



## **Principles for promoting clusters & networks of SMEs**

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## EXECUTIVE SUMMARY

- 1 In both developed and developing countries there is mounting evidence that clustering and networking helps small- and medium-sized enterprises (SMEs) to raise their competitiveness. The role of public policy in this process is less clear. The European experience suggests that local and regional government can play an important role, particularly where it cooperates with private sector organizations. Equally if not more interesting experiences can be found in developing countries. Their analysis constitutes the core of this paper.
- 2 Clustering matters in developing countries. While a fairly recent focus in research, the case material available suggests that it is common in a wide range of developing countries and sectors. Some of the case studies contradict the widespread export pessimism concerning SMEs.
- 3 Research on clustering in developing countries has been inspired by the competitiveness of industrial districts in advanced countries. The success of the Third Italy and other European regions in the 1970s and 1980s exemplifies the power of collective efficiency focused on the need of demanding customers.
- 4 Drawing firm policy lessons from these European experiences is more difficult than appears at first sight, partly because the link between public policy and private performance is under-researched. Nevertheless these experiences contributed to a double shift in the industrial policy debate: towards more concern with (1) the role of regional and local government, and (2) joint public/private sector initiatives.
- 5 Since in the European success stories, regional or local government became active only at a relatively advanced stage of industrial development, they do not provide policy lessons for making embryonic clusters grow. More can be learnt from cases where public policy helped to bring about cooperation of enterprises even though the critical mass was sometimes small and previous linkages were few. Recent experiences with fostering networks in Denmark and Chile show that specialization and cooperation between SMEs can be promoted through public institutions.
- 6 These experiences suggest that the leverage of public resources can be increased by working with groups of enterprises. The collective approach has lower transaction costs and facilitates mutual learning; and it can be used for both forming new networks and for upgrading existing clusters.

- 7 Experiences from Indonesia and Brazil suggest that dynamic clusters and networks tend to be buyer driven and that public support for upgrading of SMEs has more impact in buyer driven than in supplier driven chains. Helping SMEs to become more customer oriented is a key element of effective assistance.
- 8 The paper lends support to those who suggest that public support for SMEs in developing countries tends to be overly supply oriented (training, credit, raw materials, technology) and not sufficiently focused on demand. More than that, it shows examples of successful customer oriented assistance programmes which work through participation in trade fairs, public procurement and SME delivery contracts with large enterprises.
- 9 Intervention is most effective when it is based on the 'Triple C' which stands for customer oriented, collective and cumulative. The three 'C's do not necessarily go together, but an SME support approach which is guided by customer-orientation and targets the collective is more likely to achieve cumulative improvements in competitiveness.
- 10 Different ways of pursuing the Triple C are shown in the paper. It can work through public procurement as in a case from the Brazilian Northeast where school furniture was procured from SMEs through a local association which mediated the contract and monitored the delivery. In addition to being customer oriented and collective, the initiative was also cumulative in that it led to a thriving local industry which was able to find new customers and reduce its dependence on the public procurement programme.
- 11 A different route is tried in the Chilean Profo programme which helps SMEs to network for the purpose of pursuing market opportunities nationally and abroad. The network provides a funnel for delivering assistance to SMEs and the customer focus lays bare what kind of assistance is relevant and what kind of cooperation amongst enterprises is needed to secure orders.
- 12 The paper shows that effective interventions aimed at fostering collective efficiency are already proceeding apace in developing countries. While sometimes inspired by the success of industrial districts in advanced countries, some of the most interesting insights for policy are emerging from experiments in developing countries themselves. Therefore, as regards policy lessons, South-South channels seem to be at least as important as North-South channels for international learning and exchange of experiences.

## 1 INTRODUCTION \*

Once considered to be vestiges of the traditional sector, to be swept away by the process of modernization, small- and medium-sized enterprises (SMEs) have, in the past two decades, become one of the main targets of policies aimed at creating growth and employment in developing countries. Support for SMEs is generally based on three assumptions. The first is that there are benefits for the country as a whole from having a strong SME sector. It sustains a broad and diversified private sector and creates employment. The second is that a strong SME sector will not emerge without support from the State. It is argued that 'informational and other market failures associated with the provision of financial, technical and market support to SMEs' (Levy 1994:2) need to be redressed. Small enterprises suffer disadvantages in markets because of their size. Third programmes aimed at the smallest enterprises have been justified more in terms of their welfare impact than their economic efficiency, support for microenterprises is seen as a way of targeting aid at the poor and creating job opportunities for the disadvantaged.

In recent years, however, the competitive potential of SMEs has been highlighted. The apparent success of SMEs in North-eastern and central Italy and in other regions of Europe, point to the possibility that small can indeed be beautiful. The work of Piore and Sabel (1984) and of the International Institute of Labour Studies (Pyke, Becattini and Sengenberger 1990; Pyke and Sengenberger 1992) have presented the Italian experience to a wider, English-speaking audience as a particular model of industrial development in which the emergence of linkages and cooperation between SMEs provides economies of scale and scope. Far from being handicapped by size, clusters of SMEs (it is argued) have the advantages of flexibility and responsiveness. They can be more competitive than large firms.

This model has aroused world-wide attention. It seems to offer the chance to make SMEs more competitive. In developing countries this need is particularly pressing as trade liberalization and deregulation increase competitive pressures and reduce the direct subsidies and protection which States can offer to SMEs. However, drawing policy lessons for developing countries is fraught with difficulties. The first purpose of this paper is to tease out what they are. The second purpose is to bring together experiences from developing countries aimed at promoting clustering and networking of SMEs.

The lessons can be summarised as the 'Triple C'. The three C's stand for customer-oriented, collective and cumulative. It will be argued that policy for SMEs can be particularly effective when:

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- it is driven by the need to meet the demands of the customer. A customer-orientation forces firms to tackle their key problems of competitiveness, and successful interventions are those which establish the means by which SMEs can learn about and from the needs of their customers and obtain the technical assistance which enables them to meet these needs.
- it is directed at groups of enterprises. This has two advantages: (i) the collective approach has lower transaction costs than assistance to individual enterprises; (ii) it helps generate relationships between enterprises which improve their efficiency through the development of cooperation and maximize the potential of the group through the development of mutual learning.
- It will be argued that these two features establish the condition for the third 'C', the cumulative capacity to upgrade and become less dependent on support from outside. Being competitive is not a state, it is a process of remaining competitive through improvement. The objective of policy intervention at the micro level should be to develop the capability of groups of firms to generate processes of improvement deriving from inter-firm linkages and contact with the market. Thus, public support for a given purpose gradually becomes unnecessary and can shift to new challenges.

In order to develop these arguments we proceed as follows: Section 2 discusses the difficulties and pitfalls involved in trying to draw lessons from the experience of European industrial districts and networks. Section 3 provides a theoretical underpinning for policy, using the notion of collective efficiency. It also seeks to specify the sources of competitiveness which clustering or networking enterprises can draw on but individual enterprises forego and to define the way in which this potentially changes the nature of SME policy in developing countries. Section 4 then concentrates on examples of new policy approaches being used in developing countries. It is the core section of the paper and proceeds in a number of distinct but inter-linked steps. The first step (Section 4.1) is to establish that clusters of firms can be found in developing countries. Subsequent steps are concerned with the role public policy. Section 4.2 consider the role that promoting customer contact plays in promoting SMEs. Section 4.3 then examines the role which public procurement can play in promoting clusters of small firms, while Section 4.4 considers issues involved in upgrading small suppliers of large firms. Finally, Section 4.5 focuses on experiences of facilitating networking amongst SMEs through external assistance. The paper is based on a combination of sources. It draws on our own recent research and advisory work and distils lessons from the recent literature.

## **2 DRAWING LESSONS FROM EUROPE**

The international interest in clustering was fuelled particularly by the experience of what has come to be called the 'Third Italy'. The concept of the Third Italy (coined by Arnaldo Bagnasco) started to be used in the late 1970s. At that time, it became apparent that while little economic progress was in sight in the poor South (Second Italy), the traditionally rich Northwest (First Italy) was facing a deep crisis. In contrast, the Northeast and centre of Italy showed fast growth which attracted the attention of social

scientists. In a number of sectors where small firms predominated, groups of firms clustered together in specific regions seemed to be able to grow rapidly, develop niche, export markets and offer new employment opportunities. In the Third Italy<sup>1</sup> non-agricultural employment in SMEs rose particularly fast, non-agricultural employment as a whole, and value added grew faster than in the rest of the country in the 1960s and 1970s. Per capita consumption in these regions moved from being below that of the industrialized north in 1970 to being above it in 1981. One indication of the emerging wealth of these regions was the reversal of migration trends. The Third Italy was a net exporter of population in the 1960s, but an importer in the 1970s, overtaking the industrialized north as a destination for migrants (Rabellotti 1995b).

The rapid growth of the Third Italy, and in particular the rapid growth of SME-based industries, was associated with the concentration of firms in particular sectors and localities. Such clusters were able to establish a strong position in world markets in a number of so-called traditional products - shoes, leather handbags, knitwear, furniture, tiles, musical instruments, food processing - and also in the industries which supply machinery to these sectors. In a 'traditional' industry, such as shoes, clusters of SMEs were able to expand production and exports in the 1970s and 1980s at a time when large enterprises in Britain and Germany were in decline (Rabellotti 1995a: 30-31). Perhaps most important, such clusters seemed to have the capacity to upgrade their production. The close proximity of raw materials suppliers, equipment suppliers, component producers, sub-contractors and final goods producers, together with a combination of both intense rivalry between firms and cooperation in producers' associations seemed to be able to drive the whole cluster forward.

The apparent vitality of clusters of small- and medium-sized firms in Italy led to a considerable interest in the bases of their success. Becattini (1989; 1990) used the concept of industrial districts to capture the success of agglomerations of small firms in these areas of his country. This Italian experience gave impetus to research on industrial districts in a number of advanced country regions (see the collection of articles in Goodman and Barnford 1989; Zeitlin 1989; Pyke, Becattini and Sengenberger 1990; Pyke and Sengenberger 1992; Garofoli 1992).<sup>2</sup> From this international debate the following have emerged as the main attributes of industrial districts: geographical proximity, sectoral specialisation, predominance of small and medium sized firms, close inter-firm collaboration, inter-firm competition based on innovation, a socio-cultural identity which facilitates trust, active self-help organizations, and supportive regional and municipal government.

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<sup>1</sup>The Third Italy includes the regions of Umbria, Marche, Emilia-Romagna, Friuli-Venezia-Giulia, Veneto, Trentino-Alto Adige and Tuscany.

<sup>2</sup> Some very useful contributions to the debate on regional and local competitiveness in Europe arising from economic geography and regional science have developed other concepts to describe similar phenomenon. See, for example, the work of Courlet and Pecqueur (1991) and of Colletis *et al.* (1990) on 'local industrial systems', of Maillat (1991), Crevoisier and Maillat (1991) and Camagni (1991) on the role of the 'milieu', and of Garofoli (1991; 1993) on typologies and trajectories of 'local productive systems'.



It should however be emphasized that there are many variations amongst European industrial districts and that the weight of the above attributes varies a great deal. Furthermore, industrial districts are not merely a European phenomenon; similar experiences are reported from North America and Japan (for example, Friedman 1988; Saxenian 1994; Scott 1992; Storper 1989). Nevertheless, the main reference point in the academic and policy debate remains the Third Italy,

Using this reference point has become more complicated of late. It seems that in the 1990s, the Italian industrial districts are not performing as well as during the 1970s and 1980s (on which most of the literature has focused). Cooke and Morgan (1994) refer to Emilia Romagna as a growth region under duress, but the title of a paper by Bianchi (1994), 'Requiem for the Third Italy seems to exaggerate the crisis. Franchi's (1994) account of the evolution of industrial districts in Emilia Romagna, the core region of the Third Italy, over the period 1984-93 shows that some are in crisis but most are not. She also shows that industrial districts are restructuring; in most of them there has been an increase in average size of enterprise and more differentiation by size. Indeed, both can be expected from a period of rapid growth. The main analytical lesson is to concentrate on trajectories rather than models of industrial organization (Humphrey 1995).

Once the focus is on trajectories, one of the most important growth features of industrial districts comes to light. The European regions where they are most in evidence (Third Italy, Baden-Württemberg in South-west Germany, West Jutland in Denmark) were until the 1960s relatively marginal and underindustrialized, outside the heartland of Fordist capitalist growth. Since then, they have moved centre stage. In spite of difficulties that some of them might be undergoing, they have demonstrated that trying to grow on the basis of local SMEs is not a fantasy.

This makes the European industrial districts of special interest to policy makers in developing countries, anxious to find new ways of promoting SMEs and enabling them to compete in national and international markets without continuing State support. The European experience seems to suggest that SMEs might not be at a disadvantage at all compared to large firms, so long as they were able to benefit from the advantages of clustering.

However, drawing policy lessons from the Italian experience is not as easy as it appears at first sight. The role of policy in the Italian and other European districts has been given great attention in the literature. Particular emphasis has been placed on the role of local and regional governments in providing a framework in which clusters of SMEs can flourish. Brusco (1990; 1992); Best (1990); Murray (1991) and Pyke (1992) stress the importance of the local State in institution-building, the promotion of consortia of firms and, in particular, the development of collective service centres. The provision of support services is detailed in Box 1.

### **BOX 1: THE PROVISION OF REAL SERVICES IN ITALY**

The group of measures which has attracted most attention in the Italian industrial district debate is the provision of real services.

Real services in the Third Italy can be best illustrated with the example of CITER (*Centro Informazione Tessile Emilia-Romagna*). CITER is located in Modena, and operates in the knitwear field. The centre provides five major services.

- It edits a half-yearly periodic report on international market trends and on activities of competitors at home and abroad.
- It informs artisans about the prices and nature of yarns which are available on the market.
- It keeps members informed on technological developments, by preparing technical notes on relevant machinery and by collecting relevant literature.
- It has a CAD/CAM station for use by its members.
- It informs the local business community about the fashion trends. Because of its close relationship with the large department stores, CITER can obtain privileged information on the purchasing trend of various fashion lines offered on the market. It also collects data on the evolution of tastes, values and motivations of the consumer, and purchases the expensive catalogues of fashion institutes around the globe.

To summarize, the most important task of CITER is the collection, analysis and distribution of all information that is relevant for the local business community. CITER was initially financed with public funds when it was created in 1980, but a decade later, only 30 per cent of the total budget is supported by government funds. CITER now depends largely on member companies, either in the form of subscriptions or as payment for specific services.

The regional development agency of Emilia-Romagna, ERVET in Bologna, 'lies at the heart of a "service system" which involves dedicated sectoral service centres' such as the CITER centre described above, but also CERCAL (shoes), QUASCO (building industry) and CESMA (farm machinery). In addition, ERVET is involved in four service centres which operate 'transversally' or 'laterally', i.e. providing services to different sectors: SVEX (export promotion), RESFOR (promotion of subcontracting in metal industry), CERMET (quality upgrading) and ASTER (technology development). Other examples of real services include: *Centro Servizi* (Pisa) which serves the footwear and leather industry by offering a data bank on machinery, markets, clients and other information relevant to the sector; TECNOTEX in the town of Biella which offers professional training, research and technological experimentation for the textile industry; and the *Comitato Servizio Tendenze Moda* in Empoli which provides professional training and information on fashion trends.

Source: Brusco and Righi (1989); Murray (1991); Brusco (1992) and Pyke (1992).

Drawing policy lessons from this European experience suffers from two main problems. First, it is intrinsically difficult to establish causal connections between policies and the success of industrial districts. Perhaps this explains why very little research has been done on the causal link. Most of the literature confines itself to descriptive statements of what particular institutions do, but contains little

assessment of how they influence the activities of SMEs. While it is plausible to assert the usefulness of local policy initiatives, there is little hard evidence to support the claim.<sup>3</sup>Second, in the case of Europe, the **emergence** of the industrial districts did not result from consciously pursued local or regional industrial strategy. It seems that the districts cases went through two stages: a) spontaneous growth, and b) institutionally enhanced growth. There was no clear cut dividing line, but there was a common pattern of institutions playing more of a role in the later phase than in the earlier growth phase. In other words, to the extent that policy implications can be drawn from this experience, they are not concerned with the emergence of industrial districts but with the path they took once they existed (Schmitz and Musyck 1994).

This creates particular problems when policy makers in developing countries attempt to apply the ‘Lessons from Europe’. The simplest most direct and most obvious way of applying policy lessons is to replicate policies. SME agencies are under pressure to find effective policies, and copying what seems to work elsewhere is an obvious route to take. However, this is problematic. Policies adopted in European industrial districts were primarily about enabling already existing and dynamic clusters of firms to perform better, or to respond to new challenges. In these cases, there was already a strong basis on which policy could work. A vertically disaggregated yet linked production system was already in place. Policy built on these linkages. It supported or enhanced the dynamism of the district, but it did not create it.

In developing countries, dynamic clusters of firms do exist (a point which will be argued further below), but in many cases SME agencies are faced with clusters which are at best embryonic and/or lack the kinds of linkages and dynamism characteristic of the successful European industrial districts. In other words, the industrial districts literature focuses on the ‘success stories’. They define a destination, but not the path which needs to be taken to reach it. Yet, for policy makers in developing countries, it is important to discover, first, whether there is one possible destination or many, and, second, the means of moving along the path(s) to the destination(s). In order to explore these two issues, it is necessary to consider the factors which underlie the competitive success of the industrial districts.

### **3 CLUSTERING, NETWORKING AND COMPETITIVE ADVANTAGE**

Industrial districts in Europe appear to have secured competitive advantage in the supply to demand niche markets. They have done this by competing mainly on the basis of quality, design, speed of innovation and speed of response. This might seem far removed from, for example, the cotton knitwear cluster of Tiruppur in South India. This cluster has achieved great success in exporting basic cotton textiles, but as yet it shows little capacity to move into higher value market niches (Swaminathan and Jeyaranjan 1994). An enormous gulf remains between the small knitwear firms of Tiruppur and the

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<sup>3</sup>For an extended analysis of the limited policy lessons which can be drawn from the European industrial district literature, see Schmitz and Musyck (1994).

‘networks of technologically sophisticated, highly flexible manufacturing firms’ which Piore and Sabel (1984: 17) characterize as the basis of the Italian success. However, it will be argued here that these differing cases do have important things in common, and that what they have in common provides the potential for clusters such as Tiruppur to upgrade their facilities and become technologically more sophisticated and more capable of competing in demanding markets. What they have in common is the competitive advantage which arises when enterprises which are clustered together are driven forward by the needs of demanding customers.

The idea that there are gains in clustering is old hat in industrial economics. It can be traced back to Alfred Marshall’s analysis of industrial districts in Britain. In his **Principles of Economics** (1st edition, 1890), Marshall stressed the economies which ‘can often be secured by the concentration of many small businesses of a similar character in particular localities’ (8th edition, 1920, 221). He refers to such gains as ‘external economies’ and sees them as particularly relevant to small firms. The concept of external economies is introduced by Marshall in order to draw out (i) why and how the location of industry matters, and (ii) why and how small firms can be efficient and competitive. In his own words, ‘we now proceed to examine those very important external economies which can often be secured by the concentration of many small businesses of a similar character in particular localities’ (1920:221). He refers to such localities as ‘localized industry’ or ‘industrial districts’. He does not provide a definition for either, but his examples make it clear that he meant a cluster with a deep inter-firm division of labour.

The concept of external economies is essential to understand efficiency advantages which small firms derive from clustering. There remains, however, the problem that the concept is restricted to unplanned gains or losses. As stated by Mishan (1971:2), ‘the essential feature of the concept of an external effect is that the effect produced is not a deliberate creation but an **unintended** or **incidental** by-product of some otherwise legitimate activity. Such incidental effects are of enormous importance in contemporary industrial districts, but - as stressed by Brusco (1990), Piore and Sabel (1984), Trigilia (1989) and others - there is also consciously pursued joint action<sup>4</sup>. Such joint action can be of two types, individual firms cooperating (for example, sharing equipment or developing a new product) and groups of firms joining forces in business associations, producer consortia and the like. The concept of collective efficiency brings together the incidental and consciously pursued firms and seeks to capture the essential point that competitiveness can neither be understood nor enhanced by focusing on individual firms. Collective efficiency can be defined as the competitive advantages derived from local external economies and joint action (Schmitz 1995b).

A clear understanding of what brings about this collective efficiency is critical for both analysis and policy. A group of producers making similar things in the same locality in itself brings few benefits. It does however help them to specialize; it attracts suppliers and buyers, and it generates a pool of

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<sup>4</sup> Wilkinson and You (1992) emphasize that Marshall was very sceptical about associations and joint action.

specialized workers. As shown by Rabelotti (1995b) the external economies which arise range from static gains such as easy availability of inputs, to dynamic gains such as the fast spread of new ideas of how to innovate. Being in the same sector and location also facilitates taking joint action which again can range from more static concerns such as associations defending local producers in disputes with government or dynamic concerns such as taking groups of local producers to foreign trade fairs in the search for new markets.

A common misconception is that the stress on collective efficiency means denying competition. It does not. On the contrary, rivalry is often particularly severe amongst clustering producers, but this need not stop them from joining forces to overcome common bottlenecks in infrastructure, input supply or access to distant markets. It is the combination of competition and cooperation which drives the search for improvement. The combinations are many, a typical one being various manufacturers engaging in close cooperation with their suppliers (to improve quality and speedy delivery of components) and thus often benefiting their local rivals who work with the same supplier.

Clarifying the concept of collective efficiency allows certain conceptual distinctions to be made:

- **Cluster.** A cluster is defined as a sectoral and geographical concentration of enterprises. Such a concentration will benefit from external economies - the emergence of suppliers who provide raw materials and components, new or second-hand machinery and spare parts; the emergence of a pool of wage workers with sector-specific skills. A cluster may also attract agents who sell to distant markets and favour the emergence of specialized services in technical, financial and accounting matters.
- **Industrial district.** An industrial district in the sense the term is used in Italy, emerges when a cluster develops more than specialization and divisions of labour between firms; the emergence of 'implicit and explicit forms of collaboration among local economic agents within the districts, enhancing local production and sometimes innovation capability' (Rabelotti 1995a 35); and the emergence of strong sectoral associations. Two points should be stressed here. First, the development of these features is a matter of degree. Clusters can have more or fewer district-type characteristics. Policy would need to be directed towards promoting the development of collective efficiency in its broader sense, but not necessarily at replicating all aspects of the Italian industrial districts. Second, while the Italian literature has tended to stress the role of small firms in industrial districts, the inter-firm linkages outlined here need not exclude large firms. Schmitz has highlighted the role of large firms in Baden-Württemberg (1992) and the Sinos Valley shoe cluster in Brazil (1995).
- **Network.** If clusters can exist without displaying the aspects of collective efficiency which are associated with the industrial district model, so, conversely, cooperation between firms, mutual learning and collective innovation can exist even when large clusters of firms do not. Networking

of SMEs is not necessarily tied to being in the same locality and can still lead to collective efficiency. The external economies tend to be small but the gains from joint action can be substantial.

This last point merits further attention. The main policy debates in developing countries have been based on the experience of well established industrial districts in Europe.<sup>5</sup> They do not capture the results of policy innovations which are more recent and which build on relatively small groups of enterprises which produce similar or complementary products. The most significant initiative is the Danish network programme, a government initiative which ran from 1988 to 1993 and which is being copied in a modified form in a number of other countries (Martinussen 1995).<sup>6</sup>

The Programme was inspired by the industrial districts in the Third Italy and other parts of Europe, but the idea was not to replicate them but to foster cooperation between enterprises irrespective of whether they belonged to an existing cluster. In practice, however, participating enterprises (usually between five and ten) tend to be from the same region or town and produce similar or complementary products. The central idea is that together such enterprises can overcome obstacles and conquer markets beyond their individual reach and that external assistance plays an important role in facilitating cooperation. The key figure is the network broker who helps to identify opportunities, brings participants together and assists in implementing new ideas or projects. The Programme was designed by the Danish Technological Institute, funded by central government and carried out by the National Agency for Industry and Trade in conjunction with local institutions. Box 2 contains further information on why the Programme was introduced and how it worked. This Danish network programme and its adaptation in other countries is relatively recent, but there are two important conclusions emerging from these experiences which are of relevance to developing countries: (i) cooperation between SMEs can be promoted successfully through skilled external assistance and (ii) the leverage of public resources can be increased by working with groups of enterprises.

To conclude, Sections 2 and 3 sought to draw together policy lessons from the European experience. To do so, we asked both what was the competitiveness advantage of industrial districts and what was the role of policy. The first policy point to make is that where enterprises cluster they find it easier to overcome obstacles in access to inputs and to product markets. This is due to the external economies which arise from the combination of sectoral and geographical concentration and the possibilities of joint action. Thus - in comparison with isolated enterprises engaged in the production of tradables - they are less needy of public support.

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<sup>5</sup> See, for example, the papers in Späth (1993).

<sup>6</sup> Network promotion has also been tried in other European countries, see Bessant (1995) and Semlinger (1991; 1995). It is also an essential component of the 'systemic competitiveness' approach of Esser et al (1994) and Meyer-Stamer (1995).

## BOX 2: THE DANISH NETWORKING PROGRAMME

The programme was triggered by the recognition that SMEs, ie the backbone of the Danish economy, are ill-equipped to deal with global competition. Networking was thought to be the answer and was defined as cooperation between firms aimed at raising competitiveness, in particular at creating new business opportunities, such as developing and marketing new products that deploy significant strengths within individual firms; establishing agents and distributors in new markets; pooling of individual products into complete product ranges.

One of the major problems in Denmark was that inter-firm cooperation of this nature was not a part of the country's industrial culture. The network programme aimed to stimulate Danish companies in **large numbers** to overcome their resistance to cooperation. This was why a process approach was particularly important (Chaston 1995). There are a number of hurdles in this process which need to be overcome. In order to create an interest in networking, examples need to be found of initiatives which have some relevance for and strike a cord with the local enterprises. The next critical gate is that of identifying a viable network idea. The third hurdle is that of convincing a group of firms to pursue the idea and take ownership of its progress. Convincing firms that they need a feasibility study before they push ahead is also critical. These are the main challenges for the network broker. Best practices are methodologies, tools and promotion material which help brokers to overcome the above mentioned barriers (Martinussen 1995).

The Danish network initiative - as a government subsidized programme - finished in 1993. A final evaluation was not undertaken but a brief assessment can be made based on an interim evaluation (Gelsing and Knop 1991) and the views of external (Pyke 1994) and internal observers (written and oral information provided by Martinussen, DTI Business Network Centre, Denmark and Business Net UK). Overall, it seems that the programme has been successful on various counts:

- It achieved scale over the five years of the programme's existence, 5000 enterprises became involved in forming networks out of a target group of 10-12,000 enterprises.
- This high uptake has helped to make networking part of the Danish business culture. The idea and often also the practice have disseminated widely, such that networking has become a natural option to consider in the face of new business challenges.
- In the interim survey, 75 per cent of participating enterprises expressed that the networking was raising their ability to compete. 90 per cent of respondents expected that they would continue the practice of networking beyond the subsidy period.
- The know-how of promoting networks has been exported to a number of other advanced countries, more precisely, particularly regions in Spain, Portugal, France, UK, Norway, USA, Canada, Australia and New Zealand.

The transfer of the Danish experience means that there is a continuing search for improving practices and adapting them to different conditions. The key policy issue concerns the degree of subsidy. In Denmark the programme was, while limited in duration, largely government financed. A contrasting example is the UK where the services are largely paid for by participating enterprises. The advantage of the former is that it accelerates the uptake and makes it easier to achieve scale in the programme; the latter has the advantage of eliciting a stronger commitment of the participating enterprises and making it easier to have an ongoing and sustainable programme.

This is not to suggest that they need no support at all. Problems where they arise tend to be region and sector specific (at least in the European context) and require region and sector specific responses. Indeed, the European industrial district experience contributed to a double shift in the European industrial policy debate; (1) a shift towards decentralization, that is more concern with the role of regional and local government, and (2) successful interventions tended to be joint public/private sector initiatives often focused on specific sectors.

While this double shift is important in itself (and coincides with conclusions which some donor agencies have derived from years of experimenting with SME support in developing countries), it tells us little about how new clusters can be stimulated. In the European success stories, active local and regional governments entered the scene at a relatively advanced stage of clustering and inter-firm division of labour. Therefore, experiences in fostering collective efficiency where there is less to build on (in terms of number of enterprises and density of linkages) may render more in terms of policy lessons. This was why we focused on the Danish network programme, probably the most significant initiative of SME cooperation fostered by government and demonstrating the feasibility of the collective approach.

The transfer of this approach to other advanced countries where there is less financial backing from government underlines the importance of focusing on the customer: the formation of the network is driven by the idea of attending a specific market. (Indeed, this customer orientation has also been critical to the SME industrial districts' ability to break into new markets.) Our central point here is that the development of support programmes needs to start with a focus on the demand side before drumming-up support on the supply side. The sequence in most support programmes tends to be the other way round - an issue elaborated later on.

Finally, there is the question of whether the European experiences in clustering and networking have led to a cumulative capacity to upgrade such that public support becomes less necessary in one field and is free to concentrate on new ones. The need for this cumulative capacity can hardly be doubted, given that shortening product cycles and globalization lead to rapidly changing markets in most tradable products. As stressed before, being competitive is not a state but a process of remaining competitive through improvement. In the 1970s and 1980s, industrial districts demonstrated that they did - although with some support from local and regional government. In the 1990s, the situation is less clear. Brief mention was made of the fact that some industrial districts cannot stand the pace of change. Those who can, apparently the majority, are restructuring internally. Collective efficiency remains critical, but there is a clearer distinction between leaders and followers, in particular between those firms which have 'captured' customers and those which provide parts or entire products to the 'captors'. The role of public policy in this process is not clear. Some of the previous public support services may become less important and a broker role of regional and local public bodies may become more important. At least this is what Sabel (1995) suggests when he refers to the profusion of regional round tables and customer-supplier conferences in the Italian and German regions which inspired much



of the original discussion of industrial districts and regional industrial policy. More generally he argues for public initiatives which 'enable actors to draw lessons from common local experiences, or to assess the significance of outside developments for their purposes'. (Sabel 1995: 17). This may seem vague, but it recognizes that a) collective learning matters, b) public bodies can help to bring it about, and c) the policy lessons from the European industrial districts are hard to pin down - not least because they vary with the stage of development. The main argument of the next section is that developing countries can learn as much, if not more, from experiences in their own regions.

#### **4 LESSONS FROM DEVELOPING COUNTRIES**

The purpose of this section is to explore how collective efficiency can be fostered in developing countries. This is not done by hypothetical reasoning but by drawing on real cases which give insights on how public policy can promote clustering and networking of SMEs.

There is, of course, now a substantial experience in policies for SMEs in developing countries. While rarely focused on collective efficiency, a good deal of progress has been made over recent years, notably in two areas: (1) reducing the large firm bias in the overall legal and policy framework: while not always practised it is a well recognized priority (Liedholm and Mead 1987; Mead 1995; Stewart 1989; Young 1993); (2) channelling credit to SMEs: successful lending schemes tend to be based locally, have decentralized decision making, screen loan requests on the basis of character of the entrepreneur and project feasibility (rather than collateral), charge interest rates high enough to cover operating expenses, and sometimes use peer pressure for repayment (Levitsky 1986; Liedholm and Mead 1987; Otero and Rhyne 1994; Sanyal and Pradhan 1992). Less progress has been made in non-financial assistance. Most attempts to provide such assistance tend to suffer from three deficiencies. First, they are too supply oriented - that is, overly focused on inputs for production (skills, technology, raw materials) and not sufficiently concerned with who would buy the outputs. Second, they are rarely sustainable. This has two components: the high cost in reaching out to a multitude of SMEs and the low concern with cost recovery for support services. Third, they have at best a one-off effect on the performance of the assisted enterprise but rarely lead to a capacity for self-help and continuous upgrading.

The Triple C approach presented in this paper tries to overcome some of those deficiencies. However, it is not just about a type of intervention, but rather it concerns a particular configuration of SMEs, one in which they cluster or network. This is why, before plunging further into policy, we need to establish whether in developing countries there is fertile ground for the new approach, in other words, whether clustering is of relevance to the organization of manufacturing in developing countries.

#### 4.1 CLUSTERING IN DEVELOPING COUNTRIES

The international attention given to clusters owes much to the European, especially Italian, experience. The question addressed in this section is how common clusters are in developing countries. Statistics are not available for this purpose, but a brief overview can be provided - based on a review by Nadvi and Schmitz (1994), updated for this paper. The main conclusion is that clustering seems common in a wide range of countries and sectors. Some clusters in Latin America and Asia have acquired great depth in terms of the concentration of specialized suppliers and support bodies. Among those for which studies are available are the metalworking and textile industries of Ludhiana in the Indian Punjab (Tewari 1990; 1992); the cotton-knitwear industry of Tiruppur in Tamil Nadu (Cawthorne 1990, 1995); the diamond industry of Surat in Gujrat (Kashyap 1992); the engineering and electronics cluster of Bangalore in Karnataka (Holmström 1993); the footwear clusters of Agra in Uttar Pradesh (Knorringa, 1993) the Sinos Valley in Brazil (Schmitz 1995a), Trujillo in Peru (Tavara, 1993; San Martin Baldwin *et al.* 1994), and Leon and Guadalajara in Mexico (Rabellotti 1993, 1995b); the Korean textile cluster in Daegu (Cho 1994); sports goods and surgical equipment in Sialkot, cutlery in Wazirabad and electrical fans in Gujrat in Pakistan (Nadvi 1992; 1995). In African clusters, the inter-firm division of labour and institutional support tend to be less developed, as observed in the metalworking, furniture making, garment and other clusters in Kenya, Zimbabwe and Tanzania (Rasmussen 1991; Sverrisson 1993; McCormick 1994).

While primarily an urban phenomena, clustering can also be a feature of rural industrialisation, as in Indonesia where one can find the specialization of entire villages (Weijland 1994), for example, the manufacture of roof tiles (Sandee, 1994) or rattan furniture in Java (Smyth 1992). Within the urban arena, clusters located in intermediate towns seem to have been particularly successful, as indicated by their growth records and ability to compete in export markets. In contrast to clusters in small- and medium-sized towns, those in major cities tend to be less rooted historically and have sometimes emerged from informal self-employment coping strategies of the poor. Despite that, many such clusters display a growth potential that goes beyond informal survival strategies and indicates localized competitiveness based on increasing specialisation amongst small firms; examples are the metal and repair workshops in the Takora district of Lima, Peru (Villaran, 1993), and Suame, the industrial shanty suburb of Kumasi, Ghana (Dawson 1992). These are just some of the examples which can be identified in the recent literature and which suggest that clustering is of significance to the industrial organization of small-scale manufacturing in developing countries.

In spite of the growing interest in industrial clusters, our knowledge of how they develop and what factors induce them to take one trajectory of growth or another remains weak.<sup>7</sup> Nevertheless, some conclusions emerge from the review by Nadvi and Schmitz (1994): the growth experience of industrial clusters in developing countries is diverse. At one extreme, in most sub-Saharan African cases

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<sup>7</sup>For a discussion of trajectories of cluster development, see Humphrey (1995).

clustering has had only a minimal impact. This may well be because they are relatively young, with specialization and self-help institutions yet to develop. At the other end of the growth spectrum, there are a number of clusters in Latin America and Asia displaying sustained competitiveness, including in export markets, and with some firms progressing along a quality-innovation growth path. Even in apparently successful clusters, however, there is no obvious replication of the high road to competitiveness seen in the European clusters (See Box 3).

### **BOX 3: HIGH AND LOW ROADS TO COMPETITIVENESS**

It has been argued - for the case of advanced countries - that industrial clusters face two contrasting growth paths: (i) the 'high road', characteristic of the successful industrial districts in Europe and synonymous with innovation, high quality, functional flexibility and good working conditions, and (ii) the 'low road' based on competing on the basis of low prices, cheap materials, numerical labour flexibility and cheap labour (Sengenberger and Pyke 1991). The two roads are seen as mutually exclusive in the European literature - because the low road is seen as undermining the high road through disloyal competition.

In an earlier paper Schmitz (1989) suggested that the large labour surplus existing in many developing countries would induce competition based on low wages rather than innovation and quality improvements. However, the review by Nadvi and Schmitz (1994) suggests that this dichotomy does not capture what has occurred in clusters in developing countries. While some clusters were clearly 'low road', others seemed to show aspects of both roads. Sometimes innovation and cheap labour could be found within the same firms. Sometimes clusters were segmented, with more and less innovative firms existing side-by-side, but serving different markets.

It seems that the labour surplus has been the main factor accounting for the low wages in virtually all clusters, even in the fast-growing ones. While there is little information on how local labour markets have changed over time, it seems safe to conclude that employment tended to increase substantially but wages less so.

## **4.2 TOWARDS A DEMAND-FOCUSED APPROACH**

Given the underlying concern with growth and upgrading in this paper, it is important to identify the causes why some clusters are more dynamic than others. One key seems to be forward linkages and customer orientation. Clusters which have been able to establish/insert themselves into a marketing channel and then develop a capacity to respond to changes in the market have done well. In a nutshell, it seems that dynamic clusters are demand driven. Some of the clearest examples include the cotton knitwear cluster of Tiruppur in India (Cawthorne 1995; Swaminathan and Jeyaranjan 1994), the surgical instrument cluster of Sialkot in Pakistan (Nadvi 1995), and the footwear cluster of the Sinos Valley in Brazil (Klein 1991, Schmitz 1995), all three being major actors in national and international markets. One means of conceptualizing the integration of clusters into international markets is through the concept of commodity chains (see Box 4).

#### **BOX 4: BUYER-DRIVEN COMMODITY CHAINS**

In a number of industries where clusters of firms in developing countries have entered international markets successfully (in footwear, textiles etc.), production is organized predominantly by retailers and international companies whose role is much more with marketing, retailing and organizing the production chain than with production itself. Gereffi (1992) refers to such production systems as buyer-driven commodity chains. A commodity chain is a set of activities involved in the production and commercialization of a particular commodity, and it consists of a set of networks. In the case of footwear, these would be (i) a raw materials supply network, (ii) a production network, (iii) an export network and (iv) a marketing network (Gereffi, 1992:96). Firms can straddle these networks, be involved in only one of them or act as a coordinator between them. Within each network there will be different market niches corresponding to different products. In a buyer-driven commodity chain, the network is driven forward by the buyers, who may be retailers, or intermediaries whose main activity is marketing and design rather than production.

The presence of new customers whose demands in terms of conformance to standards, nature of products and delivery are often higher than those in domestic markets create problems and opportunities for many firms. The ability of local institutions to support initiatives taken by firms to improve their production and design capabilities, and the underlying bases for inter-firm cooperation (kin networks, strong social interaction), are important for the ability of clusters to meet these new demands and, in the longer term to redefine their positions within commodity chains. If local institutions (private and public) are strong, clusters can move into new market niches, extend the span of their activities within the commodity chain or develop new links to final markets.

One of the clearest cases in which demand has been the transforming force is the Sinos Valley footwear cluster in Brazil. In a span of three decades it grew from being a cluster of small shoemakers producing mainly for regional markets, to being a major player in the national and then international markets. There were two critical actors which connected the already existing cluster with the national/international buyers: one was a public institution, namely FENAC; the other was a private actor, namely the export agents. Together these two were the transforming agents in the development of that cluster. FENAC is an organization which organizes trade fairs, initially only for the shoe sector, now also for other industries. Its main event is the twice-yearly shoe fair which attracts buyers from all over the country and other parts of Latin America. The organization also played a role in attracting overseas buyers from North America and Europe in the late 1960s, and thus helped to forge the link with these markets. Once made, the private export agent became the critical figure in making the connection between this cluster of local producers and the international markets.

This emphasis on a demand-side approach to fostering the growth of a cluster finds support from a study carried out by Hermine Weijland (1994) in Indonesia. Her comparative statistical analysis of small firm clusters shows that growth was associated with the presence of marketing agents, confirming the importance of establishing a trade link with non-local markets in order to embark on a new stage of growth.<sup>8</sup> Private intermediaries tend to be more effective than public marketing bodies in making the day-to-day connection between the retailer and the producer (Knorringa and Weijland

<sup>8</sup> A demand-side approach is also advocated in an international multi-agency study concerned with rural small industrial enterprises (UNDP et al 1988).

1993). Public institutions can, however, contribute to the transformation of clusters by organizing trade fairs. Particularly where clusters are dormant, trade fairs can have a catalytic effect: once some producers receive new orders, those who do not will try harder; the fair gives new ideas of what to produce or how to produce; the transparency of the process induces a sense of rivalry amongst local producers, of laggards imitating leaders, of leaders having to search for further innovations. Trade fairs, that is the extreme concentration in time and space of producers and buyers, can have such a jump-start effect.

The problem with professionally run trade fairs is that the cost of exhibiting can deter small firms from participating. In Brazil, this problem is alleviated, because the Brazilian Service for Small Enterprises (SEBRAE) offers to pay small firms half the exhibition cost. This helps the small firm to exhibit at the same place as large firms. To be sure, large firms tend to have larger stalls, but for the small firm there is a guaranteed visibility and exposure. The advantage of this kind of subsidy is that it is easy to administer and induces firms to be outward-going.

The above scheme supports individual enterprises. Supporting groups of firms is an alternative which tends to be more appropriate for exhibition at distant, especially international, fairs. This was how ceramic producers from the Philippines launched themselves internationally. With external support they exhibited their range of products at European fairs.<sup>9</sup> The Brazilian Sinos Valley provides a further example. In the late 1960s when the first steps towards exporting were taken, groups of local shoe producers went to overseas trade fairs in the US and Europe. The groups were organized by the local Business Association and the venture was subsidized by the government. The idea has been repeated more recently (1995) when a group of producers from the Paranhana Valley (an extension of the Sinos Valley) exhibited at the main Asian Shoe Fair in Hong Kong.<sup>10</sup> This time there was no government subsidy and, indeed, it was not needed because the participating producers came from what is now a relatively mature cluster and can self-finance such participation at fairs. Nevertheless, the group approach seems important, not just because a joint stand increases the visibility at the fair. Large fairs are intimidating and a joint stand enables producers to face the world's buyers and competitors with greater confidence, it creates bonds between participating producers, new impressions and ideas are discussed and absorbed more fully. While such group ventures are not always harmonious, more information and ideas tend to be retained, and more follow up is likely, be it in cooperation or rivalry.

None of this is to suggest that trade fairs or a demand-orientation are always an effective way of promoting growth and innovation. They have the potential to stimulate upgrading, but they need to be complemented by efforts (private or public) to respond to the challenges which emerge. In the case of the Sinos Valley, FENAC was only one initiative. A tannery school, a shoes design and manufacturing

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<sup>9</sup> Based on interviews with the President of the Ceramics Exporters and Manufacturers Association and government officials in 1986.

<sup>10</sup> Based on interviews carried out with participants of this group in 1995.

school, and a technology centre were also developed (Schmitz 1995a). At the same time, specific efforts may be required to promote collective learning and responses to the challenges of exporting. Networks and cooperation do not arise automatically from entry into new markets, but it is a powerful trigger.

### 4.3 PUBLIC PROCUREMENT

New and challenging forms of demand need not only come from export markets. A recent **public purchasing** scheme in the Brazilian State of Ceará highlights the potential for a demand-driven approach led by the public sector and coupled with both technical support and the promotion of collective action. In this case, the search for local suppliers to the State government arose out of the need to create employment as part of the drought relief programme. The State sought to promote labour-intensive production of items needed for public works themselves, such as wooden wheelbarrows, as well as items purchased by other departments of the State government, such as wooden furniture for schools and metal grain silos. Attention will be focused here on the procurement of school furniture, particularly desks, from the town of São João do Aruaru. It has been documented and analysed by Tendler and Amorim (1995) on whom this section is based.

The scheme was organized by the Industry and Commerce Department (SIC) of the State government, together with SEBRAE, the Brazilian SME assistance agency. The scheme was customer-driven because the purchasers - in this case the Education Department - were not forced to buy through SIC/SEBRAE. In fact, many in the State government were sceptical about the scheme. They expected poor quality and high transactions costs. While this scepticism might be seen as a problem, Tendler and Amorim (1995:31-33) argue it was a strength. The scepticism and lack of commitment from the purchasers, combined with the high political profile of the initiative, provided an enormous pressure for improvement. They argue that providing protected markets or subsidies only encourages inefficiency and poor quality (1995:38-39). The small producers had to win the confidence of the customer by completing small orders at a lower price and better quality than existing large-firm suppliers.

This pressure would not have produced competitiveness without a collective approach to the small enterprises. According to Tendler and Amorim, collective action by the SMEs was promoted by various aspects of the programme:

- SIC and SEBRAE only offered contracts to associations of small producers, not to individual firms. Where associations did not exist, SEBRAE helped to form them.
- The Association was responsible for quality and product warranties. While each individual producer was identified on the product, faulty products were returned to the Association, which was responsible for them. If the maker had ceased to exist, the Association was responsible for repair.

- The Association had to coordinate the small producers. Orders would be farmed out to individual producers, but payment would only be made once the whole order had been completed.
- The one element of subsidy in the plan was that half of the payment was advanced with the order. This generated working capital for the small enterprises. If one of the enterprises defaulted, the Association had to repay the advance.

Putting the Association at the heart of the process reduced transactions costs - there was one point of contact with the suppliers instead of many. It also ensured that the members of the Association monitored each others' performance. Poor quality, late delivery or failure to deliver at all imposed penalties on all producers. At the same time, the grouping together of firms in Associations with mutual responsibility gave an incentive for producers to learn from each other. It also facilitated learning from SEBRAE. Tendler and Amorim note, for example, that the Association's members met together in advance of visits by SEBRAE's technical staff in order to discuss the issues which were of most concern to them. It was learning driven by the need to satisfy the customer.

The impact of this programme on the town of São João do Aruaru were startling. Before the programme started there were four sawmills with 12 employees in the town. Five years later, there were 42 sawmills with about 350 workers, and nearly 1,000 people were directly or indirectly employed in the woodworking industry in a town of 9,000 inhabitants. Investments had been made in power tools, upgrading the capacity of the producers. Customers had been diversified. In spite of the State procurement programme, 70 per cent of output was going to the private sector (Tendler and Amorim 1995:21-24). The Association had become an important institution in the locality:

The association of producers, formed initially at the State's urging with the purpose of producing the first orders, became a major civic institution in the town, as well as serving the sector. Among other activities, the 42-member association formed a permanent committee for group purchases of timber and other materials; shared equipment among themselves; shared information about opportunities to purchase second-hand equipment; sought ways of preventing sawmill accidents; also pressuring the State to provide an expert on occupational safety . . . The frequent rejections of defective parts at the beginning of the programme translated itself into a self-imposed pressure to improve the quality of the labour force . . . To this end, the Association successfully lobbied the Mayor of São João do Aruaru to arrange night-school sessions for high-school-age sawmill workers.

(Tendler and Amorim 1995:25).

Tendler and Amorim (1995:27) show that a vibrant and competitive cluster with extensive inter-firm cooperation and forward and backward linkages was created out of what was at best an embryonic cluster: four small saw mills. Their case study shows that the collective approach to SME support is not limited to situations where large clusters of firms already exist. The main threat to the broader application of such schemes is their success. Such procurement policy works best if it is concentrated

on a specific area, but a widely-publicized success story creates enormous political pressures for support to be dispersed across as many towns as possible (Tendler and Amorim 1995:53-54).

In summary, this section does not argue for public procurement as a general prescription for promoting small enterprise development. It is only under certain conditions that public procurement is likely to be effective and have a cumulative effect on local industrialization. The two main conditions seem to be that:

- procurement be directed at **groups of enterprises**; a minimum concentration of small enterprises (in one sector and place) is needed for specialization to develop, for producer services to emerge, for sharing of orders to become possible.
- a self help group of benefiting enterprises has to mediate the contract in order to (i) reduce transaction costs, (ii) monitor the delivery of goods and services, and (iii) provide a focal point for inter-form cooperation and learning.

#### **4.4 UPGRADING OF SMALL SUPPLIERS**

A demand side approach necessitates giving attention to the relationship between large firms and their small suppliers. In recent years, this has become increasingly important because of the trend towards deverticalization. Large firms, in order to remain competitive, increasingly focus on core competence and buy in other products and services (Sydow 1992; Håkansson and Johanson 1993). It is an uneven trend, but there is an increasing scope for the role of SMEs as suppliers of large enterprises.

There is, however, a debate about whether small-, opposed to medium-sized or even large suppliers can occupy this space. For the European case, Semlinger (1989) has drawn attention to the difficulties of small suppliers to meet the tight schedules and product specifications, and he has highlighted the risks which small firms face when they enter into large-firm networks (Semlinger 1993). Kaplinsky (1994) shows that the same applies in developing countries. Large firms demand increasingly that their suppliers deliver just-in-time and to high standards of quality. Suppliers are required to respond to orders more quickly and develop schemes which assure a consistent conformance to quality standards. Increasingly this extends also to designing and producing new components which meet the performance criteria of the large contractor.

Evidence from the Brazilian motor components industry suggests that SMEs are having considerable difficulties in meeting the changing demands of the assemblers. Faced with trade liberalization, the assemblers are demanding rapid improvements in both price and quality. Marx (1993) documents the situation of SMEs faced by the demand for ever-reduced prices and better quality. In some cases, SMEs merely withdrew from the market, moving either to the replacement market or into non-automotive products. In other cases, they had experienced considerable difficulty in meeting the



conditions imposed by the assemblers. Even more evident was the fact that the small firms were unclear about what their problems really were and how to go about rectifying them.

Within the policy armoury for SME promotion, there are a number of ways in which such problems can be tackled. Most important in these circumstances would be the provision of a subsidized diagnostic service to establish the needs of particular SMEs and to put firms in contact with approved sources of support.<sup>11</sup> Many such schemes exist around the world. However, these schemes tend to focus on the SMEs rather than on the nature of the relationship between large and small firms. What follows is an example of a scheme which concentrates on the latter.

SEBRAE, the government sponsored Brazilian Service for Small Enterprises, has launched a 'Programme to Upgrade Small Suppliers'. The programme is aimed at small firms who provide specialized components or services and it seeks to raise their quality and delivery standards. To do so it hooks into existing supply chains. For example, in the case of footwear, the entry point is the large shoe manufacturer through whom contact is established with the small suppliers. The upgrading work itself includes training for both the contractor and the small suppliers. Issues covered are both technical and behavioural, since the envisaged improvements can only be achieved if contractor and supplier see and treat each other as partners. Key to the programme is that what is talked about can be practised in existing orders. In the case of the Sinos Valley shoe cluster, the cost of the programme is shared between SEBRAE which pays approximately half, and the participating enterprises. The local business association (ACI/NH) and the Technology Centre (CTCCA) help in the implementation. Once again, links to the customer emerge as crucial aspect of SME promotion. Receiving and interpreting market signals are as important as being able to respond to them.

While it is too soon to assess the effectiveness of this recent initiative, some general observations on its relevance can be made. First, it might be argued that this kind of intervention is unnecessary: raising the quality and delivery standards of small suppliers could be left entirely to the large firms which use them. In fact, some large shoe manufacturers in the Sinos Valley have started to do so, but the SEBRAE initiative has helped to put supplier upgrading on the agenda of local industrialists and shows how to include small suppliers (including homeworkers) in such a programme.<sup>12</sup> Second, public support for such a programme is more than a subsidy to the selected firms. After all, the small firms included are not only suppliers to the large firm through which that programme is organized, they also supply to other firms who will in turn benefit but also be challenged. Such cumulative effects help to raise the collective efficiency of local producers. Third, by organizing around existing contracts and relationships, the SEBRAE initiative avoids two common problems - that enterprises are offered

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<sup>11</sup> A discussion of the implementation of a scheme to improve manufacturing competence in the Dominican Republic can be found in Bessant and Kaplinsky (1995).

<sup>12</sup> The experience of SERCOTEC in Chile is that large firms do not have the resources, experience or incentives to promote small suppliers. An input from public bodies provides the initial impetus to raising their capability and credibility in the eyes of the large firm. Once this is established, the relationship can take on its own dynamism.

assistance before they realize they need it, and that they only realize they have a problem when orders have already been lost. Fourth, such schemes also involve larger firms in the technical problems of smaller firms, which brings new resources to bear. Larger customers will know what they need from their suppliers and they will be better informed of the latest developments in their field. Once a new kind of relationship has been established small suppliers will be in a better position to obtain future support from their large customers.

To conclude, this and the previous two sections focused on the demand side approach. This is not to ignore supply problems and argue against supply side support. Our key points are that dynamic clusters tend to be demand driven and that attempts to transform dormant or embryonic clusters and make them grow are unlikely to succeed by focusing solely on supply side measures. Such support is only likely to have the desired effects if it is fed into enterprises which have inserted themselves into a channel of demand.

Perhaps the clearest evidence comes from ongoing research by Henry Sandee on small-scale industry in Indonesia. He compares producer driven and buyer driven clusters and finds that the latter tended to grow much faster. He also concludes that government-supported innovation programmes have little impact on enterprise development in producer driven clusters (the majority) and most impact in buyer driven clusters (the minority). Finally, he suggests that in attempts to stimulate and upgrade rudimentary clusters, the most effective first step is to take local producers to relevant fairs and markets before injecting training, technical or financial assistance.<sup>13</sup>

Our message in these sections was not that a demand side approach is easy. We emphasized that it is likely to be more effective if it can be directed at groups of firms. The next section will explore this further and draw on examples from Chile on how outside assistance has helped firms to cooperate and help themselves. The grouping also created an effective funnel for the initial assistance.

#### **4.5 HELPING SMEs TO NETWORK**

Our earlier discussion on the European experiences include the Danish network programme and its UK adaptation. This section examines the relevance of such a programme for developing countries, by focusing on the Chilean experience.

Proyectos de Fomento (Development Projects) or PROFOs for short, were introduced by the Chilean government's SME promotion agency, SERCOTEC, in 1990. They provide an example of how policies aimed at promoting networks of SMEs, and in some cases promoting links between these

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<sup>13</sup> Based on a presentation by Henry Sandee (University of Amsterdam) at the EADI Industrialization Workshop in Vienna, November 1994. See also Sandee (1994).

networks and large customers, are able to promote dynamic processes of upgrading of SMEs and provide a strong focus for the supply of support services by SERCOTEC.<sup>14</sup>

The PROFO programme is aimed at creating small networks of firms. It aims to promote direct cooperation between firms, to increase take-up of the other services provided by SERCOTEC for SMEs and to create focal points in local economies which will act as stimulants for development. PROFOs are based on the assumptions that (i) the biggest problem facing small firms is isolation not size, (ii) that the take-up of all of SERCOTEC's services needs to be improved, (iii) that dynamic clusters of firms can have a positive impact on the locality as a whole, and (iv) that the cooperation of the private and public sectors is essential if localities are to develop. The role of the State (SERCOTEC) in this process is to stimulate the participation of private and public sector actors in the locality, to promote the coordination of activities of various agencies, and to promote change and innovation in the relationships between actors (Dini 1993:24). It will be argued that the PROFO initiative involves a collective approach and a strategy of cumulative capability which focuses on the customer.

There are three stages of PROFO development according to Dini (1993:28-29):

- **Preparation.** This involves work by SERCOTEC to identify firms in a particular locality, diagnose their problems and establish the credibility of SERCOTEC itself as an agency which can offer useful support (Dini 1993:46-47). SME owners are not easily convinced that State intervention is good for them, particularly in a highly individualistic and anti-State entrepreneurial culture of the type seen in Chile (Montero 1992). Scepticism has to be overcome by personal contacts and problem-solving directed at individual firms. Any group of firms can ask to form itself into a PROFO, but SERCOTEC must be convinced that a basis for collaboration exists and that there are clear short-term and medium-term goals which might be met. The number of firms will be small - usually between 10 and 30.
- **Consolidation.** This is the main part of the process. The first step is to appoint a manager. The manager's role is, initially, to act as an interface between the PROFO's members and their institutional and market environment. One first task of the manager is to improve the delivery and take-up of support services, and this requires coordination not only with SERCOTEC but also with other local agencies, both private and public. Henriques (1992) argues that once firms are organized into a group they can more easily make their needs felt to institutions and markets. Their size has more of an impact in the market for services to firms. Training providers, banks, suppliers and local and regional institutions will be more willing to respond to the demands of a group of firms articulated by the PROFO manager. A second task is to develop better relations between the participating firms. This is done through such activities as visits to each others' factories, group

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<sup>14</sup> There are other experiences in Latin America of SME support based on building networks. UNIDO has promoted the formation of 34 groups of enterprises in the food, furniture, clothing and leather industries in Honduras (UNDO, 1994).

workshops and group travel. The manager will also work towards building the self-esteem of the group and promoting its activities (Dini 1993:47). Once this is achieved, the participants and the managers can work towards developing competitive advantage based on cooperation. At the same time, the work of the PROFOs is directed towards particular areas of improvement through the bi-annual evaluations of progress, which focus on particular areas of activity, such as product design, process improvement and human resource management (Dini 1993:63).

- **Independence.** The aim of the PROFO initiative is to create groups of enterprises which can develop and sustain their competitiveness, and at the same time encourage other firms in the locality to emulate the experience and inject dynamism into the local economy. For this reason, the managers are appointed for a period of three years, after which the participating firms must take over all support for their salary. The aim is that each group of firms will be self-sustaining. The benefits to the participants will be great enough for private initiative alone to sustain it. In his evaluation of the PROFOs, Dini (1993:70) suggests the following 12 criteria for assessing whether PROFOs are becoming independent:
  - are there collective business activities?
  - is the group capable of generating autonomous proposals for its development?
  - does it contribute more than 50 per cent of its expenses?
  - has it assumed leadership of local institutions?
  - how does the locality react to the PROFO?
  - have more than 75 per cent of firms shifted their human resource strategies?
  - has product improvement occurred in more than 75 per cent of firms?
  - has process improvement occurred in more than 75 per cent of firms?
  - has sales strategy changed in more than 75 per cent of firms?
  - has financial management improved in more than 75 per cent of firms?
  - have participating entrepreneurs diffused the PROFO idea?
  - can the group continue independently in the short-term?

Dini's evaluation of the PROFO initiative showed that 7 out of 10 PROFOs which had been in existence for between 20 and 30 months in November 1993 met at least 4 of these 12 criterion and 4 of the PROFOS met at least 6 of the criteria (1993:37). This indicates a capacity for collective action, and the ability to upgrade. Firms are not only working together, but also taking initiatives on product and process development, human resource development, sales and finance.

The early results from the PROFO initiative exceeded SERCOTEC's expectations. Of the 16 PROFOs operating in Chile in mid-1993 (*El Diáριο*, 16/6/93) a number had expanded their market shares, gaining access to markets in other regions in Chile, to export markets and to large local companies. The latter is particularly significant. In three cases, groups of small metalworking firms have been able to improve their performance sufficiently to begin to supply the State mining corporations in the area, providing locally inputs which had previously been imported or produced in Santiago (*El Diáριο*). This provides a driving force for improvement, since the mining corporations have no obligation to source

from local contractors. They impose higher standards on the suppliers, which in itself leads to upgrading of capabilities.

SERCOTEC was sufficiently encouraged by these results to develop a new PROFO programme specifically directed at export markets. Using the sectoral export committees of the Association of Export Manufacturers (ASEXMA), SERCOTEC has channelled funds towards groups of SMEs wishing to export. Once again the principles are (i) to approach markets as a group, participating at trade fairs or arranging shipping as a group, (ii) obtaining a diagnosis of opportunities and problems for the group, and (iii) developing strategies towards such questions as ISO 9000 certification, standards and quality. SERCOTEC pays for 70 per cent of the costs of a group manager for the first three years, and also subsidizes the hiring of consultants to provide specific help through its Technical Assistance Fund. The manager chooses consultants who can diagnose problems and help with specific areas targeted for improvement. In this case, the customer-oriented focus is particularly strong because the aim of the programme is to stimulate exports. Once groups of firms are faced with the need to meet the demands of challenging customers, and at the same time have the networks in place through which they can learn collectively, a dynamic process of improvement can take place.

Levy's study of SME support in four developing countries shows that State support for export marketing works best with a 'light-touch' and decentralized approach, either mediated by private sector organizations or hybrids of State and private sector agencies (1994:24-27). Levy argues that the start-up costs for exporters are high, and that this is particularly true when the country as a whole is not on the 'export map'. However, as export activity increases, all exporters gain from the country's visibility, and private sector agents, both in the country and from key export markets, take over much of the role of export promotion (Levy 1994: 10-11). State support, then, is particularly important in the early stages of networking for exports. Over time, the need for public support should diminish. Supporting evidence comes from Roberts and Tybout's (1995) research on 'An empirical model of sunk costs and the decision to export'. They suggest that if enterprises are assisted in the initial stages of export, they carry on exporting subsequently. The critical hurdles are the entry or 'sunk' costs of gathering information on foreign markets, upgrading quality and establishing marketing channels. Hence the critical policy question is how to entice newcomers into international trade. Box 5 shows how, in the case of the Chilean woodworking industry, this threshold was overcome through joint action of SMEs which was government supported (though not part of the PROFO programme). The main general point of this section, and indeed one of the main points of this paper, is that networking helps small enterprises to break into new markets and that such cooperation can be facilitated through skilled external assistance.

### **BOX 5: COOPERATION IN THE CHILEAN WOODWORKING INDUSTRY**

Supported by macro policies of export promotion after 1983 and specific export promotion activities undertaken by bodies such as ProChile and ASEXMA (the export manufacturers association), SMEs in the wood products sector began to try and export in the mid-1980s. At first, they were totally unprepared for the challenges they faced and made basic mistakes: 'the "new exporters" had neither enough export know-how (transport, marketing, international quality standards, protectionism) nor sufficient manufacturing competence (knowledge of technology and the organization of work, management strategies, an adequately trained work force)' (Messner 1993, 41).

Firms tried to offer too broad a range of products, failed to guarantee quality, and did not appreciate the importance of reliable delivery. Exporting was a shock to these firms. They thought that their products were good enough for export markets until they tried to sell them (Messner 1993). Such mistakes are common when firms enter export markets. What is notable, however, is how these problems were rapidly overcome.

ASIMAD, the association of small- and medium-sized enterprises provided assistance with learning about markets. It organized trade missions linked to international trade fairs and visits to overseas factories producing both furniture and machinery. It also established links with a number of higher education institutes to create technical and design courses and to promote entrepreneurship, and invited leading authorities on the sector from overseas to speak to its members. At the end of 1993, ASIMAD was preparing to sign a large contract with a leading Italian consultancy firm for training, standardization and certification in an effort to achieve the international quality standard, ISO 9000. The Association sees itself as seeking to emulate the experience of the Italian furniture industry, improving its design, manufacturing capability and skills in order to increase its competitiveness in export markets. In other words, the entry to export markets pinpointed deficiencies and provided the impulse to try to overcome them.

The development of new inter-firm linkages has been a slower development. The leading firms began to develop links with other firms and local institutions, and the growth of joint action in marketing is leading to more exchanges of information about design and technical problems. The size of export orders (much larger than those in the internal market) also tends to promote specialization and cooperation (horizontal and vertical). In this way, new relationships are being constructed, but outside agencies, such as the Fundación Chile have a role to play in establishing them.

A sector which had been almost entirely oriented to the domestic market was able to move into export markets and create the mechanisms needed to make this move a success. In the course of the second half of the 1980s, exports of non-traditional forestry products - veneers, packaging materials - grew rapidly. In the case of smaller manufacturers of wood products (furniture, processed construction materials, boards, laminates etc.), exports increased substantially from 1985 to 1992 (Messner 1993). Cooperation, promoted partly by the State and partly by sectoral associations, played an important role in this success. A long history of community or State action was not required to achieve this - only a desire to capture export markets and a framework of public support centred on private sector institutions.

## 5 CONCLUSIONS

Over the last two decades, a large body of literature has emerged which deals with policies for small-scale industry in developing countries. It was not the purpose of this paper to review this extensive work. Our aim was more limited. We started with the recognition that in many cases the growth prospects of small firms can neither be analysed nor fostered by focusing on individual firms. Particularly through clustering and networking, firms can attain a competitive advantage which eludes isolated firms. The notion of collective efficiency tries to capture this gain. This paper sought to draw together lessons on the role of public and private sectors in enhancing such collective efficiency. To this end, both European and developing country experiences were considered.

The analysis in the paper points to eight main conclusions:

- 1 Clustering matters in developing countries. While a fairly recent focus in research, the case material available suggests that it is common in a wide range of developing countries and sectors. Some of the case studies contradict the widespread export pessimism concerning SMEs.
- 2 Research on clustering in developing countries has been inspired by the competitiveness of industrial districts in advanced countries. The European success stories of the 1970s and 1980s exemplify the power of collective efficiency focused on the need of demanding customers.
- 3 The European industrial district experiences contributed to a double shift in the industrial policy debate: towards more concern with (1) the role of regional and local government, and (2) joint public/private sector initiatives. However, they do not provide policy lessons for making embryonic clusters grow.
- 4 More can be learnt from elsewhere in Europe and in developing countries, where public policy helped to bring about cooperation of enterprises even though the critical mass was sometimes small and previous linkages were few. The examples of network promotion in Denmark and in Chile show that specialization and cooperation between SMEs can be promoted through public institutions.
- 5 Assisting groups of enterprises is more cost effective than assistance to individual enterprises. The collective approach has lower transaction costs and facilitates mutual learning. The approach can be used for both the formation of new networks and upgrading of existing clusters.
- 6 Public support for SMEs in developing countries tends to be overly supply oriented (training, credit, raw materials, technology) and not sufficiently focused on demand. The paper shows

examples of successful **customer oriented** assistance programmes which work through participation in trade fairs, public procurement and SME delivery contracts with large enterprises.

- 7 In summary, intervention is most effective when it is based on the 'Triple C': customer oriented, collective and cumulative. The three 'C's do not necessarily go together, but an SME support approach which is guided by customer orientation and targets the collective is more likely to achieve **cumulative** improvements in competitiveness.
  
- 8 Effective interventions aimed at fostering collective efficiency are already proceeding apace in developing countries. While sometimes inspired by the success of industrial districts in advanced countries, some of the most interesting insights for policy are emerging from experiments in developing countries themselves. Therefore, as regards policy lessons, South-South channels seem to be at least as important as North-South channels for learning from each other.



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