: 24).

The full consequences of this problem come out more clearly in a later paper by Schmitz. When Chinese producers undercut Brazilian products in the US market in the early 1990s, Brazilian producers were faced with sharply declining prices for their products. The need to upgrade and compete in more sophisticated market segments was clear, but the most important firms in the locality had neglected the areas of design and marketing because of their strong links to traders and global buyers. Even worse, these large and influential companies did not support a strategy of raising Brazil's image in the world footwear markets and of strengthening design capabilities developed by the local business association. The largest export manufacturers opposed them because they feared that advancing into design and marketing would encroach on the core competence of their main buyer who accounted for over 80 per cent of their output and close to 40 per cent of the cluster's output. The proposals were not put into practice.

The cluster's export link had, therefore, two important consequences. Firstly, the cluster as a whole was weak on design. In the late 1990s global buyers in the US and Europe rated the cluster's production abilities (production quality, speed of response, punctuality, flexibility) as matching the best in the world (i.e. Italy), but on innovative design it lagged far behind the Italians (Schmitz and Knorringa 2000). Secondly, the strong relationships with a small number of large customers appears to have prevented the cluster from upgrading by developing new markets and reinforcing cluster design capabilities.

It is not being suggested here that all developing countries clusters have the characteristics or the problems of the Sinos Valley shoe cluster, as outlined by Schmitz. It is being suggested that clusters of producers in developing countries may be inserted into the global economy in a variety of ways, and that this has significant consequences for the development of these clusters.

This is an issue that concerns clusters in Italy, too. Work by Rabellotti (2001) on the footwear cluster in Brenta reveals new linkages being developed as a result of the development of a global fashion industry which goes beyond particular fashion items and produce complete package of clothes and accessories. Some of the firms in the Brenta cluster are now producing shoes to designs provided by global fashion companies such as Gucci and Prada. While design capabilities have not been lost in Italy as a whole, they are shifting out of the cluster and towards design centres such as Milan.

Even without design there are advantages to clustering. Firms in both Brenta and the Sinos Valley continue to benefit from the many advantages of being located closely together in large numbers. These included specialised suppliers, labour and buyers, as well as the institutional fabric of training institutions, technical centres, etc. These continue to matter. However, the long run competitiveness of clusters and the ability to sustain relatively high incomes depends upon continuing high barriers to entry that prevent them being undercut by new entrants to global markets. It has been argued that the most enduring barriers to entry lie in the realm of tacit knowledge which cannot be transferred easily around the world. The ease with which at least some types of footwear production can be transplanted to new areas, including China, indicates that the barriers to entry in production may be relatively low. Tacit knowledge is more likely to reside in development of new products or processes.<sup>4</sup>

#### **4 Local clusters in global value chains**

The position of clusters within global divisions of labour needs to be analysed. Global value chain perspective provides some tools for this analysis. The idea that the production of particular products arises from a number of different activities linked together in a chain is not new. Even in the 1990s, the chain analogy has been used by various writers, such as Porter (1990), with his concepts of value chain and value system, Ruigrok and van Tulder (1995) with the concept of industrial complexes, and Wilkinson (1995) with the concept of productive system. While sharing the common idea of the chain, they vary significantly:

- ? What does the chain consist of? Material transformation, or also activities such as design and retail?
- ? How are the different activities in the chain co-ordinated? This is the issue of chain governance.
- ? What are considered to be the critical contextual factors which affect how chains function?

The distinctive contribution of global value chain analysis, as developed initially by Gereffi (1994) and developed further by a group of researchers who met together in Bellagio in September 2000,<sup>5</sup> lies in three main points. Firstly, it analyses how these dispersed production and distribution systems are co-ordinated. In particular, it suggests that in addition to co-ordination through market mechanisms and through vertical integration (the firm), global markets are increasingly co-ordinated through the formation of networks of firms. This sometimes involves complex co-ordination of activities (product design, process specifications and timing) between firms with no ownership links. The development of divisions of labour within these networks means that firms are frequently neither "complete" nor producing finish products.

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<sup>4</sup> Clearly, this is a statement which cannot be generalised across sectors. It is probably most applicable to most labour-intensive, consumer non-durable goods sectors. There are many areas where the development and use of technology and process engineering skills are hard to imitate and transfer. However, developing country firms, and in particular small enterprises, are likely to enter the areas where tacit knowledge is limited.

<sup>5</sup> A set of papers produced by this group of global value chain researchers was published in July 2001 (Gereffi and Kaplinsky 2001).

Secondly, global value chain analysis recognises and emphasises the role played by non-manufacturing companies - designers, retailers and branders - in the construction of globally-dispersed production and distribution systems. It distinguishes between different types of value chain governance and examines their consequences for knowledge flows, access to developed country markets and upgrading opportunities. Thirdly, the analysis considers the different ways in which firms within global value chains can upgrade.

Some graphic examples of globally-distributed production and marketing systems demonstrate how large retail and branded companies such as Nike and the The Gap in clothing and footwear and supermarkets within the food industry<sup>6</sup> can exercise a decisive influence over global value chains without taking direct control of large parts of the production process and its associated logistics. However, it is important to recognise that global value chains display a variety of different "governance structures" (or forms of co-ordination). In fact, the way in which the activities at different points in the chain are co-ordinated varies considerably, not only between chains but also at different points in the same chain.

What linkages might exist between local firms and the global economy? The Italian industrial district literature discussed in Section 2 emphasises two main linkages: arm's-length market relationships and vertical integration (established through FDI in clusters). The characteristics of these two types of relationship are outlined in Figure 1. Arm's-length market relationships occur when products are standardised, or easily customised to particular buyer requirements, or designed by the producer without co-ordination with specific buyers. The purchasers of such products are "design takers": the design of the product is in the hands of the producer. In the case of finished products destined for consumers, the agents buying these products from clusters are most likely to be wholesalers, traders selling to a variety of customers and retailers (particularly small retailers or consortia of small retailers). By contrast, vertical integration involves direct co-ordination of activities within the firm. The most obvious form of this is through foreign direct investment into clusters. However, firms in developing countries may invest into developed country clusters, either in order to guarantee their position in these markets or in order to gain access to the knowledge base of other clusters. For example, some companies in the Sialkot surgical instruments cluster have established trading firms in the Tuttlingen cluster in order to facilitate access to German and global markets (Nadvi and Halder 2001).

However, trade is also co-ordinated through networks of legally independent firms using a variety of transactional relationships. Thirty years ago, Richardson (1972: 883) referred to this as "the dense network of co-operation and affiliation by which firms are inter-related". Global value chain research suggests that such relationships can increasingly be found in international trade. Figure 1 distinguishes two particular forms of such relationships. On the one hand, network relationships involve greater interaction between buyers and sellers, usually based on the sharing of competences,<sup>7</sup>

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<sup>6</sup> For the case of the clothing and footwear industry, see Gereffi (1999), and for the influence of the UK supermarkets on production and trade of fresh fruit and vegetables, see Dolan and Humphrey (2000).

<sup>7</sup> For a discussion of the role of complementary competences in the creation of network relationships between firms, see Richardson (1972) and Palpacuer (2000).

which allows a product to be manufactured which neither company alone would have the ability to design and/or make. In this case, cluster firms will tend to have long-term, complex relationships with the network partner. On the other hand, relationships between firms can be asymmetric, with one party to the transaction playing a dominant role, defining both the product and process to be produced.<sup>8</sup> These types of relationship are referred to as "quasi-hierarchical" in order to indicate the high level of control exercised within the chain. One of the characteristics of quasi-hierarchical relationships is that the buyer may exercise power at various points along the chain, and not only with its direct suppliers. A clear example of this would be the role of UK supermarkets in determining how fresh produce is grown and processed on African farms (Dolan and Humphrey 2000). The supermarkets purchase products from UK importers, but they specify how products are to be produced and processed and develop traceability procedures and monitoring systems that extend right back to the growers. Inevitably, the buyers capable of exercising this level of control tend to be large companies.

**Figure 1: Different linkages between clusters and global economy**

<b>Value chain linkage</b>
<b>Arm's-length market relationships</b> : describes 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.
<b>Network relationships</b> : occur when the supplier and buyer combine 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 it also arises when firms focus on their core competences and outsource important activities to suppliers.
<b>Quasi-hierarchical relationships</b> : 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.
<b>Hierarchical relationships</b> : occur, firstly, 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).

But why would companies want to develop quasi-hierarchical relationships? Such relationships are costly, requiring asset-specific investments in relationships with particular suppliers. Such investment also increases the rigidity of supply chains by raising the costs of switching suppliers. Nevertheless, many instances of such chain governance are evident.

Humphrey and Schmitz (2000) argue that buyer specification of product design is most likely to arise when the buyer has a better understanding of the demands of the market than the supplier. This requires explicit co-ordination of the value chain if the response to these market demands requires customised products and/or the use of transaction-specific resources. The main reason for controlling processes - the way things are made - relates to risk. Buyers specify and enforce parameters when there

<sup>8</sup> Usually, this is the buyer, but in situations such as franchising it is the seller which plays this role.

are 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.

Global value chain analysis offers a number of reasons why quasi-hierarchical relationships are a particular feature of the insertion of developing country firms into the contemporary global economy:

- ? Product differentiation and innovation are becoming an increasingly important sources of competitive advantage. Insofar as they require customised, complex exchanges between buyers and suppliers, they lead to network or quasi-hierarchical forms of governance. One driver for this tendency is the increasing importance of global buyers (Schmitz and Knorrninga 2000). As a consequence of concentration in the retail sector, powerful global buyers have become big players in global markets. Frequently, these buyers focus on retail but play an important role in product development and branding. Their use of product differentiation and innovation in the pursuit of competitive advantage means that they must actively managed parts of their supply chains.<sup>9</sup>
- ? Final product markets in developed countries are characterised by an increasing emphasis on safety, labour and environmental standards. This requires greater monitoring and supervision of production processes. Pressure on retailers more generally to meet labour and environmental standards has been increasing. This pressure has come from consumer groups NGOs and governments.
- ? In some sectors, there is a degree of task complexity and/or time pressure that requires co-ordination of tasks across firms. This increases as competition on the basis of product differentiation increases, and it is also reinforced by the development of more exclusive supply relationships. If products are increasingly customised to particular product or process specifications, then the customer cannot by suppliers on the open market or from the stocks of intermediaries.
- ? In the pursuit of low-cost inputs in labour-intensive sector such as garments, global buyers are frequently looking to develop new sources of supply. In order to introduce these new sources, while at the same time meeting quality requirements and labour and environmental standards, active management of the supply chain is needed. The new supply relationships frequently introduce buyers to markets that have higher process standards, and their facilities need to be upgraded (Keesing and Lall 1992). Furthermore, the new suppliers are likely to have limited knowledge of market demands in distant and fast-moving markets characterised by innovation and product differentiation, as would be the case in fashion segments of the garments industry, for example. As Hobday has argued, the ‘latecomer’ firm to the global economy is “dislocated from the mainstream international markets it wishes to supply” (Hobday 1995: 34).

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<sup>9</sup> Sturgeon (2001: 12) distinguishes between a value chain, that results in a product's end-use (including retailing) and the supply chain, which is the set of activities producing the inputs into a particular stage of the value chain.

The recognition of different forms of governance in global value chains has important implications for the question of upgrading. If developing country producers are inserted into value chains with a variety of governance structures, how might this affect their ability to move into higher value-added activities, both positively and negatively? If production in one country is part of a globally dispersed production and distribution network, what are the implications for national policies for enhancing competitiveness and supporting enterprise development (in agriculture and services as well as industry)? These issues are discussed in the following section.

## **5 Developing policies for upgrading in global value chains**

What are the implications for policy development of a recognition that developing country clusters are integrated into the global economy in a variety of ways? A recognition of the ways in which firms (inside and outside of clusters) can be inserted into global value chains has an impact on the formulation of strategies for private sector development. While a number of these areas of policy have, in the past, been referred to as "industry policy", it is important to recognise both that many policies apply to agriculture and service export as well, and that a wide range of policies have an impact on private sector, export-oriented development.

For different areas of policy are considered in this Section: the overall goal of an export development strategy, generic policies for promoting private sector development and exports, the targeting of support for exporters and firm-level growth and export strategies.

### *5.1 The overall goal of export development*

The policy tools used for promoting industrial development and competitiveness in developing countries have changed substantially in the past 25 years. Import substitution has given way to export promotion. Subsidies and protection aimed at promoting particular industries have largely given way to generic policies aimed at supporting competitiveness through human resource development, access to credit, business development services, etc. TRIMs (Trade-Related Investment Measures) are being phased out.

Nevertheless, the overall goal of much industry policy remains the same as before. In the terms of the discussion on industrial districts in Section 2, the overall goal is "completeness". This is represented by the passage through different stages of development en route to the formation of firms that are capable of selling their own branded products in global markets. Wortzel and Wortzel, for example, argue that there are "five identifiable stages of exporting through which a firm could pass" (1981: 51). The first stage is product assembly based on cheap labour promoted by importers looking for low-cost sites for assembly. Firms might then move through a series of stages, acquiring manufacturing, design, marketing and branding capabilities until they are able to design and market products with their own brand-name. For many writers, this is the path which has been taken by leading Korean firms such as Samsung, Hyundai and LG. The shift towards product design, branding and investment in research and development moves firms, industries and national economies into higher value-added activities and moves them away from market segments which are prone to competition from low-wage producers.

It is increasingly recognised that this is not the only strategy for development of manufacturing capability. Indeed, some leading companies in Taiwan, for example, have eschewed the pursuit of own-brand production and specialised in the provision of design, manufacturing and logistics skills to leading global companies. This is the lesson of firms working as contract manufacturers in the electronics industry, as discussed by Lee and Chen (2000) and by Sturgeon and Lee (2001). Lee and Chen show how contract manufacturers came to acquire a broader range of functions, starting with simple assembly of parts provided by the customer and moving to developing process technology improvements, contributing detail design work and taking responsibility for sourcing inputs. They have, however, been much more circumspect about developing their own brands. Furthermore, firms working in certain labour-intensive industries in Taiwan, such as footwear and garments, have increasingly moved out of manufacturing and concentrated on organising global value chains by bringing together buyers and producers and providing services such as design capacity, quality management and logistics (Gereffi 1994; Hsing 1999).

Global value chain analysis highlights the importance of developing industries which, firstly, create hard-to-replicate capabilities which provide less ephemeral competitive advantage, and secondly, manage their linkages with other parts of the global economy so that the sum of the activities undertaken along the chain is competitive. In other words, the goal of export-oriented economic development is not to create "complete" industries, but rather to develop and participate in the higher value-added segments of globally competitive value chains.<sup>10</sup>

## 5.2 *Promoting integration into global value chains: national policies*

What are the implications of the global value chain perspective for the formulation of policies directed to the overall competitiveness of the economy? Seven areas can be considered:

1. Transport infrastructure development. To the extent that global production and distribution systems become more integrated, the reliability and efficiency of the transport infrastructure becomes more important. The development of just-in-time supply systems is one aspect of this. The second aspect is that the development of network or quasi-hierarchical relationships within value chains narrows the supply base of the purchasing company and makes it difficult or impossible for that company to find alternative sources of supply. Therefore, continuity of supply becomes ever more important.
2. Access to imported inputs. Keesing and Lall (1992: 179) have argued that in globally-dispersed production systems, "Producing what is sought calls in each case for a vector of inputs meeting exacting quality requirements and specifications, since such exports are only saleable as complete packages meeting all buyer specifications (for example packaging, labels, printed instructions, exterior printing, and packing materials, as well as colours and raw materials and

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<sup>10</sup> It is important to note that such development strategies can embrace agricultural and service activities, as well as manufacturing, and that export-oriented development strategies are only one part of broader sectoral and national development goals. The emphasis here on global value chains and export-oriented development is not meant in any sense to downplay the importance of local, regional and national markets.

finishes and technical specifications)." The consequence of this is that ease of access to imports becomes an essential part of export competitiveness. This ease of access involves not only low-tariff or duty-free imports, but also the physical and bureaucratic infrastructure to enable goods to be imported quickly.

3. Removing the bias against exports. When producers supply in arm's-length market relations or through wholesale markets (in the case of agriculture), continuity of supply is not a prime concern. When supply chains are more tightly structured continuity of supply, or at least predictability of supply, is much more important to global buyers. This is seen with particular clarity in the value chains for fresh fruit and vegetables (Dolan and Humphrey 2000). In situations where trade policy leads to a bias against exports, it is not uncommon for producers to seek export markets only when the domestic market is not capable of taking all of their production. This leads to an intermittent interest in exporting, which is not acceptable to global buyers.
4. Access to specialist foreign labour. If the observation made above about the disadvantages of latecomer firms in the global economy is correct, then they may require specialist resources to enable them to upgrade and meet the requirements of their foreign buyers. Work permit and visa regimes should not obstruct the employment of such workers.
5. Access to qualified labour. A further consequence of the previous point is that in the global economy the effective utilisation of a comparative advantage such as cheap labour or access to cheap raw materials often depends upon combining these resources with highly skilled labour that can provide the management and supervisory systems that will ensure adherence to the specifications demanded by global buyers. Whilst these can be provided by importing labour, this is frequently expensive, and is only viable as a temporary expedient aimed at meeting particular needs. Therefore, in addition to the provision of basic education for the labour force, education policy should also attend to the formation of skilled managerial and technical workers.
6. Certification. Access to developing country markets depends increasingly upon certification. Global buyers also increasingly look to work only with certified companies - even if they do not rely on certification as a guarantee that certain standards will be met, it is used as an indication that certain minimum capabilities are present. Support for certification, particularly for smaller companies, can form part of an industrial promotion strategy. This may take the form of State-sponsored creation of certification bodies or subsidies for firms seeking certification or support for the process of preparation for certification.
7. FDI decision-making. The fragmentation and separation of production, branding and retailing has changed the way in which decisions about FDI are taken. When firms were vertically integrated, it was easy for governments to identify and target those responsible for making investment decisions. Today, this is no longer the case. A government wishing to promote electronics assembly should not necessarily focus on the firms whose products are being assembled. Many of these products are assembled by contract manufacturers, which are much less visible but which take the key decisions about locations within global production networks. Similarly, the location of garments production within global economy

is just as likely to be determined by traders and intermediaries based in East Asia as it is by the global brand-name companies that they supply.

### 5.3 *Business support policies*

A wide variety of policies are available to promote the competitiveness of firms in developing countries. Many of these policy initiatives are directed towards SMEs and clusters of firms. These policies fall into four main categories:

- ? promotion of linkages with markets, both information on markets (particularly overseas markets through the provision of export intelligence services) and promotion of products in these markets, particularly through participation in trade fairs;
- ? development of the human resource and technical capabilities of firms through support for training, the promotion of technical centres and specialist services, such as metrology;
- ? support for investment in physical capital and capabilities through credit and long-term investment finance;
- ? promotion of linkages between firms with a view to increasing the efficiency of individual firms and their collective competitiveness through joint efforts and collaboration.<sup>11</sup> Such efforts may include collective initiatives relating to the previous three points, such as joint export promotion and the development of public-private technical centres. The promotion of the business associations to provide voice and organisation for local producers would be a further example of such initiatives.

The different ways in which clusters of firms in developing countries can be inserted into global value chains create different needs for business support services. The challenge for policymakers with regard to upgrading is to promote upgrading which sustains and increases incomes in clusters. How does recognition of the variety of possible linkages to the global economy affect cluster upgrading strategies?

The first step is a diagnosis of value chain linkages and the particular requirements for competitiveness that they create. In other words, the cluster's marketing channels should be identified. Who are the customers? For example, is trade organised by small retailers or wholesalers, traders selling to small retailers or wholesalers, large fashion houses, global retailers (or their agents), large manufacturers supplementing their model ranges, etc.? Individual firms within a cluster may well be supplying components or product to different types of buyer. Across the cluster, it is highly likely that the wide range of different value chain relationships will be evident.

The importance of diagnosis and the impact of changing value chain relationships upon business service priorities can be illustrated by an example taken from the development of the melon export business in the north-east of Brazil. Most Brazilian melon exports to Europe currently go to the UK and the Netherlands, where fruit sales are dominated by large retailers, who themselves work through a diminishing number

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<sup>11</sup> Initiatives in this area can be regarded as the promotion of collective efficiency, as discussed by Schmitz (1995a).

of fruit importers. According to Gomes (1999) melon production is undertaken on a large scale to pre-set schedules. Fruit must be proven to have low levels of pesticide residues and packaged in conditions specified by the buyers. Therefore, promotion of fruit growing capabilities aimed at the European market would need to be linked to an understanding of the technical requirements of the industry, the capital investment required in post-harvest handling and processing, and the need to find buyers willing to take the produce. Therefore, capital investment in post-harvest processing and packing and improvements in firm-level capabilities might be the priority. Should the promotion of small-scale production be a policy goal, this would probably only be viable through outgrower schemes tightly supervised by processor/exporters.

This situation is in stark contrast to the challenges facing melon producers when production and export first started in the 1980s. At that time, it was possible to develop a melon exporting business from a developing country merely by buying melons from local farmers, arranging transportation (itself no mean feat) and selling into European wholesale markets. In order to reach these markets, State agencies in the Petrolina-Juazeiro area, which had begun to develop irrigated fruit production, brought in technical experts from the south of Brazil and from Europe to "lecture about a range of issues interesting to exporters, such as the consumer taste in different countries, the rules governing the imports of fresh fruits in European countries and the United States, and the ways in which the markets of agricultural products were organised in main fruit importers" (Damiani 1999: 114). Damiani later describes how the São Francisco River Valley Development Authority (CODEVASF) also promoted the region's produce in trade fairs in Europe and how it brokered the creation of an exporters' association in order not only to promote exports, but also to provide quality control and prevent "rogue" exporters from undermining the reputation of the region as a whole. In this case, the priorities for export promotion were in understanding the market and promoting collective efficiency, largely because of the importance of wholesale marketing channels in Europe at that time. As linkages between large retailers and exporters became stronger, market information could be provided directly by the customer, and regional reputation became less important because of the direct links with particular exporters.

The upgrading requirements of firms in different value chains will also be very different. For example, firms producing for large global buyers may have a particular concern with quality, which may require work not only on processes within the firm, but also co-operation with suppliers further down the chain, such as tanneries and cattle ranchers. Co-operation with such actors may also be important for dealing with such questions as meeting statutory regulations on environmental standards.<sup>12</sup> Alternatively, firms producing selling directly to retailers in the domestic market or in regional markets might find that the main upgrading challenge relates to their ability to manufacture efficiently a wide variety designs in small quantities. Firms working for high-fashion retail shops might have to focus on both quality and the rapid response to changes in designs and fashions.

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<sup>12</sup> For a discussion of how the requirements on the chemicals used in tanning processes were met in India, see Kennedy (1999).

#### 5.4 Firm-level upgrading strategies

A global value chain perspective also provides some insights into the particular challenges facing firms as they attempt to upgrade and reposition themselves within global value chains. Humphrey and Schmitz argue that one particularly important problem for firms which had successfully managed to integrate themselves into value chains characterised by quasi-hierarchical relationships is the danger of "lock-in". Firms find that a large part of their output is going to one or a small number of customers, and they become specialised in one particular activity, usually production, and they either do not develop design or marketing capabilities, or allow such capabilities to atrophy because of the strength of the relationship with the global buyer. As such, they become heavily dependent on this relationship. Insofar as the buyer invests in the supplier's capabilities, it may also demand exclusivity of supply into its main market in order to prevent competitors gaining from this investment.<sup>13</sup> It becomes costly for the producer to switch customers or markets, and yet it is vulnerable to competition from new sources of supply, which global buyers frequently develop as part of their overall sourcing strategy.

In the circumstances, the primary strategic aim must be to avoid being trapped in relationships that are vulnerable to new sources of competition. What strategies are available, and what are their implications for the provision of local level business services? The main strategic options for combating lock-in are:

1. Market diversification. Firms rarely produce for just one market, and clusters even more rarely. Market diversification can be promoted through "real service" provision, such as export intelligence and support for participation in trade fairs. Where dominant firms in the cluster are particularly dependent on a few large customers and reluctant to diversify, then diversification efforts can be directed towards smaller firms, who frequently produce for different markets.
2. Excellence in manufacturing. It would be wrong to believe that barriers to entry are always low in manufacturing. While it is the case that barriers to entry are low in sector such as cut-make-and-trim in the production of mass-market garments, there are opportunities for improving manufacturing performance. These prefer not only to the market niche being targeted, but also concerned the "service" attributes of supply, including quality and consistency of quality, speed of delivery and speed of response to changes in product design. This puts greater emphasis on the provision of support services, as well as logistics infrastructure, which might include provision of local customs facilities, storage, airports, road links and modernisation of seaports.
3. Effective use of knowledge acquired from within the value chain. The "learning by exporting" effect is well-known. Firms learn from contact with new markets, and to the extent that insertion into value chains creates significant information flows between producers and buyers, this effect is magnified. However, the full advantages of this effect depend upon how this knowledge is used. In some cases, knowledge can be leveraged between markets. When firms, or groups of firms, sell to different markets they can leverage the knowledge gained in one market to

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<sup>13</sup> Examples of buyer efforts to upgrade small suppliers can be found in Kaplinsky and Readman (2001: 62-63).

support upgrading in another. A clear example of this is provided by Tewari's analysis of the Ludhiana woollen knitwear cluster in India (1999). This cluster faced a severe challenge in the 1990s when its dominant export market, the former Soviet Union, collapsed. It had specialised in low-grade products suitable for this market. Markets in the West required much higher quality and a greater emphasis on good design. Tewari argues that many firms in the cluster were able to meet these requirements relatively quickly because they were used to designing and making high-quality products for the domestic market. A further example is given by Lee and Chen's (2000) analysis of Taiwanese contract manufacturing firms in the electronics industry. These firms applied the knowledge they acquired from assembling products for foreign (mainly US) customers to the production of products for other markets and for product requiring similar technologies.

4. While knowledge can be applied within and across chains, there is a continuing need for investment at the firm level and in upgrading and related producer services within the cluster. Upgrading within global value chains depends upon firm-level and/or cluster level investment in upgrading. This is one of the clear lessons provided by Kishimoto's (2001) and Lee and Chen's (2000) analysis of competence development in the Taiwanese computer cluster. Firstly, there are areas where customers cannot, or will not, provide assistance. Secondly, if firms in the cluster can contribute their own upgrading efforts to the chain, this increases the value to the other firms in the chain and provides additional protection from substitution. Firm level innovation efforts are essential here. This is one of the most important conclusions of the work of Lee and Chen (2000). These firms did not passively wait for knowledge to arrive through chain linkages. Nor did they rely on their customers to expand market opportunities. They sought out new customers and also sort out the knowledges necessary for their upgrading efforts. To the extent that these larger firms are more likely to have the managerial and financial resources to undertake this type of active efforts to seek out new knowledge and new opportunities, some degree of size differentiation within the cluster may facilitate upgrading efforts.
5. Such firm-level innovation efforts need to be supported by regional and national systems of innovation that provide firms with both technical support adequately trained research and technical staff. The linkages between such systems of innovation, firm level resources and value chain resources are essential. It can be hypothesised that the greater the extent to which upgrading involves a discontinuous shift in capabilities and a switch to different customers, then the greater the need for local and national innovation systems to provide support.

In other words, the recognition of both the variety of relationships within global value chains and the ways in which resources for innovation can be acquired through chain linkages do not lead to a decline in the importance of cluster level activities. On the contrary, the more that firms rely solely on their major customers for information and support for upgrading, the more they are likely to be locked into relationships that are undermined in the long-term by the emergence of new, lower-cost competitors. This is the lessons of Schmitz's analysis of the Sinos Valley footwear cluster in Brazil (Schmitz 1995b). In the global economy, well-established forms of cluster support –

institutions, joint efforts, learning, support services, etc. - are as important as ever.<sup>14</sup> What changes, however, is the particular upgrading challenges they have to face and the overall goal of a competitiveness strategy, which shifts from one of "completeness" to one of finding niches within global value chains that provide the basis for sustainable competitive advantage.

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<sup>14</sup> These support mechanisms may also be promoted actively by international organisations. A range of examples are provided by Kaplinsky and Readman (2001: 68-73).

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