

Collective Effects in Italian and Mexican Footwear Industrial Clusters

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ABSTRACT. The focus of this article is on the analysis of the collective economic effects deriving from the intense set of backward, forward, labor, horizontal and institutional linkages existing within clusters of enterprises. Among the economic effects two main categories are distinguished: external economies, which are the spontaneous by-product of economic activities undertaken within the clusters and cooperation effects, which are the results of explicit and deliberate cooperative behaviors of the economic actors.

In the empirical investigation, these economic effects have been analyzed in four clusters of footwear firms in Italy and Mexico. The first result of the empirical investigation is the confirmation of the importance of collective efficiency both in the 'proper' Italian districts and in the Mexican clusters. Nevertheless, there are considerable differences concerning the intensity and quality of the collective effects between the realities studied. Those differences are explained through the impact of the disparities in the outside environment on the core characteristics of the different clusters. Finally, some considerations about the need for moving from a static to a dynamic approach to explain differences between stages of development and growth trajectory patterns of the districts are put forward.

1. Introduction

In recent years industrial districts generated a great deal of interest among development economists. Traditionally, in less developed countries small firms were seen as socially desirable, but their viability remained in doubt. Their role was to create jobs, to be a seed-bed for indigenous entrepreneurship, to use predominantly local resources, to produce for local markets satisfying the basic needs of the poor, to contribute to a more equitable distribution of income, but rarely were small firms seen as able to become internationally competitive. The success of industrial districts in the West was taken as a sign that small firms could

be economically viable and strongly contribute to the industrial growth of their country. The concept of the industrial district was then introduced in the study of industrial development in the Third World, both at the empirical and theoretical level (Schmitz, 1989; Rasmussen et al., 1992).

The aim of this paper is to contribute to this line of investigation with a comparative study of two footwear districts in Italy and two clusters of spatially concentrated and sectorally specialized footwear enterprises in Mexico.¹ We intend to investigate backward, forward, horizontal, labor and institutional linkages and to classify the collective economic effects deriving from them, by distinguishing between static and dynamic external economies and static and dynamic cooperation effects. Ultimately, we compare the degree of collective efficiency in the Italian and Mexican footwear clusters.

The article is structured as follows: in the next section we present the key factors characterizing industrial districts and we discuss the concepts of external economies and cooperation effects. Section 3 contains the main findings of the empirical investigation on linkages in Italy and Mexico and section 4 provides a classification and a comparison of the collective effects, observed in the cases analyzed. The implications of these findings are drawn out in the last section.

2. External economies and cooperation effects

Research on industrial districts originated in the second half of the 1970s in Italy, where a widespread phenomenon of industrial development based on geographically concentrated and sectorally specialized small firms, was identified by a number of scholars.² The increase in the number of employees, production, exports, and per-capita income in north-central and north-eastern Italy,

Final version accepted on July 29, 1996

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also known as the 'Third Italy',³ attracted the increasing interest of Italian and foreign economists and sociologists,⁴ trying to understand the reasons for this 'economic miracle'. During the 1980s a great amount of research, both at the empirical and theoretical level, was carried out in Italy and in other Western countries, where many agglomerations of small firms, similar to the original Italian districts, were identified.

Based on the very vast body of literature available, we propose to identify industrial districts in terms of four key stylized facts (Rabellotti, 1995b):

- a cluster of mainly small and medium-sized enterprises spatially concentrated and sectorally specialized;
- a strong, relatively homogeneous, cultural and social background linking the economic agents and creating a common and widely accepted behavioral code, sometimes explicit but often implicit;
- an intense set of backward, forward, horizontal and labor linkages, based both on market and non-market exchanges of goods, services, information and people;
- a network of public and private local institutions supporting the economic agents in the clusters.

Widespread availability of external economies and cooperation effects, stemming from the above features and particularly from the last two characteristics, is commonly seen as the key factor making small firms in the districts economically viable and internationally competitive, in other words allowing the districts to reach a high degree of collective efficiency (Schmitz, 1992 and 1995b). Schmitz defines collective efficiency as the sum of unplanned or incidental consequences and planned or consciously pursued effects. Taking the definition of collective efficiency a step further, we introduce the distinction between static and dynamic external economies and cooperation effects (Rabellotti, 1995a).

The existence of external economies in industrial districts can be traced back to Marshall, who stressed in his *Principles of Economics* (1890) the importance of those economies which '*can often be secured by the concentration of many small businesses of a similar character in particular*

localities' (8th edition, 1920: 221). External economies can be defined as unpaid side-effects of activities undertaken within the districts. They tend to be characterized by non-rivalry and non-excludibility which can lead to under-investments in a market economy (Cornes and Sandler, 1986). Moreover, external economies are part of a common pool from which every economic actor can freely draw. In industrial districts a typical example can be the circulation of information about markets or technologies, freely available to every economic actor located in it, who can use the same information, adapting it at her/his potentially different needs. Other examples of external economies are the creation of a collective commercial image of the district and the diffusion of a professional and managerial culture.

Moving on to cooperation effects, they are the result of explicit and voluntary cooperative behaviors which differ by external economies because of two important characteristics: excludibility and compensation. The existence of a mechanism for compensation accounts for the rational interest of economic actors to cooperate among each other, producing cooperation effects and increasing the collective efficiency of the system. In a long term perspective, compensation can assume various forms like monetary exchange, exchanges of information, technology, know how or human capital, building up a reputation which can become useful in future interactions. Besides, the existence of a mechanism for compensation allows the introduction of excludibility in the exploitation of collective advantages deriving from cooperation effects. An example of the effects of cooperative behaviors in industrial districts is the sharing of specific information within groups of firms linked by some form of formal or informal agreements, but in any case explicit. Other examples are projects on technology, marketing, training, design carried out jointly by the members of the entrepreneurial associations or by groups of firms which explicitly decide to cooperate.

External economies and cooperation effects can be static, when they impact the level of productivity of the system, or dynamic, when they impact the system's capability to grow and innovate.

In what follows, we present the main findings of an empirical investigation undertaken in four footwear clusters in Italy and Mexico, explicitly

selected because they satisfy the key element of spatial concentration and sectoral specialization. We investigate the existence, the level of intensity and the quality of backward, forward, horizontal, labor and institutional linkages as well as the external economies and the cooperation effects, which derive from them. Cultural and social background are not explicitly considered, although their relevance indirectly comes out through their interconnections with the economic and institutional aspects of the systems.

3. The case studies

Fieldwork was carried out in four clusters of footwear enterprises: two of them located in Italy (Brenta and Marche) and two in Mexico (Guadalajara and Leon). In those clusters a sample of firms was randomly chosen among the members of the local associations of footwear entrepreneurs.⁵ The sample included 101 enterprises: 50 of them located in Italy (30 in Marche and 20 in Brenta) and 51 in Mexico (30 in Guadalajara and 21 in Leon). In order to take into account firms of different size, the sample is stratified by size, as can be seen in Table I.

TABLE I
The sample: number of firms by size

No. of firms	<50 employees	51–100 employees	>100 employees	Total firms
Italy	24	15	11	50
Mexico	17	14	20	51

Source: author's survey

A closed questionnaire was used to interview the sample firms, focused on investigating backward, forward, labor, horizontal and institutional linkages. The information collected with the questionnaire within the sample of firms was complemented with secondary data as well as with open-ended interviews with Entrepreneurial Associations, sector experts, suppliers, buyers, representatives of institutions supporting the sector.

With regard to the existence of a critical mass of spatially concentrated and sectoral specialized enterprises, the four areas all satisfied this condi-

tion as it was a criterion for choosing the research areas:

- in Marche there are 2,410 firms and in Brenta 680, out of a total 8,547 firms in the whole of Italy (ANCI, 1994);
- in Leon there are about 1,700 shoe enterprises and in Guadalajara about 1,200, out of a total of 4,500 firms in the whole of Mexico (CANAICAL, 1993).

3.1. The Italian districts: Brenta and Marche

Before the presentation of the results of the inquiry in the two Italian districts, it is useful to introduce a few very essential background information about the Italian footwear sector.⁶

The recent history of the Italian footwear industry can be divided up into two main periods: a first long period of continuous expansion from the beginning of the 1960s until 1985 and a second period of crisis and restructuring of the sector which started in the second half of the 1980s. The outstanding growth of the Italian footwear industry was export-led: at the beginning of the 1950s exports represented a mere 3.7% of the total production, in 1970 the proportion of exports increased to 63%, in 1985 it was 83% and in 1993 84% (ANCI, 1994).

More recently during the 1980s, other European countries like Spain, Portugal, some south-east Asian NICs like Taiwan and South Korea and also some developing countries like Brazil, India and China became very competitive in the international market and greatly increased their export share.

Notwithstanding its attempt to counter this increasing competition through a process of trade-up by upgrading its exports, the Italian footwear sector had to start to compete in a market where a large increase in the quantity of shoes supplied faced a stable demand. The competition became stronger because all the new producers could exploit a labor cost advantage with respect to Italy.

The Italian footwear industry is therefore going through a very difficult time, after 30 years of continuous growth: both in the domestic market and in the international market it has to face an increasing competition from countries with a clear advantage in terms of labor cost.

(a) *Backward linkages*. The existence of a very well developed system of suppliers working for the footwear sector represents one of the main assets of the Italian shoe producers: it has allowed to maintain some competitiveness in a market recently characterized by stagnant demand. The ability of suppliers to manufacture a wide variety of products with short delivery times, allows the shoe producers to postpone to the last moment their purchases of inputs. This has several advantages: first of all, it reduces the stocks required for producing shoes; secondly, it leads to the progressive shortening of the period between order and delivery which characterizes the sector and finally, it increases the capacity of shoe producers to diversify their products and to satisfy market demand.

This advanced system of production includes tanneries, producers of components and accessories, suppliers of machines and service firms. From the results of our interviews, as well as from other available studies (Varaldo, 1988; Gaibisso, 1992), it clearly appears that in many cases the collaboration between suppliers and shoe producers is facilitated by spatial proximity and by the existence of long-term relationships (often 15 to 20 years old). These are crucial factors which allows continuous interaction, facilitate comprehension and provide important sources of learning for all actors.

Altogether the relationships between shoe firms and their suppliers seem to be rather satisfactory and in fact 75% of the sample firms have not encountered any particular problems and the remaining 25% sometimes have to face some availability difficulties, namely delays in deliveries. The firms interviewed declare that normally when there are problems with the suppliers they try to solve them together. In most cases it works because, as seen before, they usually have well established relationships, which due to physical proximity and the duration in time have often become friendships. Moreover, if something goes wrong in either direction, i.e. the producer of components does not supply the quality required or the shoe producer does not pay the orders, the information immediately circulates within the district. The consequence is a loss of reputation for the firm which has broken the agreement or ultimately the extreme sanction can be the exclusion from the

community. This informal, but widely accepted, system of social and business rules contributes to creating a very efficient and cooperative system of production, able to satisfy a very diversified and volatile demand.

Wide circulation of information takes also place about products, because component manufacturers are the first to see the novelties and it is quite common for them to offer other firms models similar to what they are already making for one client. The diffusion of information helps smaller firms which do not have the capabilities to produce their own original sample collection to survive. On the other hand, larger firms which may invest a lot of resources in the development of new products try to defend themselves from imitation by other firms in the area through the stability of their relationships with suppliers, based on trust and long-standing collaboration. Naturally, the component suppliers have their own interests in maintaining stable and good relationships with their best clients and will therefore avoid making exact copies of the same products in the same season for other firms.

In the two areas analyzed, Italian shoe producers may also count on the existence of a wide network of small subcontracting enterprises specialized in one or two phases of the production cycle. According to a survey (Varaldo, 1988), more than 80% of the Italian footwear firms decentralize the production of bottoms to subcontractors, more than 70% decentralize the phases of edging and sewing of uppers and more than 50% externalize the cutting phase.

Results from the sample firms (Table II) confirm Varaldo's study (1988) that the production of bottoms is the phase more frequently decentralized. This happens because the produc-

TABLE II
The extent of externalizing production tasks: Italy
(% of sample firms)

% of pairs externalized	None	<50%	51%–90%	>90%
Cutting	26	20	20	34
Sewing	6	16	20	58
Bottoms	10	10	2	78
Finishing	96	2	2	0

Source: author's survey

tion of soles, insoles and heels is a separate phase from the rest of process, using specialized machines, requiring particular labor force skills, and with larger scale economies than shoe production itself. The edging and sewing phases also tend to be decentralized to subcontractors because they are highly labor intensive. However, in firms producing top quality products they may be internalized to maintain a greater control over the process. The cutting phase is important both with respect to quality and cost of the final product, and it depends much on the ability of the labor force. For the production of sample sets every firm needs to have its own internal cutting department. This explains why cutting is somewhat less frequently decentralized than the production of bottoms. Finally, fitting and finishing are usually internalized because it is crucial to have a strict control on these final phases. Decentralization to subcontractors is often adopted only in case of orders too large for the internal capacity of the firm.

According to the enterprises interviewed, the main reasons for decentralization are the reduction of costs (according to 72% of the firms), increased flexibility (54%), the certitude of costs (28%) and increased specialization (26%). The cost advantages of externally decentralizing part of the production arise partly from greater tax evasion and higher exploitation of labor in small subcontracting enterprises. In addition, subcontracting enterprises, being more specialized, are able to better exploit the different economies of scale in the diverse phases of production, efficiently employing the production capacity available. The results being that they produce better products at lower costs, with a shorter lead-time.

Analyzing the relationships among the shoe firms and the process specialized firms (e.g. firms specialized in the sewing or the cutting phases), they are mainly hierarchical, characterized by a strong dependence of the subcontracting firms on the shoe enterprises. Most of the subcontracting firms interviewed stress that their activity depends heavily on the demand of shoe producers, so that they move from period of extra-work to periods in which they do not have enough work to occupy their workers. They are therefore obliged to demand extremely high flexibility of the workers. Often, they employ relatives or very young women, who are normally paid on a piece-rate

basis. Most of the subcontracting firms suffer from their dependence on shoe producers, particularly during periods of crisis, because their workload can be significantly reduced and it becomes difficult to make any organizational plans; they can only wait and hope to be given work by the shoe producers.

More rarely, in these relationships there are also some aspects of cooperation. Some of the footwear enterprises interviewed stated that they often supply raw materials, workforce training, technological assistance and sometimes even credit to some of their subcontractors. They have stable relationships with their subcontractors in order to have more guarantees in terms of quality and service. From the interviews, it appears that this strategy is common mainly among firms which produce a medium-high or high quality product; in this case the stability of the subcontractor relationships is an essential condition for maintaining the required quality level.

(b) *Forward linkages.* The Italian footwear industry led the international market until the mid '80s and for a long time shoe manufacturers faced a market characterized by excess demand. Many of the entrepreneurs interviewed in Italy emphasized that until a few years ago foreign buyers, mainly from Germany, used to go and visit their firms regularly, and all they needed to do was to produce shoes. It was not necessary to make any effort to sell them. Therefore, traditionally the Italian shoe manufacturers did not care much about commercialization and marketing. According to the Entrepreneurial Association (ANCI, 1992), most of the entrepreneurs still identify the quality of their product only from a purely manufacturing point of view, according to the quality of processing and raw materials. Rarely they are aware of the importance of other factors like the image of their products or their brand name.

In Italy, it has been argued that in the footwear districts the efficient way of organizing the production phase is not complemented by an equally efficient system of commercialization (Gaibisso, 1992). In the footwear areas the role of middlemen, who have been so important in other districts, specialized in different sectors, among which we can quote the famous case of Prato and its '*impannatori*', has been very limited. Only

recently in Brenta have some wholesalers begun to play an important role in organizing the production of a number of small firms, but they all come from outside the district. They are foreign or Italian wholesalers, who take advantage of the production skills of some local firms unable to sell their own products on the market and are therefore obliged to become subcontractors. Among the firms interviewed, the few that sell their products to buyers stressed the risk of the dependence on a few, or more often only one customer. Only one firm, interviewed in Brenta, was satisfied with this way of selling its products because it produces very high quality shoes for two well known fashion houses and it believes that the quality of its products guarantees a high degree of bargaining power in front of its customers, who have every interest in maintaining successful and stable relationships.

Commercialization through non-exclusive agents took place in 76% of the sample firms, through direct sales to customers in 22%, through exclusive agents in 16%, through trading companies or in shops owned by the same firm in 8% and in the remaining 8% through consortia with other firms. The relationship with non-exclusive agents often generates discontent among footwear firms because they do not control the activity of their agents and receive very little information about the market from them. Many of the enterprises interviewed realized they would need a more active commercial strategy to be successful in an increasingly competitive market. However, in marketing, economies of scale are important and very few among the Italian firms have the financial capability to invest in advertising or in market research, to set up their own shops or to employ exclusive agents.

A collective solution, rather diffused in the two areas analyzed, is the establishment of export consortia, set up for supporting the export activity of firms with an initial public financial contribution (see beyond in the section on institutional linkages).

(c) *Horizontal linkages.* Evidence about formal agreements of horizontal cooperation is minimal. The only formal agreements among shoe firms found in the sample are agreements for commercial cooperation. Specifically, 8 firms have created

a trading company with some partners, in most cases aimed at entering in new markets.

The most common type of linkages among shoe firms are informal relationships: in our sample 42% of the firms have frequent informal contacts with other firms in their area, 28% have some contacts and the remaining 30% very rarely have relationships. Considering size, small (42% of the small firms in the sample) and medium firms (47%) have more frequent informal contacts than large firms (27%).

As regards the nature of these informal ties, the most important one being the meetings organized by the entrepreneurial associations (42% of the sample), followed by spatial proximity (24%). Moreover, 71% of small firms, 60% of medium and only 18% of large enterprises believe that informal contacts are very important. This different approach towards informal contacts of the different categories of firms may be interpreted as a tendency of small, losing firms to rely on informal cooperation as a sort of solidarity network, allowing them to survive beyond market rules (Rabellotti, 1995a).

(d) *Linkages with the labor market.* The existence of a reservoir of skilled labor is always assumed to be one of the externalities of production organization in highly specialized clusters of firms. The Italian industrial districts are described in the literature as areas where specialized jobs are taught to children by their parents and where skills are accumulated and transmitted from one generation to the other.

This process of collective learning, of knowledge accumulation among people, and therefore of know how circulating among firms through labor force mobility, enhances local innovation capability. In other words, the innovation process, which usually takes place inside the firm, becomes a collective process in the industrial districts, based on common knowledge accumulated in people rather than firms. This mechanism was confirmed by the inquiry: the majority of the firms interviewed employ people who have already been trained in other firms. This strategy is particularly frequent among small firms, which are thus able to save on training costs.

Nevertheless, the labor market has changed in the last ten years: a majority of the firms inter-

viewed (55%) stated that the availability of skilled labor was good during the period from 1980–1985, while in the second half of the 1980s, 70% of the firms said it had dropped. In our survey, according to 46% of the sample firms availability of skilled labor is low, according to 36% is good and to 18% is very good. The entrepreneurial associations and a number of firms interviewed believe that improved welfare and better education, due to the expansion of the footwear sector in the areas, results in an increasing tendency for local young people, who are better educated than their parents, to abandon the sector if they can find alternative, mainly non manual jobs. The resulting interruption of the accumulation and transmission of skills from parents to children, from one generation to the other could, in the future, undermine the collective learning effect which has been so important in determining the competitiveness of the districts.

Concerning the availability of unskilled labor, it seems to be rather good according to the firms interviewed: 44% of them said that availability is very good, according to another 44% it is rather good and in 10% is low.

In the two areas labor climate is also characterized by a high flexibility of the labor force, in terms of the willingness to work extra-hours, week-ends etc. and by generally good labor relationships. All but two of the firms interviewed declared that there is a high availability among their staff to work extra-hours when needed. This flexibility is crucial in an industry such as footwear where production is almost seasonal and the orders tend increasingly to arrive at the last moment. Finally, the existence of very friendly and easy relationships with the workforce is one of the main advantages of being located in the two areas, stressed by a large majority of the entrepreneurs interviewed.

(e) *Institutional linkages.* The importance of institutional support in the growth process of Italian industrial districts has been much emphasized in the literature. This has fueled the myth of an efficient local government able to intervene to support the needs of local industries, creating public or semi-public centers for real services, technological development, commercial promotion and so on (Brusco, 1989 and 1992). However from a

careful investigation of the available literature on industrial districts in Europe, Schmitz and Musyck (1994) conclude that the picture of institutional intervention coming out is patchy and there are few evaluations of the services supplied from the users' viewpoint.

From the investigation carried out in this study, it was clear that central government intervention was of limited importance. Only 20% of the sample firms said they have received any financial incentives. Moreover, the majority of the firms complained about the enormous bureaucratic difficulties to access the incentive schemes, which mainly consist of easy credit terms for small firms or enterprises with innovative projects.

Regarding local governments, they mainly contribute with financial support for some of the initiatives promoted in the two areas by the entrepreneurial associations. Both in Marche and Brenta, in fact, the main institutional actors are the local entrepreneurial associations, which supply a number of services to the members and play an important role in promoting initiatives to support the sector. Among the sample firms the most used services are tax counseling and the organization of trade fairs.

In Brenta, the local association ACRIB (*Associazione Calzaturifici della Riviera della Brenta*) was established by some local entrepreneurs more than 30 years ago and since then it has supported several initiatives like a large export consortium and a center for technological assistance and training. The export consortium (named *Consorzio Maestri Calzaturieri del Brenta*), created in 1967 with an initial public financing, manages collective advertising campaigns, assists firms in their export activities, and runs a data bank on 20,000 customers all over the world. Moreover, the consortium organizes a collective exhibition in Dusseldorf twice a year and promotes researches and market surveys. In 1986 with public money provided by a law aimed at supporting the crafts, ACRIB promoted a new initiative: the *Consorzio Centro Veneto Calzaturiero*. The main areas of intervention of this institution are: technology assistance, quality control, environmental control and training.

Besides ACRIB, in Brenta there is also a quite active association of artisan firms with more than 500 members in the footwear *filière* which

supplies several services like book-keeping, labor and tax assistance, consultancy for facilitating access to credit.

In Marche, there are two entrepreneurial associations, in Fermo and in Macerata, which supply services like training, book-keeping, fiscal and financial assistance to their members. In Fermo there are 650 members, and only 140 in Macerata because the footwear area in this province is smaller than in the area around Fermo. The two associations have recently launched a new initiative: a specialized center (SCAM – *Società per la calzatura Marchigiana*) supplying technological assistance, training, fashion information and promotional activities. The services are usually supplied at very low costs because they are partially financed by public grants (i.e. the training courses are financed through EC grants). An interesting project of the center is a monthly trade fair, where local producers exhibit and sell their products, outside the traditional seasonal appointments of the main national and international trade fairs.

During the 1980s thanks to an initial public grant several export consortia were created in Marche, to supply services like translations, fax facilities, assistance with export procedures. Recently, some of them have moved towards a more specialized variety of services like market surveys and promotional activities in new markets (i.e. Japan, Arabian countries, Australia). Among the services supplied there is also the access to international data banks about customers, inventories of unsold products and subcontracting opportunities.

In Marche there are also a few consortia to facilitate access to credit. One of them, promoted by the entrepreneurial association in Fermo, has 300-odd members and provides common guarantees, easy credit terms and access to long and medium-term credit.

Both in Marche and Brenta most of the firms prefer to deal with local banks because they often know the people who work there and usually this helps in obtaining credit. However, it must be said that the easier access to credit in local banks, based on trust, friendship and high circulation of information, as opposed to national credit institutions, may become an important constraint when firms go through periods of crisis. Local banks

immediately know about the difficulties and make access to credit even more difficult. This happened recently, according to a large part of the firms interviewed both in Marche and Brenta, when the reaction of local banks to the difficulties in the footwear industry was to drastically reduce credit availability to shoe firms.

To conclude, the activities of Marche and Brenta entrepreneurial associations were, in general, assessed positively by the entrepreneurs interviewed, who also participate in them quite actively. However, the tradition of institutional intervention is more firmly established in Brenta than in Marche and this is confirmed by the well organized activities supplied by the specialized centers. In Marche, according to many of the entrepreneurs interviewed, there is little tradition of collaboration and institutional intervention and this is confirmed by the only recent establishment of a service center in an area of specialization which is the most important in Italy. The need for greater institutional intervention is also confirmed by the general opinion among the entrepreneurs in Marche, who very often quote the Brenta case as a good example of how institutions can help the sector.

3.2. *The Mexican clusters: Guadalajara and Leon*

Mexico was a protected market for a long time, having adopted an import-substitution strategy, which was drastically abandoned in 1988 with the opening up of the economy to foreign competition. The acceleration of the opening up of the Mexican market to international competition, through the elimination of import licensing and tariff reduction, had a big impact on the footwear industry. The market was flooded with imports which increased from US\$ 13.7 million in 1987 to US\$ 148.2 million in 1991.

For many decades the domestic producers took advantage from a protected market where there was excess demand; to make money in the sector was easy because every kind of product was sold, no matter what its quality, design and cost. Nowadays, international competition is becoming stronger, and the Mexican footwear enterprises are starting to realize that they must increase their

efficiency if they want to survive and grow (Rabellotti, 1995a).

(a) *Backward linkages*. In Mexico the relationships between suppliers and shoe producers are less collaborative than in Italy, being based mainly on a pure market mechanism. Many sample firms complain about the low quality of components and raw materials, the scarce attention to fashion changes and the bad service provided by their input suppliers. In their turn, suppliers do not accept responsibility for their low development and accuse shoe entrepreneurs of having always adopted a strategy more focused on price than quality. Suppliers complain of unstable demand, of small order sizes, of continuously changing products, and of delays in payments. Both the suppliers of components and the manufacturers blame each other and the main deficiencies are of communication and collaboration among the two linked sectors.

However, with the opening of the market and the increase in shoe and component imports, the relationships between shoe producers and suppliers are improving and becoming more collaborative. The majority of the suppliers interviewed agree that they now try to work close to their customers in developing products and they are also available to adapt products to the needs of the shoe producers. On the other hand, some of the footwear firms interviewed are now more satisfied about their relationships with suppliers and they are trying to set up stable linkages, building up an ability to cooperate in defining fashion trends and product characteristics.

To increase the stability of demand, some groups of shoe producers have tried to organize common purchases. Some wholesalers are also working in this direction, organizing the purchases of components and raw materials for all their clients and therefore guaranteeing large and stable orders for the suppliers. Moreover, both in Leon and Guadalajara the local Credit Unions of shoe entrepreneurs have recently launched a program for pool purchasing; their objective for the near future is to import components from abroad jointly.

Some efforts towards a more cooperative attitude between shoe producers and suppliers have also been undertaken by the *Camara del*

Calzado – the footwear entrepreneurial association – and the association of suppliers in Leon, which have begun to organize meetings to discuss and jointly elaborate fashion trends. Together with the *Camara del Calzado* in Guadalajara, the two associations in Leon have also begun to work on the standardization of the measurement system. The lack of a standard, commonly accepted measurement system is a major obstacle for the development of an efficient system of specialized firms. The case of lasts is well representative of the situation: in Mexico every footwear firm requires its own models, based on a measurement system which is different for every firm.

Concerning subcontracting of phases of the production cycle, in Mexico, according to several recent studies (Boston Consulting Group, 1988; Concalzado, 1991; Dominguez-Villalobos and Grossman, 1992) and according to the results of our own survey, the level of the division of labor is generally low (Table III) and certainly much lower than in Italy (Table II). Mexican shoe firms generally decentralize some phases of production cycle only when they receive orders too large for their internal capacity. About 50% of the sample firms do not externalize any stage of the production process. This low level of the division of labor can be explained by two main factors:

- backward linked industries have remained at a low level of development with regard to design, fashion quality of components and service because the former protection of the domestic market has limited competition and, therefore, the incentive to innovate. We know from Adam Smith that the division of labor is limited by the extent of the market and this seems to apply to our Mexican cases;

TABLE III
The extent of externalizing production tasks: Mexico
(% of sample firms)

% of production externalized	None	<50%	51%–90%	>90%
Cutting	94	6	0	0
Sewing	80	20	0	0
Bottoms	59	4	4	33
Finishing	100	0	0	0

Source: author's survey

- the sector lacks a standard technical language and a common, universally accepted, measurement system and this strongly increases transaction costs.

The poor level of development and the difficulties of communication with backward-linked industries induce many shoe firms to internalize as many phases of the production cycle as possible in order to reduce their dependency on an unstable, low quality supply. Vertical integration means different phases of production are carried out inside the firm, with a lot of problems of organization of the production cycle, because the different phases are characterized by very different economies of scale, different degrees of labor intensity and different processing times. This production structure is even common among very small enterprises.

More recently, there is an increasing number of firms which, after having interrupted their activity as shoe producers because they were hit by fierce competition, began to work as subcontractors specialized in the production of uppers. Most of the subcontracting firms interviewed stated that they strongly depend upon and suffer from the still very unstable flow of work from the shoe producers. According to them, this instability limits possibilities for the development of a well-organized and efficient system of process specialized enterprises, like in the Italian districts.

To conclude, in the Mexican clusters notwithstanding the local concentration of suppliers, the lack of competition has often reduced the advantages in terms of price and service deriving from the good local availability. Nevertheless, with the opening of the market the quality of linkages between suppliers and manufacturers have begun to improve. Besides, there is also a trend towards an increasing decentralization of some phases of production. Nonetheless, to increase the degree of division of labor and the competitiveness of the industry, the two clusters need to become well-organized systems, where shoe producers may rely on quality and prompt deliveries from subcontracting firms and their linkages with suppliers are not only based on a price factor, disregarding some important aspects such as fashion and design, material quality and delivery service. From this

point of view the Italian footwear districts may actually provide some interesting lessons.

(b) *Forward linkages.* The Mexican footwear industry traditionally neglected commercialization and marketing because the domestic market was closed to international competition for long time and this allowed the domestic producers to produce shoes which were easily sold on the protected market, no matter what the quality, design, fashion content were. Generally speaking therefore, the Mexican footwear firms suffer from problems similar to those of the Italian enterprises: they have limited control over their market and little knowledge of it; they depend on non-exclusive agents and they are not used to adopting active commercial strategy to sell their products on a competitive market. Among 63% of the sample firms the main factor of competition is price, only 24% of the firms interviewed believe that design is an important factor and 12% that quality is important.

Considering marketing channels, 74% of the sample firms sell part of their production through non-exclusive agents, 51% through wholesalers and finally 16% through trading companies or shops owned by the same firms and another 16% directly to retailers.

One of the main consequences of a very fragmented distribution system dominated by independent retailers is the small size of orders: according to the Boston Consulting Group study (1988) the most frequent size of orders in the domestic market is around 300 pairs, but sometimes shoe producers receive orders for very few pairs. The possibility of working on the basis of larger orders and therefore to be able to plan production process on a longer term basis and to exploit the economies of scale deriving from specialization in a few products, is the main reason that has pushed an increasing number of firms to sell to retail chains and supermarkets. Another important reason stressed by some of the firms interviewed is related to better payment terms guaranteed by retail chains and supermarkets as compared with small family shops.

According to the firms interviewed which sell to retail chains, the relationships are definitely of dependency because these chains generally adopt a strategy based on the search for the lowest

possible price on the market. Many stories are told about some of these chains contacting some firms to buy their models and then commissioning other firms, on the illegal market, to manufacture the same products at a lower price. Some of these chains are also believed to be responsible for most of the illegal imports of very cheap synthetic or fabric shoes, which have invaded the low-price market during the last few years.

However, a few firms interviewed told us that, although most of the retail chains still maintain a very traditional strategy of commercialization based on price, some of them and particularly supermarkets, are progressively increasing their attention to quality and therefore some of the shoe producers try to limit their dependency on them, increasing the stability of their relationship by supplying good service and a stable quality of products.

Recently, an interesting experiment was started aimed at developing a stable and constructive relationship thanks to a few wholesalers. They have adopted a new strategy aimed at selling a quality product and have therefore selected a group of shoe firms with which to collaborate. Technical staffs employed by the wholesalers regularly call on the shoe enterprises, controlling quality and giving advice on technological and organizational matters; moreover the wholesalers organize a system of pool purchases of some key components or raw materials like leather, in order to guarantee a stable quality level, better prices and good service. Among the firms interviewed, the ones linked to wholesalers through such a relationship were generally very satisfied, not only with the sales, but mainly with the complementary services, like technological and organizational assistance, they receive. Many of them have been able to introduce important improvements in the organization of the production process and in the quality of their products thanks to the collaboration with these wholesalers. Naturally, they realize that depending on one main customer, who can always find another enterprise able to make the same product at a lower price, is very risky; but most of the firms also realize that they do not have enough marketing and commercialization skills to compete on the market on their own. Therefore they try to build up a linkage with the wholesalers where both parties have an

interest in collaborating, at least partially offsetting dependency.

(c) *Horizontal linkages.* In the two Mexican footwear clusters, cooperation among sample firms is aimed at the exchange of technological information and sometimes of machines in 12 firms, at subcontracting and farming out part of the production when they have excess orders in 9 firms and at the establishment of commercial agreements in 6 cases. In the majority of the firms interviewed the interactions take place among small groups of firms linked by family ties and/or long-standing friendship.

In Guadalajara, linkages among firms outside family groups have been favored by an initiative promoted by the local *Camara del Calzado*, inspired by a UNIDO methodology initially aimed at favoring the growth of small rural enterprises to reduce emigration towards urban centers. The project consists of promoting the creation of *agrupamientos industriales*, initially based on a course for entrepreneurs who had to agree to organize a visit to their own firms by the other entrepreneurs in the group and to allow an outside expert (a business student in her/his final year) to make diagnoses of their firms. In 7 years 7 groups, involving about 120 enterprises, began in this way and afterwards some of these groups have carried on with regular meetings to discuss problems related to technology, marketing, suppliers and so on, and to exchange information about clients, machines, workers, and orders.

Another interesting initiative has very recently been promoted at national level for the creation of *empresas integradoras*. The program, which was inspired by the Ministry of Trade after a visit to the Italian industrial districts, aims at creating companies established by groups of firms for jointly selling products or buying inputs or any other common objective. The new companies enjoy financial and tax incentives and facilitated bureaucratic procedures. In the survey we found three projects for the creation of *empresas integradoras*: one is for the creation of a new common site for a group of 7 enterprises linked by family ties, another is a group of 15 very small firms in Leon (with fewer than 7 employees in each firm), which after a successful experience of joint participation in the local trade fair, would like to

create a trading company with a single brand name for all their products and finally there is a group of 5 tanneries in Leon, which would like to create a company for joint buying and selling, and supplying common services like book-keeping and training.

Apart from these initiatives aimed at favoring interactions among firms, informal relationships are frequent among 80% of the enterprises interviewed and they are considered an important asset by almost all. The role of the entrepreneurial associations seems to be very important in inducing informal contacts among firms because, according to 37 firms, events organized by the *Camara* are the most important opportunities for informal exchange with their colleagues. Family ties also play an important role in 17 firms and, finally, social events are important for 11 firms. Several forms of cooperation in many different aspects of a firm's life, arise from these informal contacts. These include exchanges of technological and market information, exchanges of machinery and workers, sub-contracting of orders in case of excess demand, joint commercialization, joint purchases of inputs, and joint recovery of credits.

Notwithstanding a lot of informal linkages are going on within the two clusters analyzed, significantly 65% of the interviewed firms expressed a desire for more stable, organized and focused on specific objectives relationships with other firms.

(d) *Linkages with the labor market.* Analyzing the characteristics of the labor market, the main problems emphasized by the sample firms were in order of importance: the low availability of a skilled workforce and the high turnover of the labor force. According to 65% of the sample firms, skilled labor is a scarce resource and qualified workers demand relatively high salaries and good-working conditions. This explains why small and medium firms, which usually can only afford to pay lower salaries and offer more unstable working conditions, because of the irregularity of orders, have more difficulty in hiring. Unskilled labor represents a less important problem (only 4 firms believe that locally there is a low availability), because there is a large reservoir of young people, mainly women, available to work. According to most of the sample firms, the main

problem with unskilled labor is the high turnover, because workers move away from the footwear sector as soon as they find a job in other, more remunerative sectors or, in the case of women, when they get married.

Training was also investigated. In most of the sample firms training takes place inside the same firm. External training is generally reserved for supervisors, technicians or designers; less skilled workers like edgers are very rarely trained outside the firms. A problem emphasized by many firms is the risk of losing their workers sent to be trained outside, because they find better paid jobs. Skilled workers are heavily sought after and frequently 'pirated' from one firm to the other. This is a very common problem among small scale enterprises, which usually pay lower salaries than larger firms: a typical case of market failure which justifies some kind of extra-market intervention to make up for the firms' negative attitude about external training for their workers.

Finally, the rate of unionization is very low both in Guadalajara and in Leon, because the sector grew up in a family environment with entrepreneurs who, in most cases, started as manual workers in other firms and therefore establish relationships based on friendship and solidarity with their employers.

(e) *Institutional linkages.* At national level there are no specific policies addressing the footwear sector, nevertheless some of the sample firms which export part of their production have access to the scheme of financial incentives for exporting enterprises. Other firms have obtained easy credit terms from *National Financiera*, the Mexican bank for industrial development. A recent policy initiative which seems to have some potentialities for supporting the footwear industry is the program to favor the creation of *empresas integradoras*, described above.

At local level, a number of important institutions have been identified both in Guadalajara and in Leon, some are associations of firms, while others provide special services to the footwear industries. Entrepreneurial associations (*Camara del Calzado*) are the most important institutions supporting the footwear industry in Mexico; there are three local associations, in Guadalajara, Leon and Mexico City, and a national one aimed at

coordinating the activities of the three local *Camaras*. The role of these associations, financed through the membership fees and profits from the organization of the trade fairs, is to supply services like fiscal, legal and labor advice, managerial training, organizing of trade fairs and lobbying activities at a political level. Entrepreneurial associations also exist for the tanning and component sectors.

In Leon there is also a center for research and technological assistance (CIATEG – *Centro de Investigacion y Asistencia Tecnologica del estado de Guanajuato*), created as an agency of the central government, and which can be considered an arm of the Mexican National Science and Technology Council. The center was created with the objective of supplying technical and quality control services and specialized training to the footwear industry at national level; in fact, it is mainly used by Leon's enterprises, leaving shoe firms in the rest of Mexico almost without any technological support.

A similar institution in Guadalajara is the *Instituto Tecnológico del Calzado* (ITC), established in 1984 with support of the local *Camara* and a grant from the World Bank and devoted to training and technological research. Its activities include a diversified program for training designers, skilled manual workers like edgers, and also managers and entrepreneurs.

Both in Guadalajara and Leon there is a credit union aimed at obtaining credit for its members at more favorable conditions than the market rates because it can borrow directly from *National Financiera*. In Guadalajara the credit union is linked with the *Camara* and it was promoted by an initiative of some entrepreneurs taking part in the *agrupamientos industriales*. Its activity has recently increased thanks to the active participation of a number of small entrepreneurs who got involved in 1991 when the union was suffering a bad crisis due to the decrease in credit availability in the country. In Leon, the credit union is fairly recent (established in 1992) and it does not have any linkage with the local *Camara*.

The existence of a relatively well developed institutional support network for the footwear *filière* is a very important condition in the case of adoption of a growth strategy based on an approach at system level. Institutions like the

Camara del Calzado can have a very relevant role in diffusing among entrepreneurs a systematic vision of their business, in other words the idea that the survival and growth of their own firms strongly depends on the development of the whole system of shoe firms, suppliers, buyers, market agents, service firms and supporting institutions.

4. A classification of collective effects

Section 3.1 and 3.2 describe the linkages among economic actors found in the case studies in Italy and Mexico. The aim of this section is to classify the collective effects deriving from those linkages in terms of the concepts introduced in section 2: external economies and cooperation effects. In order to classify the collective effects, a two-dimensional classification may be usefully introduced: in Table IV the collective effects are mapped out on one side according to their being incidental and excludable and on the other side according to their static or dynamic objective.

Let us begin with external economies which derive from unplanned, incidental relationships among the economic actors who interact within the system. The most typical incidental relationships usually going on in every district and therefore also in the Italian and Mexican footwear clusters are the frequent social occasions, like casual meetings in the streets, cafes, clubs and business occasions, like meetings at entrepreneurial associations and at suppliers' facilities. A flow of information about products, markets, fashion trends, bad and good customers, suppliers, process specialized firms and technology is generated from these continuous interactions and freely circulates within the districts. This circulation of information generates both static and dynamic external economies.

With regard to static external economies, the free circulation of information may allow firms to be productive because they get access to information which otherwise they could not afford. This type of external economy is particularly significant for small firms, which can rarely afford market studies, participation in foreign exhibitions or subscriptions to data banks. The free availability of information also contributes to the birth and survival of small firms; this allows a continuous renewal of firms and recycling of the human

TABLE IV
Collective efficiency: a classification of effects

		External economies	Cooperative effects
Static	Marche and Brenta	– high availability of free information; – high availability of inputs at competitive prices, at great speed, at low transaction costs; – high division of labor; – collective reputation;	– cooperation with process specialized firms; – cooperation in export consortia, in credit consortia, entrepreneurial associations;
	Guadalajara and Leon	– high availability of free information; – good availability of inputs at market conditions; – low division of labor; – collective reputation;	– cooperation in export consortia, in credit consortia, entrepreneurial associations; – cooperation in <i>agrupamientos industriales</i> and <i>empresas integradoras</i>; – cooperation with buyers;
Dynamic	Marche and Brenta	– demonstration effects on attitudes and motivations; – high collective learning;	– strong cooperation with suppliers of raw materials, components, machinery; – cooperation with process specialized firms; – rare cooperation in export consortia, credit consortia, entrepreneurial associations;
	Guadalajara and Leon	– demonstration effects on attitudes and motivations; – low collective learning;	– very little cooperation with suppliers of raw materials, components, machinery; – rare cooperation in export consortia, credit consortia, entrepreneurial associations; – rare cooperation in <i>agrupamientos industriales</i> and <i>empresas integradoras</i>; – cooperation with buyers;

and capital resources available in the districts. Nevertheless, it also permits the survival of some inefficient firms, which only have a very superficial market knowledge and which base their competitive edge on their ability to make shoes and take advantage of low entry barriers. This category of firms can be defined as followers or, even free-riders of the district, because they usually tend to exploit resources created by other more innovative firms, for instance they imitate successful products at lower costs and lower quality. It can be said that these firms ‘use’ the district to compensate their structural and strategic shortcomings. Furthermore, it should be added that, although during the period of excess demand they could easily find a market for their products both in Italy and in Mexico, nowadays facing increasing competition they are usually the first to suffer. So, for instance, in Italy many small firms unable to develop an independent product and marketing strategy become subcontractors for other enterprises, or even close down. In Mexico, the same phenomenon occurs, with an increasing number of

firms closing down in the formal market to become informal activities, non-officially registered and therefore able to survive without paying taxes and paying less than the legal minimum wage. We can conclude that these external economies contribute to the collective efficiency of the systems analyzed, but firms which rely too much on such incidental effects have shown low performances.⁷

The free circulation of information can also have dynamic effects, generating a sort of demonstration effect on attitudes and motivations which may induce economic actors to introduce innovations in processes, products or forms of organization and contributes to the growth of the system. This positive spontaneous effect of clustering is common in Brenta and Marche, in Guadalajara and Leon, as well as in many other clusters of firms in industrialized and developing countries.

The local concentration of firms which produce or sell inputs, machinery and services and firms specialized in some phases of the production process at competitive prices, at a high level of

specialization generates some important static external economies. Every firm located within the district can in fact save on input costs because of the high competition among suppliers, because transaction and transport costs are lower due to the spatial and cultural proximity and because firms can maintain very little inventories, being able to buy what they need rapidly. Moreover, shoe firms can easily put out some phases of the production process to highly specialized firms, able to exploit the different economies of scale which characterize the phases of the production cycle. These external economies definitely characterize the two Italian footwear districts and this represents one of the main competitive advantages that prompted the growth of the Italian footwear industry during the 1970s.

With regard to the Mexican clusters, the situation is different because the long closure of the domestic market has not encouraged the growth of a competitive industry of suppliers and process specialized firms. Mexican shoe producers in Guadalajara and Leon can therefore locally buy most of the inputs they need and they may save on transportation costs, but the lack of competition has greatly reduced advantages in terms of price, quality and service. Moreover as seen in section 3.2, Mexican shoe firms are usually more vertically integrated and they tend to put out some phases of the production process only when they have excess orders, without any important gains in terms of specialization. The low degree of division of labor is also partly due to the high transaction costs generated by the lack of a standardized measurement system. From the empirical investigation it appears that the advantages in terms of face-to-face contacts, typical of clustering, are partially offset by the high transaction costs deriving from the lack of standardization. This makes the relationships of shoe producers with suppliers of components and process specialized firms particularly difficult and costly and limits the gains from clustering in Mexico.

Another type of static external economies, typical of industrial districts, is the effect of collective reputation, in other words the attraction of customers achieved by a large concentration of specialized producers. So for instance, German buyers know very well that they can find high quality women's shoes in Brenta and they go there

to buy. The same is true in Mexico: Guadalajara is the largest market in the country for women's shoes and Leon for men's and children's shoes. This enormously facilitates access to distant markets.

There is a negative side of these external economies, too. The reputation of the district is in fact usually rather homogeneous and therefore, for instance, shoe makers from Marche are known for producing a medium-low quality product. This collective reputation may have a negative effect on firms trying to differentiate their production towards different segments of market.

Finally, the high local availability of skilled labor is a dynamic external economy from which the firms located in Marche and Brenta and to some extent the firms in Leon and Guadalajara take advantage. The accumulation of know how in people moving from one firm to the other generates a process of collective learning which enhances the system's innovation capability. This typical characteristic of Italian industrial districts is less evident in the Mexican clusters, where the availability of skilled labor is more limited. It must be added that some changes may soon occur also in the Italian districts with respect to collective learning as a consequence of the increasing tendency of well-educated young people to seek non-manual jobs, mainly in sectors other than the footwear industry.

Moving to cooperative effects, in Italy explicit cooperative linkages between the shoe producers and their suppliers of raw materials, components and technology have been frequently found in the empirical investigation. Shoe firms and their suppliers often work together to develop new products and the cooperation is based on the self-interest of both parties in maintaining a stable relationship. These cooperative linkages represent an important contribution to the system's capability of innovation and growth and their effects can be therefore defined as dynamic. Thanks to those linkages, shoe firms are able to supply a very diversified, quality product in a time-to-market which is shorter when compared with the shoe industry in many other countries.

The links between shoe producers and process specialized firms are quite frequently characterized by a clear dependence of subcontractors on shoe enterprises, which define the payment

conditions and can choose another firm if they are not satisfied of the quality or the service. Nevertheless, in some cases there is also some form of cooperation, because some shoe firms prefer to have stable relationships with their sub-contractors and therefore they try to solve incidental problems and supply the needed training and sometimes even financial or technical help. Moreover, these linkages are facilitated by the low transaction costs within the districts due to the easy face-to-face contacts. The cooperative effects deriving from these linkages can be either static or dynamic.

In Mexico, similar cooperative linkages with process specialized firms are very rare because shoe firms tend to be highly vertically integrated. Only a few firms have been recently pushed by increasing competition to move towards a higher division of labor and more cooperative linkages. But, this is still an *in fieri* tendency.

Also the linkages with suppliers are less cooperative than in Italy and they can be defined as market relationships, based on a price factor. This means that thanks to clustering the Mexican shoe producers can locally buy raw materials, components and machinery but as opposed to the Italian districts they rarely cooperate developing these inputs and they must buy what is available on the market, at the market terms. The weakness of backward cooperative linkages can be explained by the long closure of the domestic market, which has not favored competition based on product quality, fashion contents and design, either in the shoe market or in the component and accessory market. Only with the recent change in trade policy, namely with the opening up of the market, have some of the shoe firms and some of their suppliers begun to realize that they belong to a system in which the success of one firm strongly depends on its interactions with other firms. Therefore, relationships are becoming more cooperative and firms are trying to build stable linkages based on a mutual self-interest in improving quality and service.

In Italy, some cooperative linkages have been found among firms which belong to export consortia and in other commercial agreements. Linkages in export consortia may be defined as dynamic if they are aimed at discovering new markets; they are otherwise static. In Mexico,

these type of consortia have not been found. Relationships within credit consortia, entrepreneurial associations and other service centers aimed at supporting the footwear industry can be also defined as cooperative linkages, and they can be found both in the Italian districts and in the Mexican clusters. All these relationships are characterized by an explicit decision of a selected group of firms to cooperate for several aims like jointly selling their products, dealing with banks or utilizing joint services supplied by entrepreneurial associations. Their effects are therefore static, apart from when they involve cooperation for carrying out some joint innovative projects.

In Mexico, other forms of cooperative agreements are the *agrupamientos industriales* and the *empresas integradoras*. These are two experiences promoted precisely with the aim of favoring the development of cooperation among selected groups of firms. Their effect is more frequently static, when they regard cooperation among firms which exchange machinery, labor force or orders or buy inputs jointly. They became dynamic when, more rarely, they involve cooperation on innovative projects. Besides, we may add that these forms of cooperation can be also found among groups of firms linked by family ties.

Finally in Mexico, a few cases of linkages have been reported between shoe producers and buyers, based on cooperation to produce good quality products and sometimes to introduce innovations on products, processes and organizational forms. However, relationships based on a strong dependence from the shoe producers' viewpoint are also common, because they often sell most of their production to only one customer. In Italy aside from a few exceptions, buyers do not play a really significant role in commercialization and they tend to have a market relationship with their customers, without intervening in the phase of product development and production.

The linkages with non-exclusive agents can be also defined as pure market relationships both in Italy and in Mexico. From the empirical investigation it appears in fact that the relationships with non-exclusive agents very rarely involve an exchange of information, in most cases they are instead pure market linkages in which agents sell the products of different firms, without a real contribution to the development of new products

based on market needs. This represents an important limitation both for the Italian and the Mexican footwear industry, which have developed very weak forward linkages with the market and have one of their biggest weak points in the commercial function.

In the Mexican case the reason for this weakness may be found again in the lack of competition, which has made it unnecessary to develop the marketing and commercial function for selling products in the protected market. The reason for the weakness of forward linkages in the Italian districts is more complicated. In this case the reason can be found in the capability of the Italian footwear firms, during the 1970s and the first half of the 1980s, to impose their products on the international market without the need to develop a commercial and marketing function. Before the advent of the international competitors like Brazil, Spain or Portugal, Italian shoes were in fact bought for their quality and fashion content and for the service supplied in terms of speed, variety of products, flexibility. This characteristic of the market has favored the development of districts that are highly developed on the production side but weak in commercial and marketing functions. Since the mid 1980s, the increasing competition in the international market, due to the 'arrival' of new producers, mainly from newly industrializing countries, has generated some difficulties in the two footwear industrial districts analyzed, as well as in many other Italian areas specialized in footwear. The number of firms has begun to decrease, the exports have slowed their continuous growth and the domestic market has been invaded by imported shoes competing with the Italian products. As a result of these changes, the need to develop a marketing function has become clear to an increasing number of firms, which react to these changes in several ways, influencing the organizational structure of the industrial districts (Camagni and Rabellotti, 1995).

To conclude some general considerations about the degree of collective efficiency in the four cases analyzed can be drawn from Table IV:

- external economies emerge both in Italy and in Mexico. However, there are some main differences concerning the availability of inputs, the degree of labor division and the availability of

skilled labor. In all these cases the production of external economies is higher in the Italian districts than in the Mexican clusters;

- cooperative effects are definitely more common among the Italian firms than the Mexican ones. The main differences are in the relationships with suppliers and process specialized firms, which are based on cooperation in Italy and mostly on market rules in Mexico.

As expected from the comparison of very different realities – two proper districts in Italy and two clusters in Mexico – we may conclude that the degree of collective efficiency, to which external economies and cooperative effects contribute, is higher in the Italian districts than in the Mexican clusters, where firms can exploit fewer clustering advantages. In the final section, we elaborate on this conclusion.

5. Some final considerations

From the results of the empirical investigations we can derive a confirmation about the importance of collective efficiency, not only in the two Italian districts, but at some extent, also in the two Mexican cluster. The analysis of the collective effects deriving from the linkages among the economic actors within the Italian districts and the Mexican clusters has in fact confirmed the existence of a certain degree of collective efficiency.⁸ Nevertheless, although collective efficiency matters both in Italy and Mexico, the empirical investigation has clearly highlighted some important differences concerning the intensity and quality of collective effects between the two realities studied. Besides, distinctions have been also identified between the empirical cases and some of the key stylized facts usually characterizing industrial districts, as stated in section 2.

The first important difference is the scarcity both in Italy and in Mexico of forward linkages as well developed as the backward linkages in the Italian districts. Moreover, in the Mexican clusters the intensity and the quality of the linkages with suppliers and with process specialized firms is definitely lower than in Italy. Concerning external economies, their production in the Italian districts and in the Mexican clusters is quite high but some

of them do not only contribute to the level of efficiency and the growth rate of the systems, rather they allow the survival of some low-performing firms on the market. In Mexico, the low availability of skilled labor generates a weaker effect of collective learning than in Italy. The general conclusion which can be drawn is the existence of different degrees of collective efficiency in the cases analyzed. In Italy, collective efficiency is high but not as high as expected and in Mexico it is even lower than in Italy.

The differences in the degree of collective efficiency between the Italian districts and the Mexican clusters may be in part explained by the existence of differences in external conditions. The most evident difference is trade policy: in Italy the existence of a competitive market has favored the development of a highly efficient system of production, based on a high degree of division of labor among specialized enterprises and intense cooperative linkages with suppliers, while in Mexico the long closure of the domestic market to international competition has induced the development of vertically integrated firms linked to their suppliers through pure market linkages. The important lesson, which can be drawn, concerns the opportunity to carefully take into consideration differences in external conditions when industrial districts are used as a reference point for analysis in different contexts.

It must be also stressed that Mexican firms have recently tried to change and improve their relationships with suppliers on a more collaborative basis in response to increasing competition. The same is true for forward linkages both in Italy and in Mexico: a few firms try to develop new marketing strategy and new links with the market to face their commercial weakness. A similar process of change in the quality of relationships was stressed in a study on the footwear industry in the Sinos Valley in Brazil (Schmitz, 1995a).

This issue introduces the question of how the systems react to changes in external conditions and the possibility that differences between districts can be explained by the existence of different stages and paths of development of clusters. The question of the capacity of clusters to respond to external changes transforming their internal organization is central. The literature on industrial districts has usually adopted a static approach,

neglecting the possibility that an external radical change, like the change in the competitive position in the cases analyzed, may represent a sign of rupture in the evolutionary path of the districts and eventually result in a new organizational form, distinct from the original one, and possibly remote from the traditional industrial district.

In another paper (Camagni and Rabellotti, 1995) we tried to identify some typologies of changes and trajectories of evolution of the districts, based on the recent Italian footwear experience.⁹ The main result is that the reaction of the Italian districts hit by increasing international competition has not been homogeneous within the systems, but some leading firms have begun to face competition by developing aggressive marketing strategies, for which they have sought some complementary resources outside the districts. The impact of these new strategies on the structure of the districts is a tendency towards hierarchization with the leading firms, which on one side organize the activities of a number of subcontracting firms within the districts and on the other interact strategically with other economic actors on the outside. To capture the realities of the Italian footwear districts it would be worthwhile to study how the structures of the systems evolve from one stage to the other, along their trajectory of development, as a reaction to external events and this involves explaining the different behaviors of the economic actors, facing change within the districts.

Similarly, in Mexico with the opening up of the market to international competition a few leading firms have begun to change their relationships with suppliers and buyers, trying to set up cooperation linkages, aimed at improving the product quality, fashion content, design and service. Some attempts to increase the division of labor among process specialized firms have been also registered in the two clusters studied. Therefore, in the Mexican clusters too it is necessary to understand the evolution of the system, generated by a change in the trade policy and led by the actions of some economic actors.

What is common among all the experiences analyzed is the replacement of generic incidental relationships by strategic cooperation with selected partners, aimed at providing specific complementary resources, in other words an upgrading of linkages. The new partners tend to be located

in the districts but they may also be outside, if the resources were not available within the districts. Most of the firms continue to gain from cluster's advantages but they are also able to overcome the limitations of the districts, networking with the outside world.

To conclude, the more general indication which emerges for future research is that the comparison of different clusters at a given point in time is an exercise which has severe limitations. A more fruitful exercise should appropriately compare trajectories of development, searching for common patterns in these trajectories. Are the trajectories of development of LDCs clusters characterized by some common patterns? And do these patterns differ from those which characterize districts in developed countries? These are all questions for further research.

Notes

* This paper presents some of the results of my D.Phil. thesis. During my work, I received constructive comments and suggestions from many people; I am particularly grateful for insightful suggestions from Roberto Camagni, Meine Pieter van Dijk, Gioacchino Garofoli, John Humphrey and Hubert Schmitz.

¹ In what follows, the terms 'industrial district' and 'cluster' are sometimes interchangeable, but it is worth recalling that while an industrial district is always a cluster, as it is evident from the definition proposed in this paper, the reverse is not always the case. Since Marshall, 'industrial district' implies at least inter-firm division of labor and in most contemporary analysis it also implies some cooperation.

² Among the first studies in which the phenomenon was identified are: Bagnasco (1977), Becattini (1979), Brusco (1982), Fuà (1983), Garofoli (1981) and Goglio (1982).

³ The term 'Third Italy' (*Terza Italia*) was first coined by the Italian sociologist Arnaldo Bagnasco (1977) to define and distinguish the industrializing areas of north-central and north-east Italy from the underdeveloped south of the country and from the traditionally industrialized north-western region. It consists of the regions of Friuli-Venezia Giulia, Veneto, Trentino-Alto Adige, Emilia-Romagna, Toscana, Marche and Umbria.

⁴ The book which first brought the success of the districts to the attention of English-speaking audiences was the *Second Industrial Divide* by Piore and Sabel (1984). Later a number of articles, some of which had previously appeared in Italian, were translated into English and published in Goodman and Bamford (1989), Pyke, Becattini and Sengenberger (1990) and Pyke and Sengenberger (1992).

⁵ The choice to include only members of the Associations is justified by the focus of our inquiry on the different forms of explicit and implicit cooperation among firms. We assume that

firms taking part in the Associations are more likely than others to entertain relationships with other firms; to become member of the Associations may in fact be interpreted as a sign of interest in getting in touch with other firms.

⁶ For a more detailed presentation of background information on the footwear Italian and Mexican industries see Rabellotti (1995a).

⁷ This is an important result of correspondence analysis presented in Rabellotti, 1995a.

⁸ This result is also confirmed by factor and correspondence analyses presented in Rabellotti, 1995a.

⁹ Specifically, the research is focused on three districts: Marche, Brenta and Montebelluna (specialized in the production of ski-boots).

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